Chemical Waste Management, Inc.
3956 State Rt 412
Vickery, Ohio 43464
419/547-7791

US EPA RECORDS CENTER REGION 5
1006426

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
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DEC 30 1985
U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE ENFORCEMENT BRANCH

December 24, 1985

William E. Muno, Chief
RCRA Enforcement Unit
United States Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

RE: Chemical Waste Management, Inc.
Vickery, Ohio
EPA I.D.# OHD 020273819
Waste Characterization Study/Initial List

Dear Mr. Muno,

In response to your letter of November 29, 1985, Chemical Waste Management, Inc. (CWM) has the following comments to your questions and concerns.

Chemical Waste Management submitted the recommended Initial List on September 30, 1985. CWM received the final characterization analysis report from the contract laboratory September 12, 1985. The submission was well within the thirty (30) day time span specified in paragraph H(2) of the Consent Decree and Final Order (CAFO).

ITEM 1: At your request CWM has re-examined its historical analytical data. The historical data examined includes Volatile Organic and EP Toxicity data on previously completed waste management areas; Pond 1, Pond 2, Pond 3, Pond 6, Pond 9, Pond 10, Pond 12, and the abandoned sludge farm. Historical groundwater and surface analysis was reviewed. Also, analysis for the 1984 overburden study was reviewed. Specific dates and sample locations are included on Attachment 1 of this submission. The data was compared with the CAFO Attachment C and the recommended Initial List. In one Pond 4 sludge sample, a 1983 analysis showed 200 ppm ortho and para-dichlorobenzene as a combined result. Analytical procedures used at the time could not distinguish between the two isomers. The recent Pond 4 analysis found only ortho-dichlorobenzene. Therefore,

CWM believes only the ortho-dichlorobenzene isomer to be present, and has not added para-dichlorobenzene to the Initial List.

ITEM 2: See attached ETC comments.

ITEM 3: CWM agrees with the agency's typographical corrections as outline in comment number 3.

ITEM 4: See attached ETC comments.

ITEM 5: Methanol was found in relatively low concentrations in two of the three replicates in the Pond 11-12 aqueous composite sample. The primary reason for determining methanol content in ground water is due to its function as a carrier agent for other target organic compounds. Because the concentration of methanol was low and it was only detected in one sample and because analysis for methanol would require a separate analytical procedure which is considerably less reliable and which has a higher detection limit than that of the other target constituents, CWM believes that methanol should not be included in the Initial List. It may only function as a carrier at low concentrations; the target constituents would be the primary compounds of interest. CWM will be specificly analyzing for the target organics.

ITEM 6: See attached ETC comments.

ITEM 7: See attached ETC comments.

CWM believes that the constituents identified as the Initial List in the September 30th submission is correct and in full compliance with CAFO (See attachment 2). CWM would welcome the opportunity to meet with you or your staff to discuss any further concerns you or they might have. If there are any further clarifications or information required, please feel free to contact me at (419) 547-7791.

Sincerely,

CHEMICAL WASTE MANAGEMENT, INC.

Steve Bowe

Steve Bowe
Environmental Manager

SB/kb

cc/Walter Heald
Dr. Vander Velde
Kirk Stemple
Dean Nelson
Jeff Miller
Jerry Homsy
Paula Kotter, OEPA
Kate Wilson, OEPA/NWDO
Craig Liska, USEPA, Region V

ATTACHMENT 1

REPORT DATE	LOCATION	REPORT DATE	LOCATION
5-11-83	CL3-3-3	4-27-83	BL12-8-1
4-26-83	BBL12-3-1	4-29-83	BL11-6-1
5-5-83	BL-5-4-1	5-5-83	BL-7-4-1
5-5-83	BL7-1-1	7-1-83	BL12-PP-1
6-28-83	1BL7-PP-1	7-1-83	XBL11-PP-1
7-1-83	1BL5-PP-1	5-18-83	CL4-1-6
5-18-83	CL4-1-6	5-6-83	BL4-2-4
5-5-83	BL5-2-1	5-10-83	CL4-2-12
5-11-83	CL3-3-3	5-12-83	CL6-3-9
5-18-83	ASF6-6	5-10-83	CL9-1-8
5-11-83	CL9-3-9	5-6-83	BL4-2-5
5-6-83	BL4-3-3	5-17-83	CL4-2-16
5-10-83	CL2-3-10	7-30-83	CL2-3-6
5-10-83	CL2-3-4	5-9-83	CL2-2-12
5-9-83	CL2-2-12	5-11-83	CL1-2-10
5-11-83	CL1-1-12.5	5-1-83	CL1-1-12
5-18-73	ASF2-0	4-27-83	BL1-1-1
5-13-83	CL10-3-8.5	5-5-83	BL-7-3-1
4-8-83	R Water 15 DN	5-3-83	BL7-1-2
4-8-83	R Water 14 UP	6-28-82	Pond 7
6-28-83	Pond 5	6-28-82	Pond 11
8-3-82	Pond 12	6-28-82	Pond 12
H.D.	W-13	H.D.	W-1N
H.D.	W-12	H.D.	W-3N
H.D.	W-4N	H.D.	W-6N
H.D.	W-7	H.D.	W-8
H.D.	W-11	H.D.	W-2
H.D.	W-3A	H.D.	W-5
Surface Water	PT1	Surface Water	PT4
7-13-84	WSS21-1	8-10-84	WSS18
8-12-84	WSS19	8-9-84	WSS20
8-15-84	WSS20R	8-11-84	WSS20U
8-12-84	WSS22	8-12-84	WSS23
8-13-84	WSS24	8-13-84	WSS24U
8-11-84	WSS1	8-11-84	WSS1U
8-13-84	WSS1A	8-13-84	WSS1AU
8-11-84	WSS2	8-14-84	WSS3
8-13-84	WSS4	8-12-84	WSS14
8-12-84	WSS15	8-12-84	WSS15U
8-14-84	WSS16	8-10-84	WSS17
8-11-84	WSS5	8-13-84	WSS4U
8-10-84	WSS9-1	8-10-84	WSS9-2
8-10-84	WSS9U	8-14-84	WSS10
8-14-84	WSS11	8-9-84	WSS12
8-13-84	WSS13	8-13-84	WSS13U
8-15-84	WSS5R	8-14-84	WSS6
8-12-84	WSS7	8-13-84	WSS8
10-24-84	WSS15-2	10-24-84	WSS11-2
10-24-84	WSS10-2	11-17-80	Pond 11 lq.
7-1-83	XBL-4-PP-1		

H.D. Historical Data

ATTACHMENT 2
CAFO INITIAL LIST

Tetrachlorethylene
Methylene Chloride
Trichloroethylene
1,1,1-Trichloroethane
Carbon Tetrachloride
Chlorobenzene
Toluene
Methyl ethyl ketone
Chloroform
Methyl Chloride
1,2- Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tethrachloroethane
Benzene
Bis(chloromethyl) ether
o-dichlorobenzene
o-cresol
m & P cresol
Phenol
p-chloro-m-cresol
2,4-Dimethylphenol
Naphthalene
2-Picoline
Aniline
m-dichlorobenzene
Heptachlor
Cadmium
Nickel
Lead
Arsenic
Mercury
Antimony
Chromium
Cyanide, Total

ETC ENVIRONMENTAL TESTING and CERTIFICATION CORPORATION

December 20, 1985

RECEIVED
DEC 23 1985

Mr. Kirk Stemple
Chemical Waste Management, Inc.
3956 State Route 412
Vickery, Ohio

Dear Mr. Stemple:

We have received a copy of the letter addressed to Steve Bowe from USEPA concerning issues regarding the Appendix VII analysis conducted during the second quarter of this year. The following discussion addresses those items within the Attachment pertaining to analytical analysis executed by ETC.

Item 2: The samples were either an aqueous composite from Ponds 11 and 12 or sludge composites. Both source types proved to be a challange for analytical processes due to the complexity of the matrices. This can be demonstrated by examining mass spectral Total Ion Chromatograms for each sample. There were high levels of interfering substances complicating quantification and therefore contributing to the variability of the replicate samples.

Another probable source of variability is the nature of the sludge matrices. These samples were dark, oily, globular, acidic, organically pungent, viscous and foamy. As can be interpreted from this description the original point source samples were very non-homogeneous in nature. Therefore the task of uniformly dispersing all compounds throughout the hazardous, caustic composite samples was highly improbable.

The process for quantifying different compounds with a wide dynamic range is as follows:

a. The undiluted extract is first analyzed and those compounds that fall within the linear range are quantified. Therefore the best method detection limit is obtained for the maximum number of compounds and recoveries can better be assessed against undiluted surrogate standards.

b. The extracts are then diluted for the high level compounds to fall within the linear range. The appropriate compounds are quantified and the method detection limits adjusted.

284 RARITAN CENTER PARKWAY • EDISON, NJ 08837 (201) 225-5600

The general policy at ETC is to quantify and report compounds with the best method detection limit (MDL) for diluted or undiluted samples falling within the linear dynamic range. Better precision values were obtained in some cases for diluted replicates but the values for the lowest acceptable dilution or no dilution were reported. Examples of this fact will be described in the following paragraphs.

Ponds 11 & 12: The replicate samples exhibited considerable interference problems. Both the acid and base/neutral extract fractions were analyzed undiluted and diluted. The values for 1,2-Dichlorobenzene in the undiluted samples were 26 ug/l, 22 ug/l, and 37 ug/l. However the MDL increased from 10 ug/l to 100 ug/l and the compounds would have been reported BMDL (below the method detection limit).

Tetrachloroethylene was reported as 40 ug/l, 14 ug/l and 12 ug/l for samples H2753, H4607 and H4608 respectively. The value of 40 ug/l was transcribed incorrectly from the raw data and should have been reported as 13 ug/l. A corrected technical report will be issued.

The methanol results were verified to be 179 mg/l, <50 mg/l, and 1950 mg/l. This variability could be attributable to the aforementioned matrix complexities and the possibility of reactivity.

Originally methyl ethyl ketone (MEK) was reported as 87, 836, and <50 ug/l. This discrepency was investigated in July and it was noted that a transcription error occurred. Unfortunately the data base was not corrected. The actual values for MEK are 870, 836 and 895 ug/l. Corrected reports will be sent.

As with 1,2-Dichlorobenzene, the data for o-Cresol in the diluted extract demonstrated better precision than in the undiluted sample. The reported values were 25, 39, and 72 ug/l. The values calculated for the diluted sample are 68, 74, and 55 ug/l with an adjusted MDL of 250 ug/l.

Pond 4: The values for phenol were investigated and were verified to be 125000 and 546000 ug/kg.

Pond 5: The volatile organic analytical work was investigated. Two of the three replicate samples matched acceptably. The third appeared to be off by a factor of two. The analytical log was traced to determine if a twofold factor was omitted during transition from analysis to calculation. The reported results were verified and no determinable source for this discrepancy was evident.

Item 4

There was a typographical error in the paragraph describing the methodology for direct aqueous injection of water soluble compounds. Four ul of the aqueous extract was injected, not four ml.

As far as the use of approved EPA methods in the analysis of Appendix VII or VIII compounds is concerned, it is well known SW846 methods are the closet to what realistically can be modified for the purpose. The Environmental Testing and Certification Corporation (ETC) has been involved in the analysis of Appendix VII and VIII parameters in groundwater since the fall of 1982. In May 1983, ETC reported to Chemical Manufacturers Association (CMA) the results of a project whose objective was to evaluate the effectiveness of SW846 to serve as a methods manual for the sampling and analysis of groundwater on leachate for the Appendix VII and VIII parameters. In the summer of 1984, ETC participated in an "Inter- and Intra- laboratory Assessment of SW-846 Methods Manual for Analysis of Appendix VIII Compounds in Groundwater" sponsered by CMA. In the fall of 1984, ETC performed a study for EPA to serve as a preliminary investigation in using presently available methodology to analyze as many Appendix VII and VIII parameters as possible. Furthermore, over the past two and one-half years ETC has been developing an analytical scheme to meet the demand for Appendix VIII analysis. Recently we are the only commercial laboratory invited as a speaker in an EPA meeting concerning the short-term guidance posture on RCRA groundwater monitoring. In essence, our modified SW-846 methods as described in our technical reports have been recognized as the practical

state-of-the-art approach to the analysis of Appendix VII and VIII compounds.

Item 5: The issue of methanol variation was addressed in Item 2 for Ponds 11 and 12.

Item 6: During evaluation of the analytical results, judgement deemed the possible discrepancy of the Chromium VI data for Ponds 11 and 12. ETC subcontracted this Chromium VI analysis to a local laboratory. The laboratory verified the data of 3600 ug/l and stated that this was an average of two separate analysis of 3570 and 3620 ug/l.

Item 7: Analysis of Appendix VII and VIII compounds were performed utilizing methods based on SW-846. As the EPA letter stated "the solid waste methods (SW-846) do not mention holding times". We are fully aware of the Waste Water Regulations (40CFR136) Methods but it is not clear that the holding times in the 600 series method are directly applicable for groundwater.

Sincerely,

Shelley J. Coldiron

Shelley J. Coldiron

SJC/tp

cc: Merna Hurd
Frank Jarke
George Vander Velde

11/07/85

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 9

IN RE:	)	Docket Nos. RCRA-09-84-0037,
	)	TSCA-09-84-0009
CHEMICAL WASTE MANAGEMENT, INC.,	)	
	)	CONSENT AGREEMENT
Respondent.	)	AND FINAL ORDER
	)	

I. These actions were instituted by a Determination of Violation, Compliance Order and Notice of Opportunity to Request a Hearing issued by the United States Environmental Protection Agency ("EPA" or "Complainant") on July 3, 1984 ("Original RCRA Complaint") and an Amended Determination of Violation, Compliance Order and Notice of Opportunity to Request a Hearing issued on June 6, 1985 ("Amended RCRA Complaint") under the Resource Conservation and Recovery Act, ("RCRA"), 42 USC §6901 et seq., and a Complaint and Notice of Opportunity for Hearing ("TSCA Complaint") issued on June 6, 1985, under the Toxic Substances Control Act ("TSCA") 15 USC § 2615.

II. The Amended RCRA Complaint alleges that Chemical Waste Management, Inc. ("Respondent") was in violation of Sections 3004, 3005 and 3006 of the Resource Conservation and Recovery Act ("RCRA"), 42 USC §§6924 and 6926; 40 CFR Part 265, regulations promulgated by the Administrator, United States Environmental Protection Agency, to implement those sections of RCRA, and Sections 25159.6 and 25200.5(b)(3) of the Health and Safety Code, State of California, at Respondent's facility located in Kettleman Hills, California, EPA ID Number CAT000646117 ("the Facility"). The Facility is an existing hazardous waste management facility as defined in 40 CFR §260.10. The State of California, Department of Health Services ("Intervenor" or "DOHS") is a party to the proceeding instituted under RCRA. Respondent filed an Answer to the Amended RCRA Complaint on August 29, 1985 which denied the allegations of the Amended RCRA Complaint.

III. The TSCA Complaint alleges that Chemical Waste Management, Inc. ("Respondent") was in violation of Section 15 of TSCA, 15 USC §2614, and 40 CFR Part 761, regulations promulgated by the Administrator, United States Environmental Protection Agency, to implement that section of TSCA at Respondent's Facility. Respondent filed an Answer to the TSCA Complaint on July 30, 1985, which denied the allegations of the TSCA Complaint.

IV. The EPA Regional Administrator has jurisdiction over the subject matter of the actions commenced pursuant to Section

3008 of RCRA, 42 USC §6928, and 40 CFR §§22.04(a) and 22.37, and Section 16(a) of TSCA, 15 USC 2615(a) and personal jurisdiction over the parties consenting hereto.

V. In settlement of the above described TSCA and RCRA actions, Complainant, Respondent and Intervenor have agreed to the entry of this Consent Agreement and Final Order ("Final Order") prior to the presentation of any testimony or evidence and without adjudication of any issue of law or fact. For the purpose of this Consent Agreement and Final Order, Respondent neither admits nor denies the specific factual allegations set forth in the Original RCRA Complaint, Amended RCRA Complaint and TSCA Complaint. Complainant, Respondent and Intervenor agree to waive any right to a hearing on the Original RCRA Complaint, Amended RCRA Complaint and TSCA Complaint and consent to the issuance of this Final Order without adjudication. Nothing in this Final Order shall be construed as an admission by Respondent of any violation or any issue of law or fact, nor shall this Final Order be used against Respondent as evidence of any violation or as an admission against interest, nor shall it prejudice or impair any right, remedy or defense Respondent may have in any other or future legal proceeding. This Final Order supersedes the previous RCRA compliance orders issued on July 3, 1984 and June 6, 1985.

VI. Except as specified herein, nothing in this Final Order shall be binding on any agency office, department, or board of the State of California except the Department of

Health Services and any successor agency thereto. It is the intent of the Parties that nothing in this Final Order is inconsistent with the provisions of the California Porter-Cologne Water Quality Control Act and regulations promulgated thereto.

VII. All days set forth in this agreement shall run consecutively from the effective date of this Final Order.

VIII. Respondent shall undertake the following tasks enumerated below:

A. ENVIRONMENTAL AUDIT

Within forty-five (45) days after the effective date of this Final Order, Respondent shall submit to EPA and DOHS the scope of work for the services of a third-party consultant who shall be expert in environmental auditing, auditing environmental management systems and auditing RCRA and TSCA waste management operations. The scope of work and consultant both shall be agreed upon by EPA, DOHS, and Respondent in writing prior to the consultant commencing the performance of the professional services as more fully set forth herein below. The consultant shall be retained and the scope of work shall be designed to audit waste operations and environmental management systems at the Facility and in the Respondent's corporate Environmental Management Department as they affect RCRA and TSCA compliance at the Facility.

1. Within one year after written agreement upon the scope of work and the consultant, said third-party consultant shall

submit separate written reports to Respondent regarding RCRA and TSCA compliance at the Facility. These reports shall:

a. Identify and describe the existing Facility waste management operations. Identify and describe Respondent's Environmental Management Department, environmental management systems, and policies and prevailing practices as they affect RCRA and TSCA compliance at the Facility.

b. Evaluate such operations, systems, practices and policies and identify and describe fully the perceived strengths and any weaknesses in such operations, systems, practices and policies, to the extent practicable, regarding their ability to promote compliance with applicable RCRA and TSCA requirements. The consultant shall apply its expertise and judgment to the foregoing data base, utilizing such factors as the consultant believes to be relevant and necessary to achieve compliance with RCRA, TSCA, and DOHS regulations implementing RCRA.

c. Based on the evaluation required in paragraph A.1.a. and b. above, the consultant shall identify and describe fully, with supporting rationales, the perceived areas, if any, where Respondent's waste management operations and environmental management systems, practices and policies may be significantly improved to achieve RCRA and TSCA compliance listing specific options for any improvements at the Facility in the following specific areas:

(1) compliance and waste management operation, staffing, education and experience requirements;

(2) compliance management, lines of authority, Respondent's corporate Environmental Management Department and relationship to the operating facility manager;

(3) personnel training for individual employees, compliance obligations and emergency spill response;

(4) Operations and Maintenance ("O & M") procedures for pollution prevention and waste management equipment;

(5) evaluation of interim stabilization units for ability to physically and chemically stabilize liquid wastes as compared to EPA's draft Statutory Interpretive Guidance, "Prohibition on the Disposal of Bulk Liquid Hazardous Waste in Landfills," (May 6, 1985).

(6) preparation of Quality Assurance and Quality Control programs for sampling and analysis and for environmental testing procedures, including Facility laboratories and contract laboratories for the Facility;

(7) preparation and review of Incident Reports with specific recommendations for corrective steps and preventive O&M, along with reporting procedures for these recommendations to corporate headquarters.

2. Respondent shall notify EPA upon receipt of said reports, and within ninety (90) days after receipt of final reports, Respondent shall submit to EPA and DOHS the portion of

the reports containing findings and recommendations of the consultant, together with Respondent's evaluation of each option it has selected for adoption and the reasons for rejecting other options. The report by Respondent shall set forth the specific actions the company shall take and a schedule for implementation of the recommendations adopted by Respondent.

3. All documents submitted to EPA and DOHS pursuant to paragraph A are considered to be "voluntarily submitted information" as defined in 40 C.F.R. §2.201(i) and will be treated as confidential to the extent authorized by law including without limitation such protection as is allowed by TSCA (for the TSCA report) and RCRA (for the RCRA report).

4. EPA and the State agree that such documents shall not be used to initiate an enforcement action or as direct evidence of a violation, but may be used as evidence of the existence of any violation which may remain uncorrected beyond six months after the delivery of the Audit Report and as evidence of knowledge or duration of a violation, provided, however, that Respondent does not waive any legal rights it may have to object to the admissibility of such evidence. It is intended that documents prepared for Respondent pursuant to paragraph A are not required by law or regulation.

B. GROUND WATER MONITORING

1. Hydrogeologic Site Investigation

a. Respondent shall have submitted a Report to EPA and DOHS by October 31, 1985, which summarizes the results of the hydrogeologic investigation of the site conducted to date by the Respondent's independent consultants. The Report shall present all data received or collected since the August 1985 data submission to EPA. This shall include, but not be limited to, the following:

1. geophysical logs
2. lithologic logs
3. construction details on all new wells
4. final geologic maps
5. water level readings from all existing monitoring wells
6. data from packer and pump tests

b. The Report shall also present the results of the K-4 ground water quality assessment program which meets the requirements of 40 C.F.R. § 265.93(d). The Report shall include the following data:

(1) Analytical data from well K-4 for the constituents listed in 40 CFR Part 261, Appendix VIII.

(2) Analytical data from monthly sampling for three months of wells A-2 and K-4 and two months for well A-1 for all of the parameters specified in the August 15, 1984, report submitted by Respondent entitled

Groundwater Quality Assessment Program plus all of the 40 CFR Part 261, Appendix VIII parameters detected in well K-4.

(3) Results of hydraulic tests of wells A-1, A-2, K-4, and wells directly above and below the water bearing zone of K-4.

(4) Ground water flow rate and direction for the K-4 water bearing zone in the vicinity of well K-4 based upon piezometric data obtained from (at least) wells A-1, A-2, and K-4.

(5) Unless otherwise requested by EPA or DOHS Respondent shall continue to monitor and assess the K-4 area in accordance with 40 C.F.R. §265.93(d)(7).

c. Respondent agrees to supplement the Report to include analytical data for monthly sampling for three months for well K-6 and one month for well A-1 (for the same parameters cited in subparagraph B(1)(b)(2) above) to be performed and submitted to EPA and DOHS in accordance with the schedule set forth in subparagraph B.2.b.(5)(a)-(c) below.

d. Respondent shall extract ground water from the K-4 water bearing zone which has elevated levels of chemical constituents. Any ground water extracted from the K-4 water bearing zone shall be to discharged only to lined surface impoundments at the Facility.

e. Within 30 days of the effective date of this Final Order, the Respondent shall submit to EPA and DOHS a

supplemental report which shall present the results of Respondent's assessment of the source of toluene detected in various samples extracted from monitoring wells at the Facility. If the supplemental report does not indicate that the toluene is due to causes such as well installation, well sampling, sample analysis, or natural sources, the Respondent shall develop and initiate an assessment program required by 40 C.F.R. 265.93(d) for determining whether toluene is present in ground water.

f. The Report shall include a site-specific ground water sampling and analytical protocol for the Facility. The sampling protocol shall be used by Respondent and all other parties whenever samples are taken from monitoring wells at the Facility. The protocol shall include the following items:

(1) Well evacuation procedures that will be employed for each well. The equipment, purging rate and purging volume that will be employed for each well shall be included. To the extent feasible, all wells must be purged in the same manner. If dewatering is a problem, then lower purging rates shall be used or Respondent shall document that inflowing water cascading down the screen will not be significantly affected in terms of the concentration of constituents of concern (e.g. volatile organics). The use of stabilized pH or specific conductance to indicate adequate purging volumes shall not be used.

(2) Sampling equipment that will be employed. To the extent feasible, each well shall be sampled in the same manner.

(3) Description of the materials of construction of the sampling and purging assembly. Such materials shall not significantly change the concentration of the constituents of concern.

(4) Sample preservation and handling techniques including provisions for field titration of samples as appropriate.

(5) Procedures for decontaminating sampling equipment between sampling events.

(6) Procedures for measuring ground water elevations at each sampling event.

(7) Chain-of-custody procedures to be used for all phases of sample management.

(8) Laboratory analytical techniques including quality assurance/quality control procedures and EPA-approved analytical methods referenced in subparagraph 2.b(3) below.

g. The Report shall include the details of the types and formats of ground water quality data that will be submitted in the future.

2. Ground Water Monitoring Program.

a. On or before November 8, 1985, Respondent shall assess and certify its compliance with the requirements of 40 C.F.R. Part 265, Subpart F.

b. Respondent also agrees to complete the following tasks:

(1) Respondent shall submit by November 8, 1985 a map which identifies the number and location of all interim status ground water monitoring wells at the facility.

(2) Respondent shall arrange to make available for review upon request by EPA and DOHS at the offices of Respondent's consultants driller logs and field notes relating to the Facility.

(3) Respondent shall take water level measurements and sample for ground water quality. Such samples shall be analyzed for the following parameters utilizing the procedures established by SW-846:

(a) Volatile organics (Method 8240)

(b) Cyanides (Method 9010)

(c) Parameters required by 40 C.F.R. 265.92(b). The first round of samples from all monitoring wells shall be collected no later than November 8, 1985.

(4) Respondent's first four rounds of sampling shall include four replicate measurements of the indicator parameters at upgradient (background) wells.

(5) The sampling and analysis required by subparagraph B.2.b.(3) shall be repeated according to the following schedule:

(a) Second round of sampling shall be completed by December 8, 1985;

(b) Third round of sampling shall be completed by January 8, 1986;

(c) Fourth round of sampling shall be completed by February 8, 1986;

(d) First round of semi-annual sampling shall be completed by March 8, 1986;

(e) Second round of semi-annual and annual sampling shall be completed by April 8, 1986;

(f) Respondent's semi-annual sampling shall include four replicate measurements of the indicator parameters in all wells;

(g) Respondent shall submit the analytical results of sampling within 60 days of sample collection.

(h) Respondent shall submit the statistical evaluations for the first two rounds of semi-annual sampling within 75 days of sample collection.

(6) Thereafter, subsequent sampling and analyses shall be performed in accordance with 40 C.F.R. 265.92(d) for the parameters set forth in 40 C.F.R. 265.92(b).

c. Respondent further agrees to install a groundwater monitoring well for each PCB landfill. The monitoring wells shall be sited such that they monitor the most permeable water-bearing zone for B-14 and the Neverita B sand for B-16 which underly each PCB landfill. To the extent feasible, the Respondent shall use the site specific RCRA ground water sampling and analytical protocol for sampling these wells. Respondent shall take water elevation measurements and sample for ground water quality quarterly, and provide the sampling results to EPA and DOHS within 60 days of sample collection. Respondent shall analyze for PCBs and any other constituents found as a result of the analysis required by subparagraph D.13 below.

C. <u>LIQUID DISPOSAL</u>

1. Respondent asserts that it has not treated or disposed of waste at the Facility by means of land spreading since April 1984. Respondent shall not treat or dispose of waste through land treatment at the Facility in the future unless it obtains a final RCRA permit for such treatment meeting the requirements of 40 CFR Part 264 and applicable state regulations. Closure of former land spreading areas S-1 through S-6 shall take place in accordance with Paragraph D of this section.

2. Respondent asserts that it has not treated or disposed of waste in unit S-3 since March 15, 1985 and in S-5 since April 1984. Respondent shall not treat or dispose of waste in units S-3 or S-5 in the future except as otherwise provided in Paragraph D below or unless authorized under interim status or by a final RCRA permit issued pursuant to 40 CFR Part 264.

3. Respondent asserts that it has been using lined stabilization bins for the treatment of bulk and containerized liquid waste at the Facility since May 8, 1985. Respondent shall not place liquid wastes in trenches at the Facility prior to stabilization. Respondent shall continue to physically and chemically stabilize liquid waste, intended for landfill disposal, in lined stabilization bins, as approved by DOHS letter of January 17, 1985 or subsequent permit, in accordance with EPA Draft Statutory Interpretive Guidance, "Prohibition on the Disposal of Bulk Liquid Hazardous Waste in Landfills," (May 6, 1985). Respondent shall confirm the elimination of free liquids through the use of the paint filter test on a sample of the waste prior to disposal of the material. Respondent shall document such stabilization by fully completing and maintaining its "Stabilization Evaluation Test" records prior to stabilization for each batch entering the stabilization bins. Records of the paint filter test and "Stabilization Evaluation Test" shall be maintained as part of the facility operating records.

D. CLOSURE AND SUBSTANTIAL MODIFICATIONS TO FACILITY

1. Respondent shall within 60 days of the effective date of this Order amend the closure plan for the Facility submitted to EPA on October 7, 1985, to set forth a closure plan for each of the following waste management units not previously covered by said closure plan:

a. P-1 through P-20
b. B-1 through B-16
c. S-1 through S-6
d. Drum decant unit
e. Cyanide treatment unit
f. PCB flushing/storage unit
g. Interim drum storage unit
h. Interim stabilization unit

2. All of the units set forth in subparagraph D.1. shall be closed with a cover design that meets the requirements of 40 C.F.R. Part 265, Subpart G.

3. Except as set forth herein, Respondent shall immediately cease discharging waste to waste management units designated as surface impoundments P-4 1/2, P-4C, P-12A, P-13, P-18 and landfills B-6, B-8, B-10, B-11, B-15 and units S-2, S-3 and S-5. Respondent shall cease discharging waste to surface impoundment P-12 no later than January 1, 1986. The closure plan for each of these units shall set forth a schedule of closure of these units. Respondent shall not commence closure of a waste management unit without obtaining prior DOHS approval of the partial closure plan. Units P-18, S-5 and S-6 (excluding the area of P-19 and P-20) shall be closed upon closure of B-19. Units P-1, P-2, P-3, P-4, P-4 1/2, P-4C, S-1,

B-1, B-4, B-5, B-6, B-8, original B-9, B-9 extension, B-10, B-11 and B-15 shall be closed in accordance with the schedule set forth in Table B. Units P-12, P-12A, P-13, S-2, P-5, and S-3 shall be closed in accordance with the closure plan for such units and in accordance with the schedule set forth in Table B. The closure of units P-12, P-12A, P-13, S-2, P-5, and S-3 shall not preclude the use of the closed area for future waste management activities. The parties agree that Respondent may continue to use the existing interim drum storage unit and interim stabilization units in their present locations, until closure of the B-9 expansion. The area of the existing interim drum storage unit and interim stabilization units shall be closed and the units shall be relocated upon DOHS approval upon closure of B-9 expansion.

4.a. Respondent shall submit to EPA and DOHS no later than the dates specified in column A of Tables A and B a sampling plan for determining the extent of residual contamination beneath surface impoundments designated as P-9, P-12, P-12A, P-13, P-14, P-16, P-18, and P-19. The sampling plan for these impoundments shall be similar to that set forth in Attachment A.

b. By December 31, 1985, Respondent shall submit detailed plans and specifications for P-19 to meet the minimum technological standards established by EPA's Minimum Technology Guidance Manual on Double Liner Systems (May 24, 1985) pursuant to the Hazardous and Solid Waste Amendments of 1984. P-19 is

approved by DOHS and EPA for operation and retrofit provided the design, plans and specifications for P-19 conform to the plans and specifications for P-9 (as modified by Attachment B) and further provided that Respondent submits to EPA and DOHS the sampling results and certification required by Paragraphs 4.a. and 4.d., respectively.

c. Each of the surface impoundments P-9, P-14, and P-16, is approved by DOHS and EPA for operation and retrofit in accordance with Respondent's plans and specifications submitted to EPA on August 9, 1985 (as modified by Attachment B) upon submission to EPA and DOHS of the sampling results and certification required by Paragraphs 4.a. and 4.d. respectively.

d. For P-9, P-14, P-16, and P-19, Respondent, prior to retrofitting an impoundment, shall submit certification by a registered engineer or a certified engineering geologist that the surface impoundment to be retrofitted has a foundation or a base capable of providing support for the structure and capable of withstanding hydraulic pressure gradients to prevent failure due to settlement, compression or uplift.

e. Column A, Submittal of Plans and Specifications to EPA and DOHS, in Table A, specifies the date by which Respondent shall submit plans and specifications, including proposed sampling plans and construction site safety plans for units proposed for retrofitting. The construction site safety plan included for each unit must clearly identify the procedures which will be used by the Respondent and its

contractors to insure the health and safety of anyone working at or having access to the construction site during retrofitting. Column B, Transfer of Pond Contents, in Table A, specifies the date by which pond content transfer must be made. Column C, Result of Sampling Plan to DOHS/EPA, in Table A, specifies the date by which Respondent shall submit the results of the sampling plan to DOHS/EPA prior to obtaining DOHS approval to retrofit as specified in Paragraph 4.c. of this section. Column D, Completion of Retrofit, in Table A, specifies the date by which Respondent shall complete retrofit of the unit.

5. Respondent shall complete cleanout of Pond P-12 no later than March 15, 1986. Respondent shall complete cleanout of ponds P-13 and P-18 in accordance with Table B not later than February 1, 1987 and March 1, 1987, respectively. Ponds P-13 and P-18 may only receive liquid waste contents transferred from ponds P-12, P-15, and P-19. Prior to transferring the contents of any pond, Respondent shall conduct compatibility tests in accordance with Respondent's applicable Waste Analysis Plan to assure that the transferred pond contents are compatible with the contents of the pond receiving the waste and are not restricted hazardous wastes as defined in Section 25122.7 of the California Health & Safety Code.

6. DOHS will place no restrictions on the transfer of liquid waste from P-15 (which received restricted waste as defined by Article 15, Title 22, California Administrative

Code, Chapter 30), provided that (a) the transferred pond contents are not restricted wastes as determined by a sampling program approved by DOHS, and (b) the transfer does not exceed one million gallons, and (c) the transfer occurs before April 1, 1986. DOHS hereby grants a variance for surface impoundment P-15 from those specific provisions of Title 22, California Administrative Code, Chapter 30, which require that ponds receiving restricted waste must be cleaned on at least an annual basis. This variance is conditioned on the adherence by the Respondent to the schedules established in Table A for unit P-15.

7. Respondent may continue to operate lined surface impoundments P-15 and P-20 in accordance with the schedule set forth in Table A until November 8, 1988, prior to retrofit as specified in Table A, unless the structural integrity of the liner is impaired or the pond is cleaned prior to that date.

8. a. Respondent shall implement the sampling program developed for units S-3 and S-5 attached to this Final Order as Attachment A to determine the vertical extent of residual contamination beneath these units. Respondent shall complete implementation of the sampling plan for the S-5 unit no later than October 31, 1985, and shall complete the sampling plan for unit S-3 no later than November 30, 1985. Respondent shall submit the results of such sampling plus any pre-existing sampling data for these units by December 31, 1985. Closure of

S-3 shall be completed by August 1, 1986 in accordance with Table B.

b. Respondent shall submit to EPA and DOHS within 30 days of the date of this Final Order detailed plans and specifications for construction of a double lined landfill to be located in the area of S-5, S-6 and surface impoundment P-18, which shall be designated as the B-19 landfill. Such plans and specifications shall meet the criteria of EPA's Minimum Technology Guidance Manual on Double Liner Systems (May 24, 1985). EPA and DOHS agree to expedite their review of the plans and specifications for B-19 and agree to approve the proposed design and operation of B-19 within 60 days of the date of receipt of detailed plans and specifications from the Respondent if such plans comply with the technical criteria of EPA's minimum Technology Guidance Manual on Double Liner Systems (May 24, 1985).

c. Upon receipt of approval of the B-19 landfill from DOHS and any other appropriate governmental agencies, Respondent may proceed with excavation and construction of said landfill. Significantly contaminated soil has been correlated with visually contaminated soils in the S-5 sampling plan. Respondent shall dispose of all visibly contaminated soil removed from the B-19 area into B-9, B-13, or the double-lined portion of B-19. All other remaining soil from the B-19 area may be stockpiled adjacent to the area as designated in the plans and specifications for B-19. This stockpile area shall

be bermed to provide for total control and containment of run-on and run-off as long as the area is used for storage of soil excavated from the B-19 area. Prior to the use of any other cover material, the stockpiled soil removed from the B-19 area shall be used as daily cover material in the B-9 expansion, B-13, or the double-lined portion of B-19, or for foundation material in preparation for final clay cover of P-12, P-12A, P-13, P-5, S-2, and S-3 areas.

d. Within thirty (30) days of this Final Order Respondent shall submit its B-19 plans for EPA and DOHS approval which plans shall specify the size, height and location of Phase I of B-19. The parties agree that Respondent may continue to use the existing B-9 expansion landfill unit until the Phase I portion of the B-19 landfill begins operation, subject to the following limitations:

(1) No later than December 15, 1985, Respondent shall submit the following with respect to B-19:

(i) an application to DOHS for a modification under interim status;

(ii) an application to the Regional Water Quality Control Board for waste discharge requirements;

(iii) an application to Kings County for a conditional use permit.

(iv) an application to Kings County Air Pollution Control District for an air permit.

(2) Except as set forth in paragraph 8.d.(3) and (4) below, use of the B-9 expansion unit shall be discontinued either (i) after disposal of waste in the B-9 expansion has reached the level which would require the unit to exceed the final elevation shown on the detailed plans set forth in Attachment C, taking into account closure and capping requirements, or (ii) by October 31, 1986, whichever occurs first.

(3) If Respondent determines that B-19 cannot be operated by the date for discontinuing the B-9 expansion specified in subparagraph 8.d.(2), Respondent no later than thirty (30) days prior to such date, shall notify EPA and DOHS. The notification shall include the reasons B-19 cannot be operated, the reasons waste for B-9 cannot be disposed in any other landfills at the Facility until B-19 is completed, and a proposed date by which the use of B-9 Expansion will be discontinued. Within fifteen (15) days of such notification, the parties shall meet to consider the matters raised in Respondent's notification, and shall modify this Final Order if a modification is agreed to by the parties. EPA and DOHS shall not unreasonably refuse to agree to a modification. If the parties cannot agree to modify this Final Order, within fifteen (15)

days of the meeting, Respondent may file a petition with the Administrative Law Judge setting forth the matter in dispute and, if such a petition is filed in good faith, the discontinuance of the use of the B-9 expansion shall be stayed until the Administrative Law Judge issues his decision and, if action is taken in U.S. District Court, until the matter is decided. EPA and DOHS shall have fifteen (15) days to respond to such petition. In making his determination, the Administrative Law Judge may consider any relevant facts relating to the B-9 expansion and B-19. The parties agree that they will jointly petition the Administrative Law Judge to issue a decision within thirty (30) days of the date on which the matter in dispute is submitted to the Administrative Law Judge. The parties agree that the decision of the Administrative Law Judge shall constitute final agency action ripe for judicial review.

(4) EPA and DOHS further agree that, after the date for discontinuing the B-9 expansion specified in subparagraph 8.d.(2), Respondent may temporarily stockpile hazardous waste within B-9 Expansion until Phase I of the B-19 area is available and approved for hazardous waste

disposal. Stockpiled waste shall be placed only upon an area where a three foot (3') thick compacted clay liner has been installed. When B-19 is available and approved for hazardous waste disposal, all stockpiled waste shall be removed from B-9 Expansion, as expeditiously as reasonably possible, and disposed of in the double-lined portion of B-19, except that any stockpiled waste which does not exceed the grade level for the B-9 Expansion as described in Attachment C need not be removed and Respondent may close B-9 Expansion to such level. If EPA and DOHS do not agree to the in-place disposal of material stockpiled above the level shown in Attachment C, such decision shall be unreviewable under subparagraph 8.d.(3). In no case shall the Final Order result in stockpiled waste being moved off-site.

e. Notwithstanding paragraph D.8.d. above, as soon as Phase I of the B-19 landfill is available for use, Respondent shall immediately cease the disposal of commercial waste in the B-9 expansion landfill and shall promptly close it, in accordance with its approved partial closure plan for the B-9 expansion landfill, with on-site contaminated soil or clean soil as appropriate to assure adequate closure of the unit. Closure shall be completed by the time provided in the closure

plan. After closure of the B-9 expansion, the parties agree that this portion of the Facility shall be closed to any waste disposal.

9. The parties agree that Respondent may continue to use landfill unit B-13 for the disposal of compatible wastes until completion of the unit as set forth in the closure plan submitted to EPA and DOHS on October 7, 1985. Respondent shall close B-13 in accordance with its approved partial closure plan.

10. Respondent shall submit to EPA and DOHS within 30 days of the effective date of this Order a revised Part A permit application which sets forth the design capacity of each of the following units: P-9, P-10, P-11, P-14, P-15, P-16, P-19, P-20, limited B-9 expansion, B-13 and B-19 as authorized by this Final Order.

11. Future replacement and expansion of landfills and surface impoundments which will receive hazardous wastes after May 8, 1985 must be designed and constructed to meet the minimum technological requirements in Section 202 of Hazardous and Solid Waste Amendments 1984.

12. Effective immediately, any proposed increases in design capacity or changes in processes for the treatment, storage or disposal of hazardous waste beyond those specified in Paragraph 10 above, must be submitted in writing to DOHS for approval, as a revised Part A or Part B permit application, with a copy to EPA. Respondent must receive written approval prior to implementing such changes. All proposed increases in

capacity or changes in processes shall include a demonstration that the proposed changes do not amount to reconstruction of the facility as defined in 40 CFR §270.72(e). If this demonstration cannot be made, Respondent may submit a Part B permit application for approval. DOHS agrees to expedite its review and decision on any such permit application.

13. Respondent shall conduct representative sampling of the liner for PCB landfill B-16 within 90 days of the date of this Final Order. The sampling shall be limited to those areas where the liner is exposed such that the sampling device will not come into contact with PCB waste placed in landfill cells. Respondent shall analyze for PCBs and priority pollutants. Results of the analysis shall be submitted to EPA and DOHS within 90 days of sample collection.

E. WASTE ANALYSIS PLAN

1. Respondent shall follow the procedures set forth in its Waste Analysis Plan dated February 15, 1985, as revised August 20, 1985, for all wastes received at the Facility. Where specified by the Facility Waste Analysis Plan, Respondent shall assure that all four components of Respondent's pre-acceptance package (Generator's Waste Profile Sheet; Certificate of Representative Sample Sheet; Special Waste Analysis Report; and Special Waste Disposal Decision Sheet) are fully satisfied prior to acceptance of each applicable incoming waste stream. Unless approved by EPA and DOHS, all four components of Respondent's pre-acceptance package required by

the present Facility Waste Analysis Plan (as revised August 20, 1985) shall be completed and retained until closure of the Facility and, after retention of paper records for a period of three years, such records may be maintained on microfiche or equivalent. Where each of these components of the pre-acceptance package is not required for a particular waste stream, Respondent shall assure that all applicable requirements of the Waste Analysis Plan are met for that waste stream. Respondent may modify its Waste Analysis Plan provided such plan remains in compliance with 40 C.F.R. 265.13.

2. Respondent shall perform all analyses required by the Facility Waste Analysis Plan for each incoming waste load. Respondent shall conduct PCB analyses on all incoming manifested PCB-contaminated soils that are to be disposed of in a non-TSCA approved landfill unit and on all oily liquid wastes of unknown PCB concentration.

3. Respondent shall continue to follow the Waste Analysis Plan dated February 15, 1985, as revised August 20, 1985, until it is formally amended, revised, or altered by Respondent. Within fifteen days of any amendment, revision or alteration of the Facility Waste Analysis Plan, Respondent shall submit a copy of the revised Waste Analysis Plan to EPA and DOHS.

F. <u>OPERATING RECORDS</u>

1. a. Within 180 days of the effective date of this Order, Respondent shall develop and implement a computerized system for the management of operating records at the

Facility. The computerized system shall apply to both TSCA waste and RCRA waste. Upon implementation, Respondent shall submit a report describing how the system is constructed and operated. The system shall be capable at a minimum of recording waste fingerprint analyses, internal waste transfers, wastes generated at the main truck wash station, waste generated at the PCB flushing/storage unit, the contents and the location of wastes deposited within each landfill cell, and the method, location and date(s) of intermediate and ultimate treatment, storage or disposal for each hazardous waste received at the Facility. Each waste shall be cross referenced to waste manifests and waste profile numbers. Decant shall be deemed an intermediate treatment. In addition, records of all waste analyses and trial tests shall also be maintained on site. The computerized operating record system shall be applicable to all wastes received at the Facility after April 1, 1986. In addition to the computerized system, the Facility's manual recordkeeping shall be maintained. After retention of paper records for a period of three years, such records may be maintained on microfiche or equivalent.

b. All operating records required by RCRA shall be made available as quickly as reasonably possible to State and Federal inspectors, but no later than 24 hours after the request.

2. Complainant shall review the Potential Release Report submitted by Respondent for the Facility dated September 8, 1985. Within 30 days of this Final Order, Complainant shall

provide Respondent an itemized listing of specific areas where further information or clarification is required. Respondent shall transmit a report to EPA and DOHS addressing such items within 60 days of receipt of Complainant's list. For each area outside of existing or previous waste management units listed in a Part A permit application identified as having received a deposit of hazardous waste, Respondent shall submit a revised closure plan within 90 days of the date of this Final Order to include such area, unless included in the closure plans identified in subparagraph D.1 above.

G. LIQUID DISPOSAL IN LANDFILLS

Effective immediately, Respondent shall fully comply with the requirements of Sections X.4(a) and X.4(b) of its interim permit in that Respondent will not place liquid wastes in a landfill without keeping permanent operating records indicating that these wastes were treated or stabilized outside the disposal unit so that free liquids were no longer present. A paint filter test must be performed and documented upon each stabilization prior to land disposal. Respondent shall fully complete and retain its "Stabilization Evaluation Test" records for each waste batch entering the stabilization units until closure of the Facility. Such records may be maintained on microfiche or equivalent after retention of paper records for a period of three years.

H. IGNITABLE OR REACTIVE WASTES

Respondent shall fully comply with Section X.6 of its interim permit by not placing ignitable or reactive wastes in landfills without indicating in its operating records the results of analyses required by the Facility Waste Analysis Plan that these wastes were treated, rendered or mixed to make them non-ignitable or nonreactive, provided that Respondent may dispose of ignitable or reactive wastes in accordance with 40 C.F.R. §265.312(b) or 265.316.

I. CLOSURE/POST CLOSURE COST ESTIMATES

Respondent shall submit to EPA and DOHS within 60 days of the effective date of this Final Order revised closure and post closure cost estimates in accordance with the revised closure plans submitted by Respondent pursuant to Paragraph D above.

J. POST CLOSURE GROUND WATER MONITORING

Respondent shall submit to EPA and DOHS within 60 days of the effective date of this Final Order revised post closure plans which include ground water monitoring to be conducted after closure or partial closure of the Facility.

K. EARTHEN DIKES

Respondent shall submit to EPA and DOHS within 60 days of the effective date of this Final Order a plan to control wind and water erosion at surface impoundment earthen dikes. The plan shall be implemented within 60 days of approval.

L. SURFACE IMPOUNDMENT INCOMPATIBILITY

Effective immediately, CWM shall not discharge new waste streams into surface impoundments unless prior trial treatment tests have been conducted in accordance with Respondent's applicable Waste Analysis Plan which confirm compatibility of new wastes proposed to be mixed.

M. DRUM DECANT OPERATION PLAN

Effective immediately, Respondent's Drum Decant Operation Plan shall be maintained at the Facility and shall be made available upon request to Federal and State inspectors.

N. PART B PERMIT REVISION

Respondent shall submit to EPA and DOHS within 120 days of the effective date of this Final Order a revision to Tables TR-1 and TR-2 of the Part B Permit application to accurately reflect chronologies of the use of all hazardous waste management units at the site. This revision must be accompanied by the signatory statement and submitted as a revision to Respondent's Part B application. This revision shall be based on the Potential Release Report submitted to EPA dated September 8, 1985.

O. COMPLIANCE WITH PERMIT REQUIREMENTS

Respondent shall demonstrate compliance with all applicable requirements of the permits issued to the Facility by DOHS relating to inspections, site security, and maintenance of two feet of freeboard and 40 C.F.R. 265.14, 265.15, and 265.222 by submission of inspection logs for the Facility for

the period November 15-30, 1985. Respondent shall submit to EPA and DOHS within 30 days of the effective date of this Final Order a revised inspection schedule and inspection record for the Facility.

P. NOTICE

All submissions and notices required by this Final Order shall be sent to:

EPA:

Chief, Waste Programs Branch
EPA Region 9 (T-2)
215 Fremont Street
San Francisco, CA 94105

DOHS:

Section Chief, Northern California Section
Toxic Substances Control Division
Department of Health Services
4250 Power Inn Road
Sacramento, CA

Respondent:

Vice President
Chemical Waste Management, Inc.
715 Comstock Street
Santa Clara, CA 95054

After December 15, 1985, notice to Respondent shall be sent to:

Vice President
Chemical Waste Management, Inc.
39899 Balentine Drive
Newark, CA 94560

Q. AGREED CIVIL PENALTY

Respondent hereby consents to the assessment of a civil penalty in the amount of Two Million One Hundred Three Thousand Dollars ($2,103,000)

Complainant acknowledges EPA is in receipt of partial payment of $108,250.00 leaving a balance of One Million Nine Hundred Ninety-four Thousand Seven Hundred and Fifty Dollars ($1,994,750).

Within thirty (30) days of the effective date of this Final Order, Respondent shall submit a cashier's check or certified check payable to "Treasurer, United States of America," in the amount of One Million Nine Hundred Ninety-four Thousand Seven Hundred and Fifty Dollars ($1,994,750). Payment should be made by sending the check with cover letter to EPA's lockbox address at the Mellon Bank in Pittsburgh, Pennsylvania, with a copy to the Regional Hearing Clerk. The addresses are as follows:

Environmental Protection Agency
Region 9 (Hearing Clerk)
P. O. Box 360863M
Pittsburg, PA 15251

Regional Hearing Clerk
EPA Region 9
215 Fremont Street
San Francisco, CA 94105

R. Respondent shall pay the sum of One Hundred Ten Thousand Dollars ($110,000) per year to the California Department of Health Services or its successor agency for a period of ten years for the purpose of reimbursing DOHS for its costs of enforcement and oversight to monitor compliance with applicable regulations implementing RCRA and/or hazardous waste enforcement and response training. Such payments shall be made payable to a special account in the Hazardous Waste Control Account in the General Fund of the State of California. The

first payment shall be made on or before January 1, 1986. The remaining installments shall be paid annually no later than January 1 of each subsequent year. Expenditures from this special account may be subject to approval by the legislature of the State of California.

S. Respondent's implementation of the soil sampling (paragraph VIII.D.), environmental audit (paragraph VIII.A.), computerized record keeping (paragraph VIII.F.), and other requirements under this Final Order represent a combined environmental monetary commitment by Respondent of approximately Seven Hundred Ninety-Seven Thousand Dollars ($797,000).

T. Complainant, Intervenor and Respondent consent to the entry of this Final Order without further notice.

U. For the performance of the requirements specified herein, Respondent shall perform such activities within the time limits set forth, unless the performance is prevented or delayed by circumstances which constitute a force majeure. For the purposes of this Order, a force majeure is defined as any circumstance arising from causes beyond the reasonable control of Respondent despite Respondent's due diligence and good faith efforts. Financial inability of Respondent to comply with these requirements shall not be considered a force majeure. In the event of a force majeure, the time for performance of the activity delayed by the force majeure shall be extended for the time period of the delay attributable to the force majeure.

The time for performance of any activity dependent on the delayed activity shall be similarly extended, except to the extent that such dependent activity can be reasonably implemented without completion of the delayed activity.

Respondent shall notify EPA and DOHS in writing as soon as reasonably possible but no later than 30 days after it becomes aware of a circumstance which may delay or prevent performance of an obligation. Such notice shall state the anticipated length of delay, the cause of the delay, the measures to be taken by Respondent to prevent or minimize delay, and the timetable by which those measures will be implemented.

Respondent shall also notify EPA and DOHS in writing of the fact of a delay in performance within 30 days after it becomes aware of such delay and failure to so notify shall constitute a waiver of a force majeure defense based on such delay. Failure of EPA or DOHS to notify Respondent in writing of any objection to such notice within 30 days after receipt of Respondent's notice shall constitute a waiver of any objection by DOHS or EPA, respectively, to a force majeure defense based on the delay.

In any proceeding where Respondent raises a force majeure as a defense to performance of a requirement, the burden of proof shall be on Respondent to prove the existence of force majeure, its consequences and the reasonableness of the delay resulting therefrom.

If a force majeure completely precludes performance of an activity or dependent activity rather than merely delaying it, Respondent, EPA and DOHS shall mutually agree upon a substitute activity. If the parties have not agreed upon a substitute activity, the parties reserve all rights they may have to petition the administrative law judge or United States District Court to resolve the dispute regarding selection of an appropriate substitute activity.

This subparagraph T. does not apply to enforcement actions which are not brought to enforce this Final Order.

V. Covenant Not To Sue

1. In consideration of Respondent's consent to this Consent Agreement and Final Order, EPA and DOHS hereby covenant not to initiate or maintain any civil claim or civil cause of action under the Federal Resources Conservation and Recovery Act, Federal Toxic Substances Control Act, or California Hazardous Waste Control Act against Respondent, its parent, subsidiaries, or present or former directors, officers, employees, or agents thereof, with respect to the Kettleman Hills facility based on facts or circumstances known by EPA or DOHS or their employees as of October 15, 1985.

2. Notwithstanding subparagraph V.1. or any other provision of this Agreement, EPA and DOHS may take (a) any action against Respondent regarding surface impoundment P-17; (b) any action to abate, prevent, or order the abatement of any condition which now or hereafter may present an imminent and

substantial endangerment; (c) an action under section 3008(h) of the Resources Conservation and Recovery Act; and/or (d) a non-penalty action under 3008(a)(1), 3013 of RCRA or section 25187 of the Health & Safety Code with respect to facts which were not previously known by EPA or DOHS and which were newly discovered by the EPA National Ground Water Monitoring Task Force inspection of the Facility in August and September, 1985, provided that Respondent shall be given a reasonable time to comply with any 3008(a)(1) or 3013 order.

3. Respondent agrees that EPA or DOHS may properly bring an action to compel compliance with the terms and conditions contained herein in United States District Court. By signing this Agreement, Respondent does not prejudice and specifically preserves any right, remedy or defense it may have with respect to any action related or unrelated to the subject matter of this document, provided, however, that in any action brought by EPA or DOHS to compel compliance with the terms of this Consent Agreement and Final Order, Respondent shall be limited to the defenses of force majeure, compliance with this Consent Agreement and Final Order, physical impossibility, and defenses under the United States and State of California constitutions.

4. In consideration of consent by EPA and DOHS to the entry of this Final Order, Respondent agrees as follows:

(a) Within one (1) working day of the effective date of this Order, EPA, DOHS and Respondent agree to stipulate to a dismissal of Respondent's action, Chemical Waste

Management, Inc. v. United States of America, et al., No. C-85-4215 (JPV) (N.D. Cal.) without prejudice.

(b) Respondent agrees to withdraw all of its pending requests relating to the Kettleman Hills Facility for information, and appeals of denials of requests for information, under the Freedom of Information Act.

(c) Respondent waives all claims that all operating records of the Facility previously submitted by Respondent to EPA are subject to TSCA Confidential Business Information claims, except for customer lists or documents from which customer lists may be compiled. However, Respondent does not waive confidentiality claims under other statutes or regulations with respect to such documents.

5. Except as noted above, this Final Order shall not operate to release, waive, limit or impair in any way claims, rights, remedies or defenses of the United States of America (including EPA), the State of California (including DOHS), or Respondent, against any person or entity not a party hereto.

6. No agency, office, department, or board of the State of California is party to the TSCA proceeding, therefore, notwithstanding subparagraph V.(1), DOHS reserves any rights it may have to bring an action with respect to PCB disposal at the Kettleman facility.

W. This Consent Agreement may be modified upon written approval of all parties hereto.

X. This Consent Agreement and Final Order shall apply to and be binding upon all parties to this Consent Agreement and Final Order, their directors, officers, employees, agents and all persons or entities acting under or for them. Each signatory to this Consent Agreement and Final Order certifies that he/she is fully authorized by the party or parties whom he/she represents to enter into this Consent Agreement and Final Order, to execute it on behalf of the party represented and to legally bind such party.

11-7-85
Date

Respondent
Chemical Waste Management, Inc.

11-7-85
Date

Complainant
Harry Seraydarian
Director, Toxics & Waste
Management Division
EPA, Region 9

11/7/85
Date

Intervenor
California Department of Health
Services
Reed Sato
Deputy Attorney General
Attorney for Intervenor
California Department of Health
Services

IT IS HEREBY ORDERED that this Final Order (Docket Nos. RCRA-09-84-0037 and TSCA-09-84-0009) be entered. This Order shall become effective immediately.

11-07-85
Date

JUDITH E. AYRES
Regional Administrator
Region 9

Appropriation No.

☐ CERCLA 68-20X8145
☒ RCRA 684/50108
☐ OTHER
DCN: _____

ENVIRONMENTAL PROTECTION AGENCY
Technical Support for Enforcement at Hazardous Waste Sites

☐ TES-1 ☒ TES-2

Contractor: PRC
Work Assignment No.: _____
No. of Pages to Follow: _____

☒ Original Work Assignment ☐ Work Plan Approval

☐ Amendment No. _____ A revised Work Plan ☐ is ☐ is not required

The Contractor shall furnish facilities, materials, and the necessary professional, technical and supporting personnel for performance of the work required by this Work Assignment, described below.

TITLE:
Site Name CWM VICKERY Task Desc. TECHNICAL DOC. REVIEW Task Type 60

Priority: ☐ Normal ☒ Expedite* Reference Information: ☐ Attached ☒ Transmitted Separately ☐ Not Applicable

Site Identifier No. TGB81 _ _ _ _		Government Est.	Contractor Est.
Effort (Technical Labor Hours):	Previous		
	This Action	50	
	Total	50	
Expert Witness Hours (Not to be included in LOE Hours)			
Period of Performance:	From Effective Date (see below)	10-23-85	
or:	To Completion of Deliverables		
Site Location (City or County):		State: IL	Region: V

Statement of Work Summary: (enforcement objective and regulatory action being supported here, attach statement of work)

The enforcement objective is to support EPA in review of the waste characteristics submitted by the Respondent in accordance with the Consent Agreement & Final Order (CAFO). (See attached portions of CAFO.) The review should include the following determinations: 1) Were U.S. EPA approved analytical methods utilized?; 2) Were proper sample holding times observed?; 3) Were proper QA/QC procedures addressed?; 4) Conclusions regarding the quality of data and the process of data acquisition.

Reporting Requirements: ☐ Briefing(s) ☒ Letter Report ☐ Draft Final Report ☐ Other

☒ Submit all deliverables to Region (Note: Monthly Reports and Final Reports are required for all work assignments.)

Primary Contact: (Name, Address, Tel. No.) Craig J. Liska, Region V, Hazardous Waste Enforcement Branch
(312) 886-4444 230 S. Dearborn Street, Chicago, IL 60604

Backup Contact: (Name, Address, Tel. No.) James Brossman, Region V, Hazardous Waste Enforcement Branch
(312) 886-4447 230 S. Dearborn Street, Chicago, IL 60604

Initiator: Craig J. Liska Date: 10-21-85

Project Officer: Date: Tel. (202) 382-4842 (FTS)

Contracting Officer DATE (effective date)

Contractor Acknowledgement of Receipt (signature & title) DATE

*Justification Required

Sheet 1 White—Contracting Officer Copy (Washington, D.C.)
Sheet 2 Blue—Project Office Copy (Washington, D.C.)
Sheet 3 Green—Contractor Copy
Sheet 4 Yellow—Acknowledgement Copy
Sheet 5 Pink—Region [illegible]
Sheet 6 Gold—Region [illegible]

Revised March, 1985

ATTACHMENT

H. To meet the requirements of 40 C.F.R. §265.90 to .94, Respondent shall implement an initial groundwater program as set forth in subparagraphs 1-11 hereof (the "Initial Groundwater Program") and shall also implement a continuing groundwater program as set forth in subparagraphs 12 and 13 hereof (the "Continuing Groundwater Program") as follows:

1. Within 60 days after the effective date of this CAFO, Respondent shall perform a waste characterization analysis for the constituents listed in Attachment C on the following samples:

   a. Composite aqueous sample from Ponds 11 and 12;

   b. Composite sludge sample from Pond 4;

   c. Composite sludge sample from Pond 5; and

   d. A sludge sample from Pond 7.

2. Within 30 days after the completion of such waste characterization, Respondent shall submit to U.S. EPA and OEPA a list of the constituents identified in the waste characterization performed pursuant to subparagraph 1 above as well as a list of hazardous waste constituents listed in Attachment C which have previously been detected at the Facility. (The combined list of constituents shall hereinafter be referred to as The "Initial List.")

3. As used herein the term:

   a. "Bedrock Well" means a groundwater monitoring well located in the bedrock aquifer beneath the Facility;

ATTACHMENT C

PROPOSED ANALYTICAL SCHEME
FOR
APPENDIX VII (SEVEN COMPOUNDS)

Isobutanol
Chloroacetaldehyde
Dichloropropanol
Methanol

Pyridine
Tetrachloroethylene
Methylene Chloride
Trichloroethylene
1,1,1-Trichloroethane
Carbon Tetrachloride
1,1,2-trichloro-1,2,2-trifluoroethane
Trichlorofluoromethane
Chlorobenzene
Toluene
Methyl ethyl ketone
Carbon dissulfide
Chloroform
Methyl Chloride
Acrylonitrile
1,2-Dichloroethane
1,1,2-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Vinyl Chloride
1,1-Dichloroethylene
Benzene
1,1,2-Trichloropropane
1,2,3-Trichloropropane
1,2,2-Trichloropropane
Bis (chloromethyl) ether

o-dichlorobenzene
o-cresol
m&p cresol

Nitrobenzene
Pentachlorophenol
Phenol
2-Chlorophenol
p-chloro-m-cresol
2,4-Dimethyl phenol
2,4-Dinitrophenol
2,4,5-Trichlorophenol
Bis (2-chloroethyl) ether
2,4,6 trichlorophenol
4 nitrophenol
4,6-dinitro-o-cresol
2,3,5,6-Tetrachlorophenol
2,3,4,6-Tetrachlorophenol
2,3,4,5-Tetrachlorophenol
Chrysene
Naphthalene
Fluoranthene
Benzo (b) Fluoranthene
Benzo (a) pyrene
Indeno (1,2,3-cd) pyrene
Benzo (a) anthracene
Dibenz (a) anthracene
Acenaphthalene
Benzyl Chloride
Hexachlorobenzene
Hexachlorobutadiene
Hexachloroethane
m-Dinitrobenzene
2,4-Dinitrotolune
2-Picoline
[illegible]hlorocyclopentadiene
2,4-Dichlorophenol
2,6-Dichlorophenol
Aniline
Diphenylamine
m-dichlorobenzene
p-dichlorobenzene
1,2,4-Trichlorobenzene
1,2,3-Trichlorobenzene
2,4,6-Trichlorobenzene
1,2,3,4-Tetrachlorobenzene
1,2,3,5-Tetrachlorobenzene
1,2,4,5-Tetrachlorobenzene
1,4-Naphthoquinone

Chlordane
Heptachlor
Toxaphene

Acrylamide
Acetonitrile
2,4 Toluene Diamine
(o,m,p) Phenylenediamine

Cadmium
Hexavalent Chromium
Nickel
Lead
Arsenic
Mercury
Antimony
Chromium

Cyanide, Total

Justification for an Expeditious Review

An expeditious review is requested. Hazardous waste constituents are suspected to be present in the groundwater. A new groundwater monitoring system is currently being installed at the Vickery facility. The analyses of samples obtained from the new system hinges upon acceptance of the attached waste characterization. The waste characterization is necessary in determining the constituents of concern for groundwater analysis, consequently, it is imperative that the waste characterization be performed accurately and according to U.S. EPA approved methods. An early determination on the adequacy of the waste characterization will accelerate the process of collecting groundwater samples and analyzing for hazardous waste constituents.

Chemical Waste Management Inc

September 30, 1985

RECEIVED
OCT 03 1985
U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
OFFICE OF THE DIRECTOR

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Basil G. Constantelos, Director
Waste Management Division
U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, IL 60604

Re: Waste Characterization Study: Initial List

Dear Mr. Constantelos:

In accordance with the terms of the Consent Agreement and Final Order (CAFO) between Chemical Waste Management, Inc. (CWM) and the U.S. Environmental Protection Agency (USEPA), enclosed please find the waste characterization "Initial List".

The Initial List includes those constituents detailed in Attachment C of the CAFO that were previously identified in waste analyses and from the waste characterization study recently completed by Environmental Testing and Certification Corporation (ETC). The technical reports as well as a summary report for the waste characterization analysis have been also been enclosed for your review.

The Initial List is presented in Table 1 of the September 20, 1985, letter from Gary Collison of Golder Associates to Steve Bowe of CWM.

Should you have any questions or require further clarification please contact me at (419) 547-7791.

Sincerely,

CHEMICAL WASTE MANAGEMENT, INC.

RECEIVED
OCT 03 1985
SOLID WASTE BRANCH
U.S. EPA, REGION V

Steve Bowe
Environmental Manager

SB/ja

cc: Craig Liska, USEPA
Tom Carlisle, OEPA
Kate Wilson, OEPA/NWDO
Tim Fishbaugh, OEPA

2

Golder Associates
CONSULTING GEOTECHNICAL AND MINING ENGINEERS

September 27, 1985

853-3020.6
F/N 307.11

Chemical Waste Management, Inc.
3956 State Route 412
Vickery, Ohio 43464

Attention: Mr. Steven K. Bowe

RE: GROUNDWATER MONITORING CONSTITUENTS
CAFO INITIAL LIST
VICKERY, OHIO FACILITY

Dear Mr. Bowe:

In accordance with the terms of the CAFO, an "Initial List" of constituents for first groundwater sampling and analysis of the new monitoring wells has been determined. This Initial List includes those constituents in Attachment C of the CAFO which were identified from previous analyses of waste materials and from the waste characterization study recently completed by ETC.

A summary of constituents from the CAFO Attachment C list which were identified in previous waste analyses and in the waste characterization study is provided on Table 1, attached. The composite of these identifications is the Initial List, which is also provided in Table 1.

The constituents identified in the waste characterization study, from the ETC "Federal Consent Agreement Waste Characterization Site 490 Summary Report," August 1985,

3772 PLEASANTDALE ROAD, SUITE 165, ATLANTA, GEORGIA 30340, U.S.A. • TELEPHONE (404) 496-1893

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submitted as a final report on September 12, 1985, are summarized in Table 2, attached. This Table indicates the individual sample test results and the trip blank results.

Table 3, attached, lists the constituents identified in waste characterization analyses performed on aqueous samples from the ponds, sludge samples from the ponds, fixed material, and fixed material leachate from the Vickery Facility. This list was compiled from analytical tests performed prior to April 1985 and constitutes, to the degree we can determine, the list of hazardous waste constituents previously detected at the Facility which is required to be compiled under terms of the CAFO.

Those constituents on the Initial List in Table I will be included in the analysis of groundwater samples obtained from the first sampling event of the new groundwater monitoring wells. Two constituents reported in one of three replicates of one sample from the waste characterization are not believed to have been identified during the waste characterization and, therefore, are not included on the Initial List: Methanol and Hexavalent Chromium.

We do not believe that methanol was identified in the waste characterization. Methanol is soluble in water, and if present in a sample, will be identified in analyses of all replicates of that sample. Because it was reported in only one of three replicates of only one sample, we believe the report is a false positive and is not indicative of the presence of Methanol.

We do not believe that Hexavalent Chromium was identified in the waste characterization. Hexavalent Chromium is soluble in water, and if present in a sample, will be identified in

analyses of all replicates of that sample. Because it was reported in only one of three replicates of only one sample, we believe the report is a false positive and is not indicative of the presence of Hexavalent Chromium. This conclusion is reinforced because Hexavalent Chromium was also reported in the trip blank for the same sampling run and the trip blank was not opened in the field. This is indicative of laboratory contamination. Moreover, it is impossible for Hexavalent Chromium to exist in the highly acidic conditions prevailing in the ponds, which would convert it quickly into Trivalent Chromium. Furthermore, if Hexavalent Chromium exists in the pond acid it would also be present in the sludges and it was not found in them (total Chromium was detected in both at about the same order of magnitude). Finally, the 24 hour holding time specified for analyzing Hexavalent Chromium is difficult to achieve using off site laboratory facilities and results of analyses total Chromium would include Hexavalent Chromium in any event.

Should there be any questions regarding this matter, please feel free to call.

Very truly yours,

GOLDER ASSOCIATES, INC.

Gary H. Collison

Gary H. Collison, P.E.
Principal

GHC/ije

cc: Mr. G. Vander Velde
Mr. J. Miller

TABLE 1
CWM VICKERY FACILITY
INITIAL LIST OF CONSTITUENTS FOR GROUNDWATER MONITORING

CAFO Attachment C (Appx. VII) Constituent List	Constituents Identified in Waste Characterization Samples	Constituents Detected in Previous Testing of Waste Samples	CAFO Initial List
Isobutanol			
Chloroacetaldehyde			
Dichloropropanol			
Methanol	x		Note 1
Pyridine			
Tetrachloroethylene	x	x	Tetrachloroethylene
Methylene Chloride	x	x	Methylene Chloride
Trichloroethylene	x	x	Trichloroethylene
1,1,1-Trichloroethane	x	x	1,1,1-Trichloroethane
Carbon Tetrachloride	x	x	Carbon Tetrachloride
1,1,2-trichloro-1,2,2-trifluoroethane			
Trichlorofluoromethane			
Chlorobenzene	x	x	Chlorobenzene
Toluene	x	x	Toluene
Methyl ethyl ketone	x		Methyl ethyl ketone
Carbon dissulfide			
Chloroform	x	x	Chloroform
Methyl Chloride	x	x	Methyl Chloride
Acrylonitrile			
1,2-Dichloroethane	x		1,2-Dichloroethane
1,1,2-Trichloroethane		x	1,1,2-Trichloroethane
1,1,1,2-Tetrachloroethane			
1,1,2,2-Tetrachloroethane		x	1,1,2,2-Tetrachloroethane
Vinyl Chloride			
1,1-Dichloroethylene			
Benzene		x	Benzene
1,1,2-Trichloropropane			
1,2,3-Trichloropropane			
1,2,2-Trichloropropane			
Bis (chloromethyl) ether		x	Bis(chloromethyl)ether
o-dichlorobenzene	x	x	o-dichlorobenzene
o-cresol	x		o-cresol
m&p cresol	x		m&p cresol
Nitrobenzene			
Pentachlorophenol			
Phenol	x	x	Phenol
2-Chlorophenol			
p-chloro-m-cresol	x		p-chloro-m-cresol
2,4-Dimethylphenol	x		2,4-Dimethylphenol
2,4-Dinitrophenol			
2,4,5-Trichlorophenol			
Bis (2-chloroethyl) ether			
2,4,6 trichlorophenol			
4 nitrophenol			
4,6-dinitro-o-cresol			

TABLE 1
(Continued)

CAFO Attachment C (Appx. VII) Constituent List	Constituents Identified in Waste Characterization Samples	Constituents Detected in Previous Testing of Waste Samples	CAFO Initial List
2,3,5,6-Tetrachlorophenol			
2,3,4,6-Tetrachlorophenol			
2,3,4,5-Tetrachlorophenol			
Chrysene			
Naphthalene	x		Naphthalene
Fluoranthene			
Benzo (b) Fluoranthene			
Benzo (a) pyrene			
Indeno (1,2,3-cd) pyrene			
Benzo (a) anthracene			
Dibenz (a) anthracene			
Acenaphthalene			
Benzyl Chloride			
Hexachlorobenzene			
Hexachlorobutadiene			
Hexachloroethane			
m-Dinitrobenzene			
2,4-Dinitrotoluene			
2-Picoline	x		2-Picoline
Hexachlorocyclopentadiene			
2,4-Dichlorophenol			
2,6-Dichlorophenol			
Aniline	x		~~2,6-Dichlorophenol~~ Aniline
Diphenylamine			
m-dichlorobenzene		x	m-dichlorobenzene
p-dichlorobenzene			
1,2,4-Trichlorobenzene			
1,2,3-Trichlorobenzene			
2,4,6-Trichlorobenzene			
1,2,3,4-Tetrachlorobenzene			
1,2,3,5-Tetrachlorobenzene			
1,2,4,5-Tetrachlorobenzene			
1,4-Naphthoquinone			
Chlordane			
Heptachlor	x		Heptachlor
Toxaphene			
Acrylamide			
Acetonitrile			
2,4 Tolume Diamine			
(o,m,p) Phenylenediamine			
Cadmium	x	x	Cadmium
Hexavalent Chromium	x		Note 2
Nickel	x	x	Nickel
Lead	x	x	Lead
Arsenic	x	x	Arsenic
Mercury	x	x	Mercury

TABLE 1
(Continued)

CAFO Attachment C (Appx. VII) Constituent List	Constituents Identified in Waste Characterization Samples	Constituents Detected in Previous Testing of Waste Samples	CAFO Initial List
Antimony	x		Antimony
Chromium	x	x	Chromium
Cyanide, Total	x	x	Cyanide, Total

94

Notes

1. Reported in only one of three replicates of one sample. Methanol is soluble in water and, if present, would have been detected in all replicates. Report is a false positive.

2. Reported in only one of three replicates of one sample. Hexavalent Chromium is soluble in water, and if present, would have been detected in all replicates. Hexavalent Chromium was also reported in the trip blank for the same sampling run, which blank was not opened in the field. This indicates the positive report for the one replica was a false positive caused by laboratory contamination. Hexavalent Chromium could not exist in the highly acidic pond acid, where it would be quickly converted to trivalent Chromium. If it was present in the pond acid it would also be identified in the sludge and it was not (total Chromium was determined in both at about the same order of magnitude). The holding period for analyzing Hexavalent Chromium would make it difficult to use independent off site laboratories. In any event, analyses for total Chromium would include Hexavalent Chromium.

TABLE 2
CWM Vickery Facility

WASTE CHARACTERIZATION SUMMARY

Composited aqueous sample from Ponds 11 & 12 Triplicate | Pond 7 Sludge | Trip Blank | Pond 4 Sludge Duplicate | Pond 5 Sludge Triplicate

Compound	LAQ11-12VII (ug/1) H4608	H4607	H2753	BL7VII (ug/kg) H2755	XTB11-12 (ug/1) H2754	BL4VII (ug/kg) H2756	H4604	H4605	BL5VII (ug/kg) H4606	H2757
Methanol	1,950	--	--	--	--	--	--	--	--	--
Chlorobenzene	108	113	113	1,440,000	--	1,316,000	1,230,000	621,000	1,099,000	1,168,800
Chloroform	38	40	39	65,200	--	137,840	119,580	--	79,690	84,920
Methyl chloride	52	61	57	--	--	--	--	--	--	--
1,2-Dichloroethane	16	17	16	--	--	269,000	232,000	--	--	--
Methylene chloride	1,230	1,032	749	108,000	--	196,000	125,000	--	205,000	310,000
Methyl ethyl ketone	--	836	87	--	--	--	--	--	--	--
Tetrachloroethylene	12	14	40	295,000	--	267,770	--	139,300	218,040	237,270
Toluene	54	56	55	183,000	--	649,000	586,000	194,000	467,000	498,000
1,1,1-Trichloroethane	75	82	83	165,000	--	192,000	160,000	--	106,000	118,000
Trichloroethylene	36	41	40	143,000	--	211,400	205,260	--	250,410	246,440
Aniline	3,600	2,460	2,100	--	--	--	--	--	--	--
p-Chloro-m-cresol	20.1	18.6	--	--	--	--	--	--	--	--
o-Cresol	72	39	--	--	--	--	--	--	--	--
m+p-Cresol	178	90	116	--	--	--	--	--	--	--
1,2-Dichlorobenzene	60.1	--	26	376,000	--	22,600	19,700	23,700	36,200	28,300
2,4-Dimethylphenol	18.5	16.3	18	--	--	--	--	--	--	--
Phenol	6,360	8,590	7,430	--	--	125,000	54,600	--	--	--
2-Picoline	28	16	13	--	--	--	--	--	--	--
Antimony	7,000	7,000	6,700	120,000	--	40,000	40,000	50,000	60,000	50,000
Arsenic	136,000	183,000	200,000	320,000	--	63*	630,000	82*	76*	100*
Cadmium	1,630	1,710	1,560	4,200	--	2,000	2,000	1,000	1,000	1,000
Chromium	377,000	373,000	360,000	397,000	40	258,000	306,000	197,000	201,000	169,000
Lead	5,100	5,100	4,900	1,100,000	--	450,000	533,000	160,000	190,000	160,000
Mercury	3.4	3.4	3.4	2,700	--	2.3*	2,700	1.8*	1.4*	2.3*
Nickel	74,300	73,000	70,900	35,000	--	36,000	39,000	37,000	40,000	33,000
Chromium, Hexavalent	--	--	3,600	--	1,050	--	--	--	--	--
Heptachlor	--	--	--	--	--	600	540	230	340	220
Carbon tetrachloride	--	--	--	61,300	--	--	--	--	--	--
Cyanide, Total	--	--	--	68,000	--	--	--	--	--	--
Naphthalene	37	35	25	--	--	--	--	--	--	--

NOTES:

1. LAQ11-12VII = Pond 11/12 aqueous composite
2. BL7VII = Pond 7 sludge
3. XTB11-12 = Trip Blank not opened in field
4. BL4VII = Pond 4 sludge composite
5. BL5VII = Pond 5 sludge composite
6. * Denotes mg/kg
7. -- Denotes none detected level
8. Information summarized from analysis completed by E.T.C. of Edison, New Jersey

TABLE 3
CWM VICKERY FACILITY
PREVIOUSLY DETECTED CONSTITUENTS

CONSTITUENT	POND 4 Aqu.	POND 4 Sl.	POND 5 Aqu.	POND 5 Sl.	POND 7 Aqu.	POND 7 Sl.	POND 11 Aqu.	POND 11 Sl.	POND 12 Aqu.	POND 12 Sl.	POND 4,5,7 Sludge Composite	Fixed Material Leachate
Benzene											*	*
bis(Chloromethyl)ether				*								
Carbon tetrachloride				*							*	*
Chlorobenzene		*	*	*	*	*	*		*		*	*
Chloroform				*							*	*
1,2-Dichloroethane											*	*
Methyl Chloride							*					
Methylene Chloride	*		*	*	*	*	*		*		*	*
1,1,2,2-Tetrachloroethane											*	*
Tetrachloroethylene		*		*							*	*
Toluene	*	*	*	*	*	*	*				*	*
1,1,1-Trichloroethane	*	*	*	*	*		*				*	*
1,1,2-Trichloroethane											*	*
Trichloroethylene			*	*	*		*				*	*
1,3-Dichlorobenzene				*		*						
Ortho-dichlorobenzene		*										
Phenol	*		*		*		*		*			
Chromium	*		*		*		*		*		*	*
Nickel	*		*		*		*		*			
Cadmium	*		*		*		*		*		*	*
Arsenic							*		*		*	
Lead							*		*		*	*
Mercury							*		*			
Cyanide							*		*			

Legend

* Indicates constituent previously Aqueous (aqu.) sample from source noted in column heading.

Reference Notes

1. Pond 4,5,7,11, and 12 aqueous sample organic constituent test results in ETC reports dated July 1983.
2. Pond 4,5,7,11, and 12 sludge sample test results in ETC report Phase VA, August 1983.
3. Pond 4,5,7,11, and 12 aqueous sample metal and ion test results from CWM site laboratory.
4. Pond 4,5 and 7 composite sludge sample test results in Battelle Columbus Laboratories report "Assessment of Waste Sludge Stabilization Alternatives," July 13, 1984.
5. Fixed Material Leachate sample test results in Battelle Columbus Laboratories report "Assessment of Waste Sludge Stabilization Alternatives," July 13, 1984.

TABLE 3
CWM VICKERY FACILITY
PREVIOUSLY DETECTED CONSTITUENTS

CONSTITUENT	POND 4 Aqu.	POND 4 Sl.	POND 5 Aqu.	POND 5 Sl.	POND 7 Aqu.	POND 7 Sl.	POND 11 Aqu.	POND 11 Sl.	POND 12 Aqu.	POND 12 Sl.	POND 4,5,7 Sludge Composite	Fixed Material Leachate
Benzene											*	*
bis(Chloromethyl)ether				*								
Carbon tetrachloride				*							*	*
Chlorobenzene		*	*	*	*	*	*		*		*	*
Chloroform				*							*	*
1,2-Dichloroethane											*	*
Methyl Chloride							*					
Methylene Chloride	*		*	*	*	*	*		*		*	*
1,1,2,2-Tetrachloroethane											*	*
Tetrachloroethylene		*		*							*	*
Toluene	*	*	*	*	*	*	*				*	*
1,1,1-Trichloroethane	*	*	*	*	*		*				*	*
1,1,2-Trichloroethane											*	*
Trichloroethylene			*	*	*		*				*	*
1,3-Dichlorobenzene				*		*						
Ortho-dichlorobenzene		*										
Phenol	*		*		*		*		*			
Chromium	*		*		*		*		*		*	*
Nickel	*		*		*		*		*			
Cadmium	*		*		*		*		*		*	*
Arsenic							*		*		*	
Lead							*		*		*	*
Mercury							*		*			
Cyanide							*		*			

Legend

* Indicates constituent previously Aqueous (aqu.) sample from source noted in column heading.

Reference Notes

1. Pond 4,5,7,11, and 12 aqueous sample organic constituent test results in ETC reports dated July 1983.
2. Pond 4,5,7,11, and 12 sludge sample test results in ETC report Phase VA, August 1983.
3. Pond 4,5,7,11, and 12 aqueous sample metal and ion test results from CWM site laboratory.
4. Pond 4,5 and 7 composite sludge sample test results in Battelle Columbus Laboratories report "Assessment of Waste Sludge Stabilization Alternatives," July 13, 1984.
5. Fixed Material Leachate sample test results in Battelle Columbus Laboratories report "Assessment of Waste Sludge Stabilization Alternatives," July 13, 1984.

ATTACHMENT

1.	May 5. 1985	Respondent shall implement the Inspection Program for PCB-contaminated fixed sludge as described in Attachment A of the CAFO.
2.	May 5, 1985	Respondent shall submit the scope of work for the services of a third party consultant and the identity of the proposed consultant who will be retained to perform an environmental audit of waste operations and environmental management systems at the facility and in the Respondent's corporate Environmental Management Department as they affect RCRA and TSCA compliance at the Vickery facility.
3.	June 4, 1985	Respondent shall perform a waste characterization analysis for the constituents listed in Attachment C of the CAFO on the following samples: a. Composite aqueous sample from Ponds 11 and 12; b. Composite sludge samples from Pond 4; c. Composite sludge samples from Pond 5; and d. A sludge sample from Pond 7.
4.	June 4, 1985	Respondent shall submit a workplan for the Bedrock, Lacustrine and Till monitoring wells to be installed at the approximate locations shown on Attachments D and E of this CAFO.
5.	June 4, 1985	Respondent shall submit a closure plan for either Pond 11 or 12; whichever one will be emptied in accordance with the CAFO.
6.	June 30, 1985	Respondent shall submit a copy of the Audit report of RCRA and TSCA compliance at the facility completed pursuant to the State Consent Decree.
7.	July 1, 1985	Respondent shall submit a copy of its annual PCB report for the previous calendar year, prepared pursuant to 40 U.S.C. §761.180. These reports are due July 1 of each calendar year.
8.	July 4, 1985	Respondent shall submit a list of the constituents identified in the waste characterization required in No. 3, as well as a list of constituents listed in Attachment C of the CAFO which have previously been detected at the facility.
9.	90 days after approval of Groundwater Monitoring Workplan	Respondent shall install Bedrock wells, MW14-R and MW19-R to MW24-R, Lacustrine wells, L-14, L-19 to L-23, and L-26 to L-35, Till wells, T-14, T-19, T-23, T-24, and T-27.

10.	90 days after excavation of fixed sludge, soil and rip-rap from Ponds 4, 5, and 7.	Respondent shall install Bedrock wells MW-15R, MW-16R, Lacustrine Wells L-15 and L-16.
11.	90 days after removal of the clay liner beneath the temporary stockpile.	Respondent shall install Bedrock wells MW-17R, MW-18R, Lacustrine wells L-17, L-18, L-25, Till Wells T-17 and T-18.
12.	60 days after installation of each group of wells listed above.	Respondent shall sample that group of wells according to the Initial Groundwater Program described in the CAFO.
13.	30 days after the Respondent receives final results of the set of analyses.	Respondent shall submit the results of such analyses and the reports required by 40 CFR 265.93(d)(5).
14.	November 24, 1985	Respondent shall not accept waste from offsite until November 24, 1985, or until the inventory of waste Ponds 11 and 12 has been reduced to 50 million gallons, whichever is later.
15.	July 1, 1986	Within one year after agreement on the scope of work for the environmental audit, the consultant must submit the report to the Respondent and the Respondent shall notify the U.S. EPA upon receipt of the report.
16.	September 29, 1986	Respondent shall submit report containing the consultants recommendation concerning the environmental audit and the actions that will be taken.

ETC ENVIRONMENTAL TESTING and CERTIFICATION

28

FEDERAL CONSENT AGREEMENT
WASTE CHARACTERIZATION
SITE 490

Ponds 4, 5, 7, 11, 12

SUMMARY REPORT

August, 1985

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SITE 490
WASTE CHARACTERIZATION STUDY
March 6 and April 1, 1985

BACKGROUND

This report summarizes the waste characterization study stipulated in the April 4, 1985 Federal Consent Agreement between Chemical Waste Management and the U. S. Environmental Protection Agency. The sampling program was conducted at the Site 490 facility located in Vickery, Ohio on March 6 and April 1 under the direction of Michael Bonomo of ETC.

Analysis for constituents (Appendix VII) as listed in Attachment C of the Consent Agreement was undertaken on the following samples:

- Composite aqueous sample from Ponds 11 & 12;
- Composite sludge sample from Pond 4;
- Composite sludge sample from Pond 5; and
- Sludge sample from Pond 7.

Table I lists the ETC sample numbers, sample code IDs and sampling locations.

The laboratory's best effort was undertaken to complete all analysis for these samples, however because of sample matrix complexity, some of the parameters could not be determined. The analysis not completed include cyanide, hexavalent chromium and acrylamide and acetonitrile.

* Acrylamide and acetonitrile would be analyzed by Direct Aqueous Injection HPLC. The matrices were too complex to perform this analysis.

* Cyanide was indeterminant since this inorganic is very unstable at low pH. The typical pH of these samples was <1.

* Hexavalent chromium analyses was performed on the trip blank and one aqueous sample collected from Pond 11 and 12. Sample unstability precluded the hexavalent chromium analysis of the remaining samples.

There are different systems of nomenclature for compounds. The list below compares the reported format to the requested format:

Requested	Reported
Dichloropropanol	1,3-dichloro-2-propanol
1,1,2-Trichloro 1,2,2-trifluoroethane	Freon TF
o-dichlorobenzene	1,2-dichlorobenzene
p-dichlorobenzene	1,3-dichlorobenzene
m-dichlorobenzene	1,4-dichlorobenzene

TABLE I

SAMPLE POINT CODES & LOCATIONS

ETC Code	Sample point ID	Comment
H2757 H4605 H4606	BL-5-VII	Pond 5 Sludge - a lab composite sample of sludge from four different locations. Appendix VII Analysis in Triplicate
H2756 H4604	BL-4-VII	Pond 4 Sludge - a lab composite sample of sludge from four different locations. Appendix VII Analysis in Duplicate
H2754	XTB11-12	Trip Blank - Aqueous - Appendix VII Analysis of Trip Blank.
H2753 H4607 H4608	LAQ11-12VII	Pond 11/12 Aqueous - a lab composite of prefiltered aqueous samples from Pond 11 and Pond 12. Appendix VII analysis in Triplicate.
H2755	BL-7-VII	Pond 7 - Sludge - Appendix VII Analysis.

FIELD METHODOLOGY

A sludge sample was collected from Lagoon 7 on March 6 by Mr. Mike Curry of Chemical Waste Management Inc., under the direct supervision of Mr. Michael Bonomo. A new, cleaned stainless steel tablespoon was used to collect a sample from the edge of the lagoon (see Figure 1). The sample was placed in a clean 1 liter amber bottle provided by ETC. The sample was placed in a Sample Shuttle with frozen ice packs and returned to the ETC laboratory.

The sludge samples from Lagoons 4 and 5 and the aqueous samples from Lagoons 11 and 12 were collected on April 1, 1985. Samples were collected under Michael Bonomo's supervision with the assistance of Mr. Bill Roarback of Chemical Waste Management Inc. A total of four grab samples were collected from different locations in Lagoon 4 and four grabs were collected from Lagoon 5 (see Figure 1). A bucket was used to collect sample material. A new, cleaned stainless steel tablespoon was then used to withdraw sample from the middle of the backhoe bucket. The sample was placed in a clean 1 liter amber bottle and 40ml vial provided by ETC. The samples were placed in a Sample Shuttle with frozen ice packs. Chain-of-custody procedures were followed and samples from Lagoon 5 were composited at ETC. Quality control splits were made from the composites.

Liquid samples were taken from Lagoons 11 and 12 as follow

Lagoon 11 - Sample Point ID LAQ11 was taken from inside pumph No. 1 at pump 116 before filtering. Preservativ were added immediately, the sample bottles were placed in a Shuttle with frozen ice packs, sea and held for express shipment to ETC.

Lagoon 12 - Sample Point ID LAQ12 was taken from the Fi Building at pump 203 before the polish fil Preservatives were added immediately as r the sample bottles were placed in a Shut frozen ice packs, sealed, and held for shipment to ETC.

Samples were shipped to ETC and composited laboratory for analysis. An equal proportion c from these samples coded as LAQ11-12 VII. Qua were made from the composites.

A trip blank was prepared by ETC. Samp for Appendix VII analysis were filled with the lab. Samples were shipped to and fro with the samples collected on April 1. T blank is to determine whether samples ar transport, on the site or in the lab.

CHAIN-OF-CUSTODY DOCUMENTATION

Chain-of-Custody and the associated documentation was maintained for each sample which includes the chain-of-custody form (CC1) and field information form (CC2). ETC Sample Shuttles were used to maintain custody from the time the containers left the ETC laboratory in Edison, New Jersey until they were returned to the same location. Shuttles were sealed at the laboratory with a numbered ETC seal and the seal was broken at the Vickery site prior to sample collection. Use of this seal guarantees the integrity of the Shuttle contents during shipment.

Once a person had the sample or sample bottles under custody, they were at all times

- in his/her actual possession; or
- in his/her view, after being in actual possession; or
- in his/her actual possession and then placed in a locked or otherwise secure place to which any access by others was fully recorded.

Before leaving the site, the Shuttles were sealed with a numbered ETC seal and the seal number recorded on the chain-of-custody form. These seals were broken upon receipt at ETC, the seal number verified, and the internal chain-of-custody maintained. All chain-of-custody records are presented in the data reports for each sample.

METHODOLOGY FOR ANALYSIS OF APPENDIX VII PARAMETERS

The methods employed in the analysis of specific compounds in Appendix VII are based on the second edition (July 1982) of EPA Manual SW-846 "Test Methods for Evaluating Solid Waste". Since the manual is deficient in details on how the complete analysis of Appendix VII compounds can be performed, ETC devised an analytical scheme that divides the compounds into eleven categories. Two of these categories: unstable compounds and exotic compounds, have been excluded from requirements for Site 490 by the Attachment C of the Consent Agreement. Within the nine categories of compounds that can be specifically analyzed, not all the reference standards are readily available. Those unavailable compounds are footnoted in the technical report results tables. In the GC/MS analyses we were able to search for the specific compounds that did not have corresponding reference standards by using standard spectra from the literature. For GC and HPLC analyses, where retention time characteristics are the only means of identifying the compounds, ETC was unable to draw conclusions for those compounds where corresponding reference standards were not available at the time of analysis. These procedures are in full accord with the USEPA SW-846 analytical procedures and either meet or exceed these regulations.

In each category rigid compliance with the instrument parameters and performance criteria of established EPA methods, such as those in methods 624 and 625, was achieved before any sample analysis was initiated. For GC/MS analysis where standard were available, identification was performed using relative retention times, the relative abundance of three characteristic ions and the abundance ratios. The entire mass spectrum was reviewed to confirm each identification. Quantitative analys was performed using an internal standard with a single characteristic ion. When compounds without a correspondin reference standard were identified, they were quantified the same response factor as the internal standard (i.e. factor of one).

VOLATILE COMPOUNDS BY PURGE AND TRAP GC/MS

For the analysis of purge and trap volatile co Methods 8240 and 5030 were used. The analysis car as follows: a 1 gram aliquot of sample is placed designed sample chamber and heated to 40°C. A r helium is purged through the chamber which con purgeable compounds in the vapor phase. The through a sorbent column where the organic c After the purge cycle is complete, the sorb and backflushed with helium to desorb the a gas chromatographic column. The gas ch temperature programmed to separate the separated purgeable components are then using a computerized mass spectrometer

WATER SOLUBLE COMPOUNDS BY DIRECT AQUEOUS INJECTION GC/MS

The analysis of water soluable compounds can be summarized as follows: a 1 gram aliquot of sample is extracted using 1 ml of water. Four ml of the aqueous extract is injected directly into the GC/MS system. The chromatographic column employed in the procedure is the same column used for the purge and trap analysis. MS scanning was begun prior to sample injection to capture mass intensity data for early eluting compounds. The GC oven temperature program used was that specified in procedure 8240.

EXTRACTABLE ACID, BASE/NEUTRAL AND PESTICIDE COMPOUNDS BY GC/MS

For the analysis of the Acid, Base/Neutral and Pesticide compounds in non-aqueous media, the analysis can be summarized as follows: a measured weight of sample, approximately thirty grams, is mixed with approximately sixty grams of sodium sulfate. The pH of the sample is then adjusted to between 5 and 9 and extracted with an aliquot of 1:1 methylene chloride/acetone. The mixture is subjected to vacuum filtration with a Buchneer funnel and the filtrate collected in an Erlenmyer flask. The extraction is repeated twice more. A homogenizer is used to mix the sample and solvent. The sample extract is concentrated and filtered through the gel permeation chromatography clean-up. After clean-up, the tract is concentrated to a 10 ml final volume. A 1 ml aliquot is packaged for GC/MS.

GC ANALYSIS OF PESTICIDES

The methods employed in the analysis of your sample for herbicides and pesticides are established EPA methods taken from the "Manual of Analytical Methods for the Analysis of Pesticides in Humans and Environmental Samples," June, 1980 and methods 8050, 8140 and 8150.

The pesticide method can be summarized as follows: a measured weight of sample, approximately thirty grams, is mixed with approximately sixty grams of sodium sulfate. The pH of the sample is then adjusted to between 5 and 9 and extracted with an aliquot of 1:1 methylene chloride/acetone. The mixture is subjected to filtration with a Buchneer funnel and the filtrate collected in an Erlenmyer flask. The extraction is repeated twice more. A homogenizer is used to mix the sample and solvent. The sample extract is concentrated and filtered through the gel permeation chromatography clean-up. An aliquot is filtered through an alumina column clean-up with glass wool. The final volume in 20ml.

ANALYSIS OF METALS

The determination of silver, beryllium, cadmium, chromium, copper, nickel, antimony, lead and zinc in sediment samples is performed according to methods published by EPA in "Interim Methods for the Sampling and Analysis of Priority Pollutants in Sediments and Fish Tissue", EPA 600/4-81-055, October 1980. Mercury is determined according to sediment method published by EPA in "Method for Chemical Analysis of Water and Wastes", EPA 600/4-79-020, March 1979. Arsenic, selenium and thallium are determined by furnace AA using nitric acid in a closed decomposition vessel for sample digestion.

ANALYSIS BY HPLC

The analysis of thermally unstable and polar compounds are based on the HPCL methods 8320 and 8330. The compounds analyzed fall into two categories: direct aqueous injection and Base/Neutral extractables. Twenty micro liters of the sample or extract is injected into an HPCL equipped with a reverse phase column. Gradient elution and UV detector at 210 and 250 nm are used.

CONVENTIONAL

Total cyanide analysis is performed using Method 9010.

SUMMARY OF QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES (QA/QC)

ETC bases its quality assurance protocols on the following government guidelines:

- "Handbook for Analytical Quality Control in Water and Wastewater Laboratories", EPA-600/4-79-019, March, 1979;
- National Enforcement Investigation Center Policies and Procedures manual, EPA-330/9/79-001-R, October 1979;
- The recommended guidelines for EPA Methods 624 and 625. (Federal Register, December 3, 1979, updated on October 26, 1984);
- "Manual of Analytical Methods for the Analysis of Pesticides in Humans and Environmental Samples," EPA 600/8-80-038, June 1980; and
- "Determination of 2,3,7,8-TCDD in Soil and Sediment: EPA, Region VII, Kansas City, September 1983.
- Organic Analysis: Multi-media, Multi Concentration IFB WA84-A267
- Dioxin Analysis: Soil/Sediment Matrix; Multi-Concentration; Selection Ion Monitoring with Jar Extraction Procedure-IFB WA84-A002

However, we have modified our protocols to provide a higher level of QA/QC than the guidelines require. For example, we analyze a higher than required number of quality control samples and we especially pay careful attention to the certification of the "reference standard" compounds we use in analysis. In the following text the key QA/QC elements for the methods are listed.

In addition, for this project, replicate samples were analyzed to evaluate the analytical precision. The aqueous sample from Ponds 11 and 12 was analyzed in triplicate. The Pond 5 sludge was analyzed in triplicate, and the Pond 4 sludge was analyzed in duplicate.

ANALYSIS OF VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY MASS SPECTROMETRY

- Each batch of 13 samples consists of 9 customer samples (at a maximum), one blank sample, one spiked blank, one spiked sample and one replicate sample. This amounts to a 30% quality control factor.

- Three surrogate compounds are added to each sample in the batch of 13.

- A blind quality control sample is introduced to the laboratory for analysis on a weekly basis.

- Each GC/MS is checked and retuned, if necessary, at the beginning of each day to ensure that its performance on bromofluorobenzene (BFB) meets the EPA criteria.

- A calibration curve for quantitation is prepared using a mixture of Volatile Organic Priority Pollutant "standards" at a minimum of 3 different concentrations and using a mixture of 3 internal standards at a constant concentration.

- The calibration curve is verified with a mixture of priority pollutant standards every day. If the response factors vary greater than 25%, the instrument must be recalibrated.

ANALYSIS OF ORGANIC COMPOUNDS EXTRACTED IN ACID OR BASE/NEUTRAL SOLUTION BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY

- Each batch of 20 samples consists of 16 customer samples (at a maximum), one blank sample, one spiked blank (for water matrices), one sample spiked with the priority pollutant standard mixture and a duplicate customer sample. This amounts to a 20% quality control factor.

- Three surrogate compounds are added to each sample in the batch for Base/Neutral analysis.

- Three surrogate compounds are added to each sample in the batch for Acid analysis.

- A blind quality control sample is introduced to the laboratory for analysis on a weekly basis.

- Each GC/MS is checked and retuned, if necessary, at the beginning of each day to ensure that its performance on decafluorotriphenylphosphine (DFTPP) meets EPA criteria.

- A calibration curve for quantitation is prepared using a mixture of standards composed of either the Organic Acid or Base/Neutral Extractable Compounds at a minimum of 3 concentrations and using five internal standards for quantitiation.

ANALYSIS OF METALS

ALL SAMPLES

- New standards are prepared for each batch of samples.
- Normal calibration is performed using a blank sample and four standards that have been through the sample preparation procedure. A regression analysis is used to construct the calibration curve.
- All EP Toxicity samples and all samples determined by furnace atomic absorption are calculated by the "method of additions".
- For each sample analysis that requires the use of the "method of additions" technique, a three point calibration is performed using U.S. EPA "Methods for Chemical Analysis of Water Wastes, 1979". Results are obtained using linear regression analysis. Any regression with a coefficient of correlation below 0.990 is considered suspect, necessitating review of calibration data or sample re-analysis.
- In constructing the normal calibration curves the lowest concentration levels we use are values greater than or equal to 5 times the Instrumental Detection Limit (IDL).
- All calibration standards are analyzed in duplicate, at a minimum.
- Independent reference standards are used to check the accuracy of calibration standards.
- A check standard is analyzed every ten samples to validate the normal calibration curve.
- One customer sample out of every ten is analyzed in triplicate.

HOMOGENEOUS SAMPLES (EXCEPT FOR MERCURY ANALYSIS)

Samples are analyzed in batches of 30 or less. For batches in which the sample matrices are homogeneous, the QC program is a minimum of 25% and consists of analyzing:

- 3 Sets of triplicate analyses;
- 2 Replicate spikes;
- 1 Independent reference standard;
- 4 Calibration standards (processed using the sample preparation method);
- 4 Calibration standards (without sample preparation); and
- 1 Reagent Blank.

HETEROGENEOUS SAMPLES (EXCEPT FOR MERCURY ANALYSIS)

Samples are analyzed in batches of 30 or less. For batches in which the sample matrices are heterogeneous, the QC program is a minimum of 35% and consists of analyzing:

- 3 sets of triplicate analyses;
- 2 Replicate spikes;
- 1 Replicate independent reference standards;
- 4 Calibration standards (processed using the sample preparation method);
- 1 Procedural Blank;
- 4 Calibration standards (without sample preparation); and
- 1 Reagent Blank.

ANALYSIS OF MERCURY

To analyze samples for mercury we group them by matrix batches of 30 or less. Our QC program is a minimum of 30% and consists of analyzing:

- Each of the 30 customer samples in duplicate;
- 3 Sets of triplicate analyses;
- 2 Replicate spikes;
- 2 Replicate independent reference standards;
- 10 Calibration standards (processed using the sample preparation method); and
- 2 Procedural Blanks.

ANALYSIS OF PESTICIDES, HERBICIDES AND PCB'S BY GAS CHROMATOGRAPHY

Pesticide, herbicide and PCB samples are grouped in batches of 16 customer samples or less according to the type of analysis to be performed. The QC program for each of these three types of analyses is a minimum of 20% and consists of analyzing:

- 1 Procedural blank samples (a reagent blank is analyzed in the case of non-water matrices);
- 1 Spiked blank sample (the spiked blank is elminated in the case of non-water matrices);
- 1 Replicate sample;
- 1 Replicate spiked sample; and

- 1 Known reference QC sample for at least 100 samples analyzed.

The instrument is calibrated each run with three standards, and checked every 10 samples.

ANALYSIS OF CYANIDES, PHENOLS, FLUORIDE, CHLORIDE, NITRATE AND NITRITE

- All parameters are analyzed using a Technicon Autoanalyzer II GT.

- 3 Calibration standards are analyzed at the beginning and end of each batch.

- Each batch (up to 80 samples) consists of analyzing one blank, one spiked blank, one duplicate and spiked sample every 20 samples, and an EPA known reference sample.

ANALYSIS OF TOTAL CARBON (TOC)

TOC samples are analyzed on a daily basis with the number of samples analyzed per day dependent on the request for duplicate or quadruplicate analyses. The quality control program is designed to maintain the appropriate amount of QC and consists of the following elements:

- Daily instrument calibration

- One blank

- Standard recalibration every 10 samples

- Spiked samples at a low and high level

- Every sample is run in duplicate at a minimum

ANALYSIS OF TOTAL ORGANIC HALIDE (TOX)

- Blank reagent water for absolute carbon background must contain less than 5 ug/l of halide (as chloride).

- Using a trichlorophenol standard, the mean adsorption efficiency must be within +/- 15% of standard value.

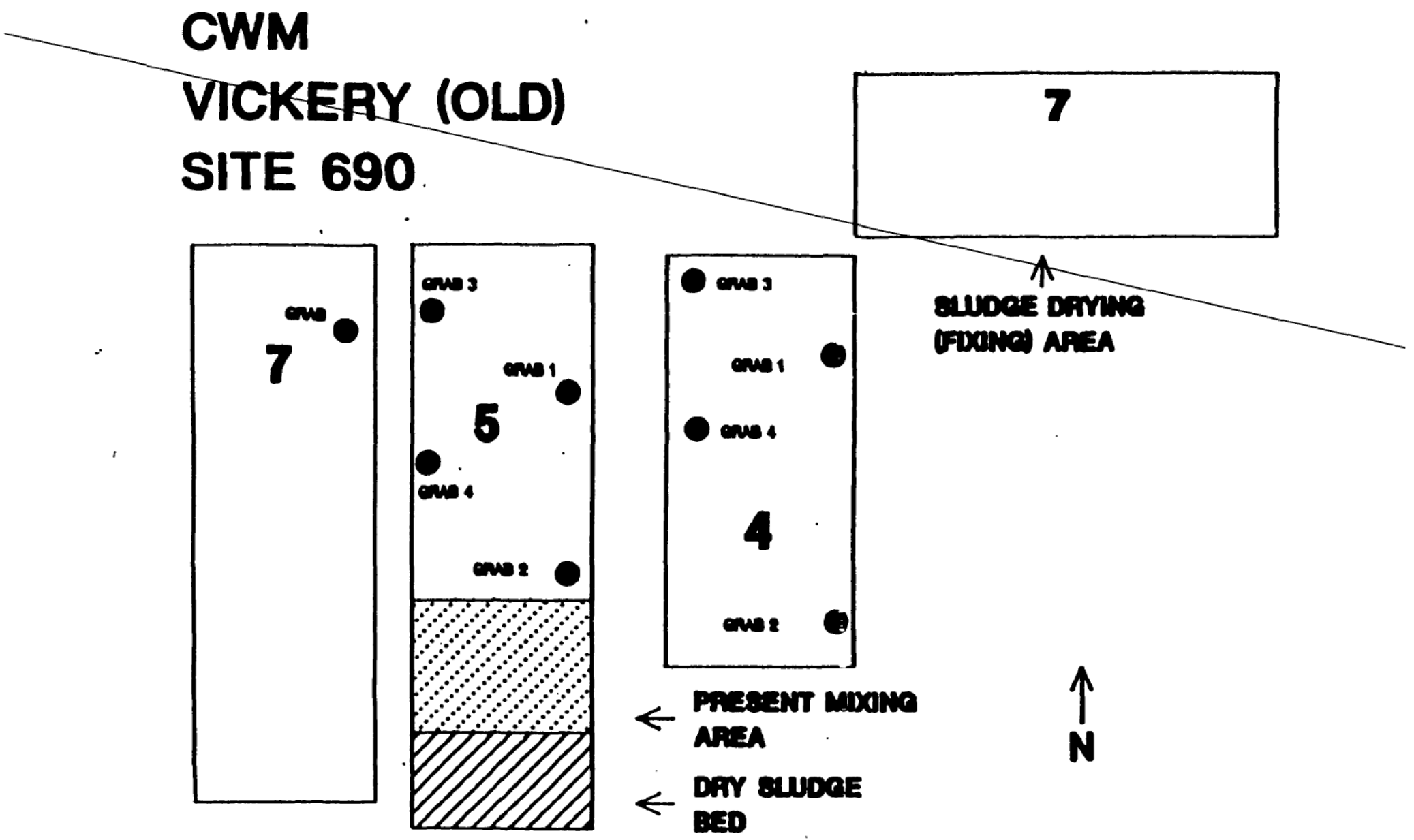
- Calibration standards are run every 10 samples.

- Every sample is run in duplicate at a minimum.

SUBCONTRACTOR QA/QC

Chyun was contracted to analyze the trip blank and the aqueous sample from Ponds 11 and 12 for hexavalent chromium. The subcontractor is required to maintain an appropriate level of quality control and is required to submit to ETC the quality control data for analyses performed. The data is kept on file at ETC. In general, the amount of quality control required is one duplicate sample with one spike sample for every ten analyses.

FIGURE 1


CWM
VICKERY (OLD)
SITE 690
7
SLUDGE DRYING
(FIXING) AREA
7
GRAB
5
GRAB 3
GRAB 1
GRAB 4
GRAB 2
4
GRAB 3
GRAB 1
GRAB 4
GRAB 2
PRESENT MIXING
AREA
DRY SLUDGE
BED
N

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT STATUS REPORT

For

WASTE MANAGEMENT, INC.

490

APRIL, 1985

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

DATE: 08/28/85
PAGE: 1

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490		See Below
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

Ponds 11/12

Sample Points, Sampling Dates, and ETC Sample No.'s

arameters	Units	AQ11-12VIIL 850401 H2753	AQ11-12VIIL 850401 H4607	AQ11-12VIIL 850401 H4608	TB11-12 850401 H2754				
scellaneous Parameters									
,1,1,2-Tetrachloroethane	ug/l	< 10	< 10	< 10	< 10				
,1,1-Trichloroethane	ug/l	83	82	75	< 10				
,1,2,2-Tetrachloroethane	ug/l	< 10	< 10	< 10	< 10				
,1,2-Trichloroethane	ug/l	< 10	< 10	< 10	< 10				
,1,2-trichloropropane	ug/l	< 10	< 10	< 10	< 10				
,1-Dichloroethylene	ug/l	< 10	< 10	< 10	< 10				
,2,2-trichloropropane	ug/l	ND	ND	ND	ND				
,2,3,4-tetrachlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,2,3,5-tetrachlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,2,3-Trichlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,2,3-Trichloropropane	ug/l	< 10	< 10	< 10	< 10				
,2,4,5-Tetrachlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,2,4-Trichlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,2-Dichlorobenzene	ug/l	26	< 10	60.1	< 10				
,2-Dichloroethane	ug/l	16	17	16	< 10				
,3,5-Trichlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,3-Dichlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,3-dichloro-2-Propanol	mg/l	< 50	< 50	< 50	< 1				
,4-Dichlorobenzene	ug/l	< 10	< 10	< 10	< 10				
,4-Naphthoquinone	ug/l	< 10	< 10	< 10	< 10				
,3,4,5-tetrachlorophenol	ug/l	< 25	< 25	< 25	< 25				
,3,4,6-Tetrachlorophenol	ug/l	< 25	< 25	< 25	< 25				
,3,5,6-tetrachlorophenol	ug/l	< 25	< 25	< 25	< 25				
,4,5-Trichlorophenol	ug/l	< 25	< 25	< 25	< 25				
,4,6-Trichlorophenol	ug/l	< 10	< 10	< 10	< 10				
,4-Dichlorophenol	ug/l	< 10	< 10	< 10	< 10				
,4-Dimethylphenol	ug/l	18	16.3	18.5	< 10				
~~,4-Dinitrophenol~~	ug/l	< 10	< 10	< 10	< 10				
,4-Dinitrotoluene	ug/l	< 10	< 10	< 10	< 10				
,6-Dichlorophenol	ug/l	< 25	< 25	< 25	< 25				
-Chlorophenol	ug/l	< 10	< 10	< 10	< 10				
-Picoline	ug/l	13	16	28	< 10				
,6-Dinitro-o-cresol	ug/l	< 10	< 10	< 10	< 10				
-Nitrophenol	ug/l	< 10	< 10	< 10	< 10				

otnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

DATE: 08/28/85
PAGE: 2

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

		Sample Points, Sampling Dates, and ETC Sample No.'s							
arameters	*Units*	L AQ11-12VII 850401 H2753	L AQ11-12VII 850401 H4607	L AQ11-12VII 850401 H4608	K TB11-12 850401 H2754				
cenaphthalene	ug/l	< 10	< 10	< 10	< 10				
crylonitrile	ug/l	< 100	< 100	< 100	< 100				
niline	ug/l	2100	2460	3600	< 10				
ntimony	ug/l	6700	7000	7000	< 100				
rsenic	ug/l	200000	138000	136000	< 10				
enz[a]anthracene	ug/l	< 10	< 10	< 10	< 10				
enzene	ug/l	< 10	< 10	< 10	< 10				
enzo(a)pyrene	ug/l	< 10	< 10	< 10	< 10				
enzo[b]fluoranthene	ug/l	< 10	< 10	< 10	< 10				
enzyl chloride	ug/l	< 10	< 10	< 10	< 10				
admium	ug/l	1560	1710	1630	< 4				
arbon disulfide	ug/l	< 10	< 50	< 50	< 10				
arbon tetrachloride	ug/l	< 10	< 10	< 10	< 10				
hlordane	ug/l	< 100	< 100	< 100	< 100				
hloroacetaldehyde	mg/l	< 50	< 50	< 50	< 20.0				
hlorobenzene	ug/l	113	113	108	< 10				
hloroform	ug/l	39	40	38	< 10				
hromium	ug/l	360000	373000	377000	40				
hromium, Hexavalent	ug/l	3600	-	-	< 10				
hrysene	ug/l	< 10	< 10	< 10	< 10				
ibenz[a,h]anthracene	ug/l	< 10	< 10	< 10	< 10				
iphenylamine	ug/l	< 10	< 10	< 10	< 10				
luoranthene	ug/l	< 10	< 10	< 10	< 10				
reon TF	ug/l	< 10	< 10	< 10	< 50				
eptachlor	ug/l	< 10	< 10	< 10	< 10				
exachlorobenzene	ug/l	< 10	< 10	< 10	< 10				
exachlorobutadiene	ug/l	< 10	< 10	< 10	< 10				
exachlorocyclopentadiene	ug/l	< 10	< 10	< 10	< 10				
exachloroethane	ug/l	< 10	< 10	< 10	< 10				
ndeno(1,2,3-cd)pyrene	ug/l	< 10	< 10	< 10	< 10				
sobutanol	mg/l	< 50	< 50	< 50	< 1				
ead	ug/l	4900	5100	5100	< 90				
ercury	ug/l	3.4	3.4	3.4	< .2				
ethanol	mg/l	179	< 50	1950	< 10.0				
ethyl chloride	ug/l	57	61	52	< 10				
ethyl ethyl ketone	ug/l	87	836	< 50	< 50				
ethylene chloride	ug/l	749	1032	1230	< 10				

otnotes. BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

DATE: 08/28/85
PAGE: 3

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

		Sample Points, Sampling Dates, and ETC Sample No.'s							
		L AQ11-T2VIIL 850401 H2753	L AQ11-T2VIIL 850401 H4607	L AQ11-T2VIIK 850401 H4608	TB11-T2 850401 H2754				
arameters	*Units*								
aphthalene	ug/l	25	35	37	< 10				
ickel	ug/l	70900	73000	74300	< 30				
itrobenzene	ug/l	< 10	< 10	< 10	< 10				
entachlorophenol	ug/l	< 10	< 10	< 10	< 10				
henol	ug/l	7430	8590	6360	< 10				
yridine	mg/l	< 50	< 50	< 50	< 1.00				
etrachloroethylene	ug/l	40	14	12	< 10				
oluene	ug/l	55	56	54	< 10				
oluene-2,4-Diamine	ug/l	< 25	< 25	< 25	< 25				
oxaphene	ug/l	< 250	< 250	< 250	< 250				
richloroethylene	ug/l	40	41	36	< 10				
richlorofluoromethane	ug/l	< 10	< 10	< 10	< 10				
inyl chloride	ug/l	< 10	< 10	< 10	< 10				
is(2-Chloroethyl) ether	ug/l	< 10	< 10	< 10	< 10				
is(Chloromethyl)ether	ug/l	< 10	< 10	< 10	< 10				
+p-Cresol	ug/l	116	90	178	< 25				
-Dinitrobenzene	ug/l	< 10	< 10	< 10	< 10				
-phenylenediamine	ug/l	< 25	< 25	< 25	< 25				
-Cresol	ug/l	< 25	39	72	< 25				
-phenylenediamine	ug/l	< 25	< 25	< 25	< 25				
-Chloro-m-cresol	ug/l	< 10	18.6	20.1	< 10				
-phenylenediamine	ug/l	< 25	< 25	< 25	< 25				

otnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

DATE: 08/28/85
PAGE: 1

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

		Pond 4		Sample Points, Sampling Dates, and ETC Sample No.'s	Pond 3				
arameters	*Units*	B L4VII 850401 H2756	B L4VII 850401 H4604	B L5VII 850401 H2757	B L5VII 850401 H4605	B L5VII 850401 H4606			
scellaneous Parameters									
,1,1,2-Tetrachloroethane	ug/kg	<50000	<50000	<50000	<50000	<50000			
,1,1-Trichloroethane	ug/kg	192000	160000	118000	<50000	106000			
,1,2,2-Tetrachloroethane	ug/kg	<50000	<50000	<50000	<50000	<50000			
,1,2-Trichloroethane	ug/kg	<50000	<50000	<50000	<50000	<50000			
,1,2-trichloropropane	ug/kg	<50000	<50000	<50000	<50000	<50000			
,1-Dichloroethylene	ug/kg	<50000	<50000	<50000	<50000	<50000			
,2,2-trichloropropane	ug/kg	ND	ND	ND	ND	ND			
,2,3,4-tetrachlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,2,3,5-tetrachlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,2,3-Trichlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,2,3-Trichloropropane	ug/kg	<50000	<50000	<50000	<50000	<50000			
,2,4,5-Tetrachlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,2,4-Trichlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,2-Dichlorobenzene	ug/kg	22600	19700	28300	23700	36200			
,2-Dichloroethane	ug/kg	269000	232000	<50000	<50000	<50000			
,3,5-Trichlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,3-Dichlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,3-dichloro-2-Propanol	mg/kg	< 100	< 100	< 100	< 100	< 100			
,4-Dichlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
,4-Naphthoquinone	ug/kg	<16500	<16500	<16500	<16500	<16500			
,3,4,5-tetrachlorophenol	ug/kg	<16500	<16500	<16500	<16500	<16500			
,3,4,6-Tetrachlorophenol	ug/kg	<41250	<41250	<41250	<41250	<41250			
,3,5,6-tetrachlorophenol	ug/kg	<16500	<16500	<16500	<16500	<16500			
,4,5-Trichlorophenol	ug/kg	<16500	<16500	<16500	<16500	<16500			
,4,6-Trichlorophenol	ug/kg	<41250	<41250	<41250	<41250	<41250			
,4-Dichlorophenol	ug/kg	<41250	<41250	<41250	<41250	<41250			
,4-Dimethylphenol	ug/kg	<41250	<41250	<41250	<41250	<41250			
,4-Dinitrophenol	ug/kg	< 412500	< 412500	< 412500	< 412500	< 412500			
,4-Dinitrotoluene	ug/kg	<16500	<16500	<16500	<16500	<16500			
6-Dichlorophenol	ug/kg	<41250	<41250	<41250	<41250	<41250			
Chlorophenol	ug/kg	<41250	<41250	<41250	<41250	<41250			
Picoline	ug/kg	<16500	<16500	<16500	<16500	<16500			
6-Dinitro-o-cresol	ug/kg	< 412500	< 412500	< 412500	< 412500	< 412500			
Nitrophenol	ug/kg	<41250	<41250	<41250	<41250	<41250			

tnotes. BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

		Sample Points, Sampling Dates, and ETC Sample No.'s							
Parameters	*Units*	B L4VII 850401 H2756	B L4VII 850401 H4604	B L5VII 850401 H2757	B L5VII 850401 H4605	B L5VII 850401 H4606			
Acenaphthene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Acrylonitrile	ug/kg	<500000	<500000	<500000	<500000	<500000			
Aniline	ug/kg	<16500	<16500	<16500	<16500	<16500			
Antimony	ug/kg	40000	40000	50000	50000	60000			
Arsenic	ug/kg	63000	66000	100000	82000	76000			
Benz[a]anthracene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Benzene	ug/kg	<50000	<50000	<50000	<50000	<50000			
Benzo(a)pyrene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Benzo[b]fluoranthene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Benzyl chloride	ug/kg	<16500	<16500	<16500	<16500	<16500			
Cadmium	ug/kg	2000	2000	1000	1000	1000			
Carbon disulfide	ug/kg	<50000	<50000	<50000	<50000	<50000			
Carbon tetrachloride	ug/kg	<50000	<50000	<50000	<50000	<50000			
Chlordane	ug/kg	< 67	< 67	< 67	< 67	< 67			
Chloroacetaldehyde	mg/kg	< 100	< 100	< 100	< 100	< 100			
Chlorobenzene	ug/kg	1316000	1230000	1168000	521000	1099000			
Chloroform	ug/kg	137840	119580	84920	<50000	79690			
Chromium	ug/kg	258000	306000	169000	197000	201000			
Chrysene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Dibenz[a,h]anthracene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Diphenylamine	ug/kg	<16500	<16500	<16500	<16500	<16500			
Fluoranthene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Freon TF	ug/kg	<50000	<50000.0	<50000	<50000	<50000			
Heptachlor	ug/kg	600	540	220	230	340			
Hexachlorobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Hexachlorobutadiene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Hexachlorocyclopentadiene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Hexachloroethane	ug/kg	<16500	<16500	<16500	<16500	<16500			
Indeno(1,2,3-cd)pyrene	ug/kg	<16500	<16500	<16500	<16500	<16500			
Isobutanol	mg/kg	< 100	< 100	< 100	< 100	< 100			
Lead	ug/kg	450000	533000	160000	160000	190000			
Mercury	ug/kg	2300	2700	2300	1800	1400			
Methanol	mg/kg	< 100	< 100	< 100	< 100	< 100			
Methyl chloride	ug/kg	<50000	<50000	<50000	<50000	<50000			
Methyl ethyl ketone	ug/kg	<50000	<50000	<50000	<50000	<50000			
Methylene chloride	ug/kg	196000	125000	310000	<50000	205000			
Naphthalene	ug/kg	<16500	<16500	<16500	<16500	<16500			

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

DATE: 08/28/85
PAGE: 3

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

		Sample Points, Sampling Dates, and ETC Sample No.'s							
arameters	*Units*	B L4VII 850401 H2756	B L4VII 850401 H4604	B L5VII 850401 H2757	B L5VII 850401 H4605	B L5VII 850401 H4606			
ickel	ug/kg	36000	39000	33000	37000	40000			
itrobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
entachlorophenol	ug/kg	<41250	<41250	<41250	<41250	<41250			
henol	ug/kg	125000	54600	<41250	<41250	<41250			
yridine	mg/kg	< 100	< 100	< 100	< 100	< 100			
etrachloroethylene	ug/kg	267770	235930	237270	139300	218040			
oluene	ug/kg	549000	586000	498000	194000	467000			
oluene-2,4-Diamine	ug/kg	< 8300	< 8300	< 8300	< 8300	< 8300			
oxaphene	ug/kg	< 67	< 67	< 67	< 67	< 67			
richloroethylene	ug/kg	211400	205260	246440	83800	250410			
richlorofluoromethane	ug/kg	<50000	<50000	<50000	<50000	<50000			
inyl chloride	ug/kg	<50000	<50000	<50000	<50000	<50000			
is(2-Chloroethyl) ether	ug/kg	<16500	<16500	<16500	<16500	<16500			
is(Chloromethyl)ether	ug/kg	<50000	<50000	<50000	<50000	<50000			
+p-Cresol	ug/kg	<16500	<16500	<16500	<16500	<16500			
-Dinitrobenzene	ug/kg	<16500	<16500	<16500	<16500	<16500			
-phenylenediamine	ug/kg	< 8300	< 8300	< 8300	< 8300	< 8300			
-Cresol	ug/kg	<16500	<16500	<16500	<16500	<16500			
-phenylenediamine	ug/kg	< 8300	< 8300	< 8300	< 8300	< 8300			
-Chloro-m-cresol	ug/kg	<41250	<41250	<41250	<41250	<41250			
-phenylenediamine	ug/kg	< 8300	< 8300	< 8300	< 8300	< 8300			

otnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

DATE: 09/24/85
PAGE: 1

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

Parameters	Units	Pond 7 B L7-VII 850306 H2755							
		Sample Points, Sampling Dates, and ETC Sample No.'s							
Miscellaneous Parameters									
1,1,1,2-Tetrachloroethane	ug/kg	<25000							
1,1,1-Trichloroethane	ug/kg	165000							
1,1,2,2-Tetrachloroethane	ug/kg	<25000							
1,1,2-Trichloroethane	ug/kg	<25000							
1,1,2-trichloropropane	ug/kg	<25000							
1,1-Dichloroethylene	ug/kg	<25000							
1,2,2-trichloropropane	ug/kg	ND							
1,2,3,4-tetrachlorobenzene	ug/kg	<82500							
1,2,3,5-tetrachlorobenzene	ug/kg	<82500							
1,2,3-Trichlorobenzene	ug/kg	<82500							
1,2,3-Trichloropropane	ug/kg	<25000							
1,2,4,5-Tetrachlorobenzene	ug/kg	<82500							
1,2,4-Trichlorobenzene	ug/kg	<82500							
1,2-Dichlorobenzene	ug/kg	376000							
1,2-Dichloroethane	ug/kg	<25000							
1,3,5-Trichlorobenzene	ug/kg	<82500							
1,3-Dichlorobenzene	ug/kg	<82500							
1,4-Dichlorobenzene	ug/kg	<82500							
1,4-Naphthoquinone	ug/kg	<82500							
2,3,4,5-tetrachlorophenol	ug/kg	<82500							
2,3,4,6-Tetrachlorophenol	ug/kg	<206000							
2,3,5,6-tetrachlorophenol	ug/kg	<82500							
2,4,5-Trichlorophenol	ug/kg	<82500							
2,4,6-Trichlorophenol	ug/kg	<206000							
2,4-Dichlorophenol	ug/kg	<206000							
2,4-Dimethylphenol	ug/kg	<206000							
2,4-Dinitrophenol	ug/kg	<2060000							
2,4-Dinitrotoluene	ug/kg	<82500							
2,6-Dichlorophenol	ug/kg	<206000							
2-Chlorophenol	ug/kg	<206000							
2-Picoline	ug/kg	<82500							
4,6-Dinitro-o-cresol	ug/kg	<2060000							
4-Nitrophenol	ug/kg	<206000							
Acenaphthene	ug/kg	<82500							

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	WASTE MANAGEMENT, INC.	490	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

Parameters	Units	Sample Points, Sampling Dates, and ETC Sample No.'s							
		B L7-VII 850306 H2755							
Acrylonitrile	ug/kg	< 250000							
Aniline	ug/kg	<82500							
Antimony	ug/kg	120000							
Arsenic	mg/kg	320							
Benz[a]anthracene	ug/kg	<82500							
Benzene	ug/kg	<11000							
Benzo(a)pyrene	ug/kg	<82500							
Benzo[b]fluoranthene	ug/kg	<82500							
Benzyl chloride	ug/kg	<82500							
Cadmium	ug/kg	4200							
Carbon disulfide	ug/kg	<25000							
Carbon tetrachloride	ug/kg	61300							
Chlordane	ug/kg	< 67							
Chloroacetaldehyde	ug/g	IND							
Chlorobenzene	ug/kg	1440000							
Chloroform	ug/kg	65200							
Chromium	ug/kg	397000							
Chrysene	ug/kg	<82500							
Cyanide, Total	mg/kg	68							
Dibenz[a,h]anthracene	ug/kg	<82500							
Dichloropropanol	ug/g	< 50.0							
Diphenylamine	ug/kg	<82500							
Fluoranthene	ug/kg	<82500							
Freon TF	ug/kg	<25000							
Heptachlor	ug/kg	< 6.7							
Hexachlorobenzene	ug/kg	<82500							
Hexachlorobutadiene	ug/kg	<82500							
Hexachlorocyclopentadiene	ug/kg	<82500							
Hexachloroethane	ug/kg	<82500							
Indeno(1,2,3-cd)pyrene	ug/kg	<82500							
Isobutyl Alcohol	ug/g	< 50 0							
Lead	ug/kg	1100000							
Mercury	mg/kg	2.7							
Methanol	ug/g	< 50.0							
Methyl chloride	ug/kg	<25000							
Methyl ethyl ketone	ug/kg	<25000							
Methylene chloride	ug/kg	108000							

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-OL) - All Parameters Tested, Samples Linked by Order

Chain of Custody Data Required for ETC Data Management Summary Report

See Below ETC Sample No.	Company	Facility	Sample Point	See Below Date
	WASTE MANAGEMENT, INC.	490		

Parameters	Units	Sample Points, Sampling Dates, and ETC Sample No.'s							
		B L7-VII 850306 H2755							
Naphthalene	ug/kg	<82500							
Nickel	ug/kg	35000							
Nitrobenzene	ug/kg	<82500							
Pentachlorophenol	ug/kg	< 206000							
Phenol	ug/kg	< 206000							
Pyridine	ug/g	< 50.0							
Tetrachloroethylene	ug/kg	295000							
Toluene	ug/kg	183000							
Toluene-2,4-Diamine	ug/kg	< 8300							
Toxaphene	ug/kg	< 67							
Trichloroethylene	ug/kg	143000							
Trichlorofluoromethane	ug/kg	<25000							
Vinyl chloride	ug/kg	<25000							
bis(2-Chloroethyl) ether	ug/kg	<82500							
bis(Chloromethyl)ether	ug/kg	<25000							
m+p-Cresol	ug/kg	<82500							
m-Dinitrobenzene	ug/kg	<82500							
m-phenylenediamine	ug/kg	< 8300							
o-Cresol	ug/kg	<82500							
o-phenylenediamine	ug/kg	< 8300							
p-Chloro-m-cresol	ug/kg	< 206000							
p-phenylenediamine	ug/kg	< 8300							

Footnotes: BMDL =Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

IN RE: CHEMICAL WASTE MANAGEMENT, INC. OAK BROOK, ILLINOIS	)	TSCA-V-C-307

STIPULATION TO EXTEND TIME
FOR FILING ANSWER

Respondent, Chemical Waste Management, Inc., hereby moves to extend by 1 day the time for filing its Answer as set forth herein and Complainant consents to such extension by stipulation.

Complainant and Respondent continue to have intensive settlement negotiations intended to finalize a proper agreement acceptable to both parties. It is stipulated by the parties that it is in their respective interests to extend the period of time for Respondent to file its Answer up to an including April 5, 1985.

Dated: April 4, 1985

Michael J. Walker
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Jeffrey G. Miller
BERGSON, BORKLAND, MARGOLIS
& ADLER
11 DuPont Circle, N.W.
Washington, DC 20036
202/462-5930

Attorney for Respondent
Chemical Waste Management, Inc.

CERTIFICATE OF SERVICE

I hereby certify that on ~~March 21~~ April 2, 1985, the foregoing Unopposed Motion to Extend Time for Filing Answer was served by mailing a copy thereof, postage prepaid, upon the following:

Michael Walker, Esq.
Office of Regional Counsel
U.S. Environmental Protection
Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Jeffrey G. Miller

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

IN RE: CHEMICAL WASTE MANAGEMENT, INC. OAK BROOK, ILLINOIS	)	TSCA-V-C-307

ORDER

On consideration of Respondent's Unopposed Motion to Extend Time for Filing Answer, it is hereby ordered that the time for Respondent to file its Answer is extended to April 5 1985.

Dated: March 21, 1985

Valdas V. Adamkus
Regional Administrator
U.S. Environmental Protection Agency
Region V
Chicago, Illinois 60606

7/2/85

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. CHEMICAL WASTE MANAGEMENT, INCORPORATED, Defendant.	)	CIVIL ACTION NO. 88-7599

PLAINTIFF'S SECOND SET OF INTERROGATORIES AND SECOND REQUEST FOR THE PRODUCTION OF DOCUMENTS TO DEFENDANT CHEMICAL WASTE MANAGEMENT, INC.

Pursuant to Rules 26, 33 and 34 of the Federal Rules of Civil Procedure, the United States directs Chemical Waste Management, Incorporated, ("Chem Waste") to answer the following interrogatories, and to produce requested documents for inspection and copying, at the offices of the United States Department of Justice, Environmental Enforcement Section, Washington, D.C. 20530, within the time provided by the Rules.

I. INSTRUCTIONS

1. Pursuant to Rule 33(a) of the Federal Rules of Civil Procedure these interrogatories are to be answered separately and fully in writing under oath, unless objected to, in which event the reasons for objection are to be stated in lieu of an answer. If only part of an interrogatory is objected to, the balance of the interrogatory should be answered in full. Answers are to be signed by the person making them and objections by the attorney making them.

2. Answer each interrogatory to the fullest extent possible. Include in your answer an explanation of the extent, if any, to which your answer is incomplete, limited or qualified. Preface each answer with the interrogatory to which it responds.

3. These interrogatories cover all information in the possession, custody, or control of Chem Waste, any corporate parent, and any of its subsidiaries, officers, employees, contractors, attorneys or agents.

4. If any information is responsive to an interrogatory but is withheld under claim of privilege or for other reason, provide: (a) a description of the information; (b) the date, title, author, recipients and custodian of any document related to that information; (c) a description of the privilege or theory upon which the information is being withheld; (d) all information relating to the withholding of the information, including but not limited to all facts on which you will rely in establishing the elements of the privilege or theory, and all facts pertinent to waiver of such privilege or theory; and (e) the identification of each person with knowledge of the information or with knowledge of the facts or circumstances related to your decision to withhold the information.

5. If Chem Waste withholds any document or portion thereof, covered by this request under a claim of privilege, furnish a list identifying the withheld material by author, addressee, date, number of pages, and subject matter; specifying the nature and basis of the claimed privilege and the paragraph

of this Request to which the withheld material is responsive; and identifying each person to whom the withheld material was sent and each person to whom the withheld material or its contents, or any part thereof, was disclosed. If the document contains both privileged and unprivileged material, produce the entire document with the privileged material redacted.

6. When asked to identify a person or source in response to an interrogatory, provide the following facts regarding that person, both as they existed at the time of the activities described in the interrogatory response and as they exist currently. For a natural person, (a) full name, (b) employer, (c) position or job title, (d) addresses and telephone numbers at which the person may be contacted. For a partnership, corporation or other organization, (a) correct name, (b) address of the main office and of any other office which was involved in the matters addressed by the interrogatory, (c) place of incorporation and (d) the names and positions of the natural persons representing the organization in the matters addressed by the interrogatory. Also, for anyone identified, provide the person's last known addresses and telephone numbers if you do not know the correct current addresses and telephone numbers.

7. When asked to identify information or documents, provide the following facts: for documents, the author, recipient, date, number of pages, identification numbers of copies furnished in response to plaintiff's first request for the production of documents, and if not furnished in such response,

the substance of the documents and the identification of the persons who have possession or control of the original and copies of the documents; for information which is not identified as "documents," its form, substance, the author or speaker, the recipient and date.

8. When asked to identify a "communication" or "submission", provide the following facts: whether it was oral or written, its date, the identities of the person issuing or making it and of each other person present or receiving it, its substance and of any response thereto, and the identity of the document.

When asked to identify an "analysis", state the date the sample was taken, the identity of the persons taking the sample and making the analysis, and a description of the identity and concentration of each substance found in the analysis.

9. Unless otherwise stated, the interrogatories apply to the time period between January 1, 1980 and the date Chem Waste answers them, and the document requests apply to documents prepared, sent, received, used, or in effect between January 1, 1980, and the date of Chem Waste's response to this request.

10. Documents produced pursuant to this Request should be produced in the order in which they appear in the files, and should not be shuffled or otherwise rearranged. Documents that in their original condition were stapled, clipped, or otherwise fastened together should be produced in such form. To facilitate the handling of documents produced and to prevent confusion with

documents produced from other sources, mark each page produced at the lower right-hand corner with the initials of your company and number each page sequentially. Place all documents produced in file folders or other enclosures bearing the name or abbreviation of your company.

11. If any documents called for by this Request were furnished in response to the First Request, they need not be produced again.

II. DEFINITIONS

1. "Chem Waste" means Chemical Waste Management, Inc., its wholly or partly owned subsidiaries, affiliates or divisions, its predecessors-in-interest, if any, its present and former officers, directors, employees, agents, representatives, and any other person acting in a consulting, advisory, supervisory or reviewing capacity (including any parent company) to, or acting or purporting to act on behalf of, any of the foregoing.

2. "Facility", "stockpile", "drainage ditch", "retention basin", "ponds 6W, 9, 10 and 12" and "CAFO" are defined or described in the Complaint. "Ponds 6W, 9, 10 and 12" also include the areas so known to defendant.

3. "Person" means any individual, partnership, corporation, association, or other business or legal entity.

4. "Or" and "and" mean the most inclusive of and/or.

5. "QA/QC" means quality assurance/quality control.

6. "Relate to" or "relating to" means discuss, describe, refer to, reflect, contain, analyze, study, report on, comment on, evidence, comprise, constitute, set forth, consider, recommend, concern, allude or pertain to, in whole or in part.

7. "Document" means any written, recorded, or graphic material of any kind, whether prepared by Chem Waste or by any other person, that is in the possession, custody, or control of Chem Waste. The term includes but is not limited to: agreements; contracts; letters; telegrams; interoffice communications; memoranda; reports; records; instructions; specifications; notes; notebooks; scrapbooks; diaries; plans; drawings; sketches; blueprints; diagrams; photographs; photocopies; charts; graphs; descriptions; drafts; minutes of meetings; conferences; telephone or other conversations or communications; invoices; purchase orders; bills of lading; recordings; published or unpublished speeches or articles; publications; transcripts of telephone conversations; deposition transcripts; ledgers; financial statements; microfilm; microfiche; tape or disk recordings; and computer printouts. The term "document" also includes electronically stored data from which information can be obtained either directly or by translation through detection devices or readers; any such document is to be produced in a reasonably legible and usable form. The term "document" includes the original document (or a copy thereof if the original is not available) and all copies which differ in any respect from the original, including any

notation, underlining, marking, or information not on the original.

Interrogatories

1. State whether Chem Waste contends that it was not required by paragraph H. 11, 12 of the CAFO to furnish to U.S. EPA the initial, October 1986 or first 1988 semi-annual groundwater monitoring report described in the Third Claim of the Complaint, at all, or within thirty days after receipt of the final results of the analyses. If the answer is in the affirmative, state fully for each such report:

a) all facts relied upon by Chem Waste relating to why such report was not required;

b) all facts relied upon by Chem Waste relating to why such report was not required within thirty days after receipt of the final results of the analyses;

c) all laws, regulations and provisions of the CAFO upon which Chem Waste relies for its contention, and Chem Waste's interpretation of why such laws, regulations or CAFO do not require submission of such report, or submission within thirty days;

d) identify all written or oral communications which relate to or support such factual contentions or such interpretation of the laws, regulations or CAFO; and

e) identify each person with knowledge relating to such

factual contentions or interpretations, and describe such person's knowledge.

Documents Requested

1. With respect to paragraph H. 11, 12 of the CAFO, furnish all documents (including communications of any kind) that relate to:

a) the negotiation of the paragraph;

b) the obligation by Chem Waste under such paragraph to furnish reports to U.S. EPA;

c) the circumstances under which a report pursuant to such paragraph is or would be required;

d) the schedule, timing or due date of any report pursuant to such paragraph;

e) the purpose or reason for, or the interpretation or meaning of, such paragraph; or

f) the circumstances or conditions under which Chem Waste would or might be in violation of such paragraph.

2. Furnish all documents that relate to QA/QC, reliability, accuracy, interpretation, meaning or significance of the results of the initial, October 1986 or first 1988 semi-annual analysis of groundwater at the facility, or to any result in such analyses showing or indicating a finding or presence of any hazardous substance or constituent.

3. Furnish all documents that relate to the identity, amount or concentration of any hazardous substance or constituent in the groundwater at the facility.

4. Furnish all documents that relate to the direction or rate of flow of groundwater, or hazardous substances or constituents in the groundwater, at the facility or at any monitoring well or other point at the facility.

5. Furnish all documents, including communications

between Chem Waste and any consultant, contractor or person engaged by Chem Waste, that relate to:

a) the purpose, need, use, requirement or reason for any report, analysis or study of groundwater quality or contamination at the facility; or

b) the schedule, timing or due date of any report, analysis or study of groundwater quality or contamination at the facility.

6. Furnish each annual and quarterly report and financial statement (including profit and loss statements) for Chem Waste, the facility and the organizational unit, division or subsidiary that includes the facility, and each 10-K, 10-Q and prospectus for Chem Waste.

RICHARD B. STEWART
Assistant Attorney General
Lands and Natural Resources
Division
U.S. Department of Justice
Washington, D.C. 20530

By: _____
FRANK BENTKOVER
Attorney
Environmental Enforcement Section
Land and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044
(202) 633-4149

JOYCE J. GEORGE
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OF COUNSEL:

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Chicago, Illinois 60604
(312) 886-0562

HELEN KENNEDY
Office of Enforcement and
Compliance Monitoring
U.S. Environmental Protection Agency
401 M Street S.W.
Washington, D.C. 20460
(202) 382-3082

BERGSON, BORKLAND, MARGOLIS & ADLER
11 DUPONT CIRCLE, NORTHWEST
WASHINGTON, D. C. 20036
(202) 462-5930
CABLE: BEMAAD

HERBERT A. BERGSON
1950-1977
HERBERT BORKLAND
1950-1969

JEFFREY G. MILLER

March 19, 1985

Michael Walker, Esq.
Assistant Regional Counsel
United States Environmental
Protection Agency
230 S. Dearborn Street
Chicago, Illinois 60604

RE: Chemical Waste Management, Inc.
Vickery, Ohio Facility

Dear Mike:

Enclosed for discussion at our Thursday meeting is a copy of a Consent Agreement which I redrafted after our last substantive negotiation in early winter. I believe it incorporates our understanding as of that time. The stipulated penalties reflect the agreement between EPA and CWM in the Emelle case. In addition, by Thursday, I will have drafts of paragraphs or attachments filling in some of the holes in the draft and reflecting subsequent agreements in principal.

The schedules in the draft Agreement must be adjusted to reflect new beginning dates. In addition, parts of it may have to be changed to reflect subsequent changed circumstances. I have asked CWM to again review the draft Agreement in this regard.

As I indicated to you in our telephone conversation today, I am having some difficulty in drafting specific clauses regarding pond closure and groundwater monitoring because relevant CWM personnel are spread across the country on other matters and are unable to focus on these issues immediately. I hope by Thursday to have some, if not all of the issues adequately addressed. With regard to Pond closure, I call your attention to the desireability of closing Pond II first, to enable early proper disposal of PCB contaminated rip rap in that Pond. I don't know why Pond 12 was thought desirable for earlier closure. We should discuss this on Thursday.

Very truly yours,

Jeffrey G. Miller

JGM:ma
Enclosure
cc: George Vander Velde
Leonard Tinnan
Joseph Homsy
Kathy Trent
Gary Collison

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

IN RE:	)	
	)	
CHEMICAL WASTE MANAGEMENT, INC.	)	DOCKET NOS. TSCA-V-C-000
OAK BROOK ILLINOIS,	)	RCRA-V-C-000
	)	
	)	CONSENT AGREEMENT AND ORDER
Respondent.	)	

CONSENT AGREEMENT

WHEREAS:

A. The above-captioned civil administrative proceedings were initiated pursuant to Section 16(a) of the Toxic Substances Control Act (TSCA), 15 U.S.C. §1265(a), and Section 3008 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §6928;

B. A Complaint and Notice of Opportunity for Hearing was filed by Complainant William H. Sanders, III, Director, Environmental Services Division, on December 7, 1984, charging that Respondent violated Section 15 of TSCA, 15 U.S.C. §2614, and implementing regulations at 40 C.F.R. Part 761, et seq. In addition, a Complaint and Notice of Opportunity for Hearing was filed by Complainant, Basil G. Constantelos, Director, Waste Management Division, on December 7, 1984, charging that Respondent violated Section 3005 of RCRA, 42 U.S.C. §6925 and implementing regulations at 40 C.F.R. 261, 262, 265, and 270, et seq. The Complaints allege that certain violations occurred at

Respondent's facility located at 3956 State Route 412, Vickery, Ohio (the "Facility"). The Facility is an existing hazardous waste management facility, as defined in 40 C.F.R. §260.10.

C. The parties have discussed settlement of this action through Mr. Joseph Homsy, Assistant General Counsel, Chemical Waste Management, Inc. ("CWM"); Mr. George Vander Velde, Vice President, CWM; Mssrs. Jeffrey G. Miller and Angus McBeth, Bergson, Borkland, Margolis and Adler, Washington, D.C., Counsel for CWM; Mr. Michael J. Walker, Counsel for U.S. EPA; Mr. Rodger Field, Counsel for U.S. EPA; and Mr. James Brossman and Ms. Patricia Polston for U.S. EPA.

WHEREFORE, for the purpose of the above-captioned proceedings and without prejudice to any other proceeding:

A. This Consent Agreement and Final Order (CAFO) of the Regional Administrator is in full and complete settlement of all liabilities which might have attached as the result of said proceedings;

B. Other than as set forth in paragraph D below, Respondent neither admits nor denies the factual allegations of the Complaints and Respondent agrees not to contest the jurisdictional allegations contained in the Complaint or the authority of the Regional Administrator to issue this CAFO;

C. Respondent expressly waives its right to request an adjudicatory hearing on the allegations of the Complaints and consents to the assessment of the civil penalties stated in the following Order; and

D. Respondent stipulates:

1. That on or about May 22, 1984, Respondent, CWM, and the State of Ohio entered into a Consent Decree (the "State Consent Decree"), which was filed in the Court of Common Pleas for Sandusky County, Ohio, in which Respondent agreed, among other things, to cease the sale of oil products from waste oil receipts recycled at the Facility subsequent to entry of the Decree, until it had developed a comprehensive oil management program that was acceptable to the Ohio Environmental Protection Agency and to decontaminate and close certain surface impoundments and other areas of the Facility alleged to be contaminated by polychlorinated biphenyls (PCBs);

2. That said Decree requires that PCB-contaminated soils, sludges and other materials from the Facility be placed into a closure cell to be constructed and operated in compliance with 40 C.F.R. §761.75;

3. That Respondent has, in fact, submitted an application to the Regional Administrator, Region V, for said closure cell pursuant to the State Consent Decree;

4. That Respondent has removed or will remove or decontaminate the buried oil/water separation tank, the concrete

pit and oil/water trench, and that portion of a buried pipeline between sampling points identified in Section XVI, paragraph 29, of the State Consent Decree;

5. That Respondent has removed or will remove all sludge with PCBs in concentrations over 500 parts per million (ppm) and all free oil containing PCBs, and dispose of said material off-site in accordance with 40 C.F.R. Part 761, et seq. as set forth in Section XVI, paragraph 29 of the Consent Decree;

6. That prior to construction of the closure cell, non-liquid PCB material in concentrations below 500 ppm shall be placed in a temporary stockpile area to be clay lined, covered and located adjacent to Pond 4, as specified in Section XV Schedule for Closure of the State Consent Decree.

Based upon the foregoing stipulations, the parties agree to the following ORDER:

A. Except as provided below, U.S. EPA inspectors shall have full access to all operating areas of the Facility without delay upon presentation of credentials to company security personnel at the Facility's gate. Except as provided below, full access includes the right to obtain samples (providing split samples to CWM) and to record observations of site conditions, including photographs, without restriction, interference, or prior approval of Respondent's personnel or other agents of the company. Nothing in this paragraph is intended to limit any other lawful rights of access or inspection which U.S. EPA

may have with respect to the Facility. Prior to access to the Facility, U.S. EPA inspectors shall complete CWM's safety training briefing, including signing an acknowledgment of the same, or shall sign a waiver of liability agreement.

B. Within thirty (30) days of the effective date of this Agreement, CWM shall implement the Inspection Program for PCB-contaminated solids and liquids in storage, attached hereto as Attachment A.

1. CWM agrees to cooperate with U.S. EPA, upon proper notice, but without warrant, during lawful inspections conducted to monitor compliance with this Agreement, provided, however, that during such inspections U.S. EPA shall not request or seek to obtain any environmental audit or internal compliance documents which are not required to be maintained by law or regulation and which are prepared pursuant to the environmental management program described and evaluated in paragraph B of the Agreement.

2. If U.S. EPA requests the Audit report and documents prepared in connection with the Audit report by CWM's Environmental Management Department after six months following the date of delivery of the Audit recommendations described in subsection 3, CWM shall provide such documents. Documents prepared by CWM in connection with the Audit report, excluding documents prepared by or at the direction of CWM's lawyers shall be made available to U.S. EPA in accordance with the above.

U.S. EPA agrees that such documents shall not be used to initiate a civil enforcement action or as direct evidence of a violation, but may be used as evidence of the existence of any violation which may remain uncorrected beyond six months after the delivery of the Audit report and as evidence of knowledge or duration of a violation provided, however, that CWM does not waive any legal rights it may have to object to the admissability of such evidence. It is intended that documents prepared for CWM pursuant to paragraph B are not required by law or regulation.

3. CWM shall propose to U.S. EPA's Office of Enforcement and Compliance Monitoring (OECM), through Michael J. Walker, within thirty (30) days of the effective date of this Agreement, the scope of work for the services of a third-party consultant, as well as its proposed consultant, who shall be expert in environmental auditing, environmental management systems and RCRA and TSCA waste management operations. This scope of work and consultant shall be agreed upon by U.S. EPA and CWM in writing, prior to the consultant commencing the performance of the professional services as more fully set forth herein below. The consultant will be retained and the scope of work will be designed to review waste operation and environmental management systems at the Vickery facility and in the CWM corporate Environmental Management Department as they affect RCRA and TSCA compliance at the Vickery facility.

4. Within one hundred eighty (180) days after agreement upon the scope of work and the consultant, said third-party consultant shall report in writing to CWM. This report shall:

a. Identify and describe the existing facility waste management operations and the Environmental Management Department environmental management systems, policies and prevailing practices as they affect RCRA and TSCA compliance at the Vickery facility, to the extent that they are different from such systems, policies, and practices as they affect RCRA and TSCA compliance at the Emelle, Alabama facility.

b. Evaluate such operations, systems, practices and policies and identify and describe fully the perceived weaknesses in such operations, systems, practices and policies, to the extent practicable, regarding their ability to promote compliance with applicable RCRA and TSCA requirements.

The consultant shall apply its expertise and judgment to the foregoing data base, utilizing such factors as the consultant believes to be relevant and appropriate (which factors shall be stated in the report).

c. Based on the evaluation required in paragraph B.4.a. and b. above, the consultant shall identify and describe fully, with supporting rationales, the perceived areas, if any, where CWM's waste management operations and environmental

management systems, practices and policies may be improved as they affect Vickery regarding RCRA and TSCA compliance obligations, listing specific options for any improvements at Vickery in the following specific areas:

(1) compliance and waste management operation, staffing, education and experience requirements;

(2) compliance management budget, lines of authority to CWM's corporate Environmental Management Department and relationship to the operating facility manager;

(3) personnel training for individual employee compliance obligations and emergency spill response;

(4) Operations and Maintenance (O&M) procedures for pollution prevention and waste management equipment;

(5) preparation and self-monitoring reports required to be filed with the State and U.S. EPA;

(6) evaluation of waste management operations and pollution prevention equipment in terms of adequacy of design and compatibility with wastes being passed through said equipment;

(7) preparation of Quality Assurance (QA) and Quality Control (QC) programs for sampling and analysis and for environmental testing procedures; including Vickery laboratories and contract laboratories for Vickery;

(8) preparation and review of Incident Reports; evaluation of causes and prevention of pollution, waste

management equipment malfunctions, and improper waste handling, with specific recommendations for corrective steps and preventive O&M, along with reporting procedures for these recommendations to corporate headquarters.

5. CWM shall notify U.S. EPA upon receipt of such report, and within ninety (90) days after receipt of a final report, CWM shall submit to U.S. EPA that portion of the report containing all of the recommendations of the consultant, together with CWM's evaluation of each option it has selected for adoption and the reasons for rejecting other options. The report by CWM shall set forth the specific actions the company shall take and a schedule for implementation of the recommendations adopted by CWM.

6. All documents submitted to U.S. EPA pursuant to paragraph B shall be kept confidential to the extent authorized by law.

C. On or before July 1 of each calendar year, CWM shall submit to U.S. EPA a copy of its annual PCB report for the previous calendar year, prepared pursuant to 40 U.S.C. §761.180. CWM shall submit to U.S. EPA copies of the monthly reports prepared to document compliance with the remedial requirements of the State Consent Decree, pursuant to paragraph 45 of the State Consent Decree, and shall include in such reports the amounts of materials contaminated with PCBs for the preceding month, chemically fixed and temporarily stockpiled, disposed of

in the closure cell referred to in paragraph D.2. and 3. of the stipulations, or removed from the Facility. For material contaminated with greater than 500 ppm of PCBs removed from the Facility, such reports shall indicate the concentrations of PCBs in such materials, based on analyses undertaken by CWM, and shall identify the destination of any such materials removed from the Facility.

D. CWM waives all claims that all operating records of the Facility previously submitted by CWM to U.S. EPA are subject to TSCA Confidential Business Information claims, except for customer lists or documents for which customer lists may be compiled.

E. CWM waives all claims that records pertaining to the design and operating methodology of pollution control equipment at the Facility previously submitted to U.S. EPA and/or the Ohio EPA for issuance of a permit, license or the like are subject to Confidential Business Information claims.

F. To assure that the Facility is properly managed and supervised during emergency events, CWM shall implement the procedures in Attachment B. The reports prepared and submitted pursuant to paragraphs B.2. and 4. shall address whether such measures are sufficient to provide adequate management and supervision at the Facility during emergency events, and if they are not, shall recommend additional measures to meet that objective.

G. Respondent shall monitor NOx emissions from surface impoundments every two hours during operations transferring aqueous wastes between Ponds 4, 5, 7, or 11, and when NOx emissions from the surface impoundments are visable, with Draegger tubes.

H. Except as longer periods of compliance are contemplated in this CAFO or in the State Consent Decree or otherwise provided in paragraph I below, Respondent shall immediately, upon the signing of this CAFO, achieve and maintain compliance at the Facility with applicable regulations for hazardous waste treatment facilities, as set forth in 40 C.F.R. Parts 265 and 270. The foregoing shall include, but not be limited to, compliance with 40 C.F.R. §270.72 in the event of creation of new waste piles or the addition of new processes in the treatment, storage or disposal of hazardous waste. U.S. EPA shall promptly process and take final action upon any submissions made by CWM pursuant to this paragraph. All matters in which U.S. EPA claims, based on its present knowledge, that CWM is not in compliance with such regulations, are set forth in the Complaints.

I. Respondent shall implement a groundwater monitoring program in full compliance with 40 C.F.R. §265.90 through 40 C.F.R. §265.94. To carry out the foregoing, Respondent agrees to do the following:

1. Respondent shall install ten (10) groundwater monitoring wells into the bedrock geological strata beneath

the Facility at locations designated _____ to _____ on Attachment C (the "Bedrock Wells"). If the operation of a new water production well at the Facility shifts the groundwater gradiant to the northwest, Respondent shall install one (1) Bedrock Well at the location designated _____ on Attachment C.

2. Respondent shall install twenty-one (21) groundwater monitoring wells into the lacustrine geological strata beneath the Facility and shall drill and continually sample twenty-one (21) boreholes to bedrock beneath the Facility (for the purpose of ascertaining the geological formations beneath the Facility) at locations designated _____ to _____ on Attachment D (the "Lacustrine Wells" and the "Boreholes", respectively). If any of the Borehole samples detect a sand layer of greater than six (6) inches in the glacial till between the lacustrine geological strata and the bedrock strata beneath the Facility, Respondent shall install a groundwater monitoring well into the glacial till near such Borehole (together, the "Till Wells"). Respondent shall install six (6) groundwater wells into the glacial till beneath the Facility at locations designated _____ to _____ on Attachment D (the "Till Holes"); provided, however, that if Respondent installs a Till Well at any such location, it is not required to install a Till Hole at that location.

3. Installation of the groundwater monitoring wells described herein shall be done in accordance with a

workplan to be submitted to U.S. EPA. Upon approval by U.S. EPA, Respondent shall implement said workplan in accordance with its terms and any modifications or amendments made by U.S. EPA. Any modification or amendment made by U.S. EPA may be disputed in accordance with the procedures outlined in paragraph ___ hereof.

4. The Bedrock Wells, Lacustrine Wells and the Till Wells shall be monitored as part of the groundwater monitoring program required by 40 C.F.R. §§265.90 through 269.94. The annual evaluation required by 40 C.F.R. §§265.93 and 264.97 shall utilize the statistical procedure described in Attachment E to evaluate the indicator parameters designated as described in Attachment E.

5. Respondent shall submit a plan for a full assessment of the effects of Respondent's waste disposal, storage and/or treatment activities at the Facility on groundwater quality pursuant to 40 C.F.R. §265.93(d). The number, location, and depth of wells to be specified in the plan submitted pursuant to 40 C.F.R. §265.93(d)(2) shall be the Bedrock Wells, the Lacustrine Wells, the Till Wells and the Till Holes as described herein, except the Bedrock Wells marked _____, the Lacustrine Wells marked _____, and the Till Wells installed at locations marked _____ on Attachments C and D. Such plan shall provide for analysis of all hazardous wastes and hazardous waste constituants designated in accordance with Attachment E and shall

utilize the analytical procedure described in Attachment E. Respondent shall implement such plan in accordance with its terms and modifications or amendments made by U.S. EPA to conform to the specific requirements of 40 C.F.R. §265.93(d) or this CAFO. Any modification or amendment made by U.S. EPA may be disputed in accordance with the procedures outlined in paragraph ___ hereof.

6. Except as provided below, Respondent shall:

a. Submit a workplan for installation of Bedrock Wells, Lacustrine Wells, Till Wells, Till Holes and Boreholes within 45 days;

b. Submit a plan for an assessment of groundwater quality pursuant to 40 C.F.R. §265.93(d) within 45 days;

c. Install Bedrock Wells within 90 days after approval of workplan;

d. Install Boreholes within 90 days;

e. Install Lacustrine Wells, Till Wells, and Till Holes by August 31, 1985 if the workplan is approved by March 1, 1985;

f. Complete assessment of groundwater quality by December 15, 1985 if the workplan and assessment plan are approved by March 1, 1985.

Bedrock Wells marked _____, Lacustrine Wells _____, and Till Wells marked _____ on Attachments C and D shall be installed or completed within 90 days after the completion of closure of Ponds 4, 5, and 7.

7. The number and location of the monitoring wells specified in paragraphs 1 and 2 above is in conformance with the requirements of 40 C.F.R. §§265.90 through 265.94. If and when Ponds 11 and 12 are closed pursuant to 40 C.F.R. §625.228(a)(1), Bedrock Wells marked _____, Lacustrine Wells marked _____, and Till Wells installed at locations marked _____ on Attachments D and E may be grouted shut and are no longer necessary to meet such requirements.

J. The agreement of U.S. EPA to entry of this CAFO is contingent upon Respondent's full compliance with the terms of the State Consent Decree. In the event of a material violation of a material requirement of the State Consent Decree, U.S. EPA expressly retains the right to commence enforcement proceedings for penalties provided by RCRA Section 3008 for any associated violation of RCRA, and CWM expressly retains the right to contest any such action, including U.S. EPA's jurisdiction to take such action. U.S. EPA may not collect penalties under this paragraph and under paragraph O for the same violation.

K. Notwithstanding any other provision of this Order, an enforcement action may be brought pursuant to Section 7003 of RCRA or other statutory provision should U.S. EPA find that the handling, storage, treatment, transportation or disposal of solid waste or hazardous waste at the Facility presents an imminent and substantial endangerment to human health or the environment. Nothing herein shall be construed to prevent U.S.

EPA from seeking legal or equitable relief to enforce the terms of this CAFO in the event Respondent fails to comply with the terms hereof. Nothing herein shall relieve Respondent of either civil or criminal liability for any violation not alleged in the Complaints and, without limitation on the foregoing, shall not limit U.S. EPA from taking further enforcement action to abate any groundwater contamination attributable to the Facility.

L. All documents, plans, or other communications pursuant to this CAFO shall be directed to:

Director
Waste Management Division (5H)
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604
Attn: James Brossman

M. In consideration of the foregoing stipulations, for cooperation shown to the government, and Respondent's commitment to remain in compliance with TSCA and RCRA, Complainant agrees to mitigate the proposed civil penalty to _____ _____ Dollars ($_____). Payment will be remitted within twenty (20) days of receipt of the fully executed Consent Agreement and Order by sending a cashier's or certified check in the amount of _____, made payable to the Treasurer of the United States of America, to the Regional Hearing Clerk (5C-16), U.S. Envornmental Protection Agency, Region V, 230 South Dearborn Street, Chicago, Illinois 60604.

N. Failure to remit the civil penalty will result in a referral of this matter to the United States Attorney for the initiation of a collection action.

O. Respondent shall pay to U.S. EPA stipulated penalties in the amount of One Hundred Dollars ($100) per day for failure to meet any requirement contained in Paragraphs C, D and E of this CAFO; Five Hundred Dollars ($500) for failure to meet any requirement contained in Paragraphs F and G of this CAFO and Five Thousand Dollars ($5,000) for failure to meet any requirement contained in Paragraph I of this CAFO. If the Respondent is rendered unable, wholly or in part, by force majeure to perform the actions specified in this CAFO, Respondent shall give Complainant prompt written notice of the force majeure, with reasonable particulars concerning it, and the obligation of the Respondent shall be suspended during, but no longer than, the continuance of the force majeure. The term "force majeure" shall mean an act of God, act of the public enemy, war, blockade, public riot, lightning, fire, storm, flood, explosion, and any other cause which is not reasonable within the control of Respondent.

P. This CAFO shall terminate upon Completion of closure of Ponds 11 and 12 at the Facility.

_____
Chemical Waste Management, Inc.
Oak Brook, Illinois

Dated: _____

William H. Sander, III
Director
Environmental Services Division
U.S. Environmental Protection Agency
Region V
230 Dearborn Street
Chicago, Illinois 60604

Dated: _____

Basil G. Constantelos
Director
Waste Management Division
U.S. Environmental Protection Agency
Region V
230 Dearborn Street
Chicago, Illinois 60604

Dated: _____

It is so ORDERED as agreed to by the parties as stated in the Consent Agreement.

Valdas V. Adamkus
Regional Administrator
U.S. Environmental Protection Agency
Region V
230 Dearborn Street
Chicago, Illinois 60604

Dated: _____

ATTACHMENT A

The facility inspection plan pursuant to 40 C.F.R. §265.15 will be modified to include inspection of the stockpile of fixed material. As a minimum the following will be included:

(1) Inspect for evidence of slope instability;

(2) Inspect for cover integrity;

(3) Inspect for integrity of run-on and run-off control features.

2.0 Implementation of Response Procedures

The following represents the facility's communication plan when implementing emergency response procedures in the facility's Contingency Plan. A logic diagram of initial response activities leading to implementation of the Contingency Plan is shown in Figure 2-1. In the event of an imminent or actual emergency, the person observing the incident will implement the following procedures:

* Notify facility supervisory personnel and secure the area.

* The supervisory person notified will assume responsibility for performing a preliminary assessment of the situation, implementing the necessary control measures and contacting the Emergency Coordinator(s) (as described in Section 2.1). The following information will be provided to the Emergency Coordinator(s):

  (a) Name of person reporting the incident;

  (b) Location;

  (c) Nature and extent of the incident; and

  (d) Actions taken and/or recommended.

* The Emergency Coordinator(s) will evaluate the situation using the criteria in Table 2-1 and determine whether the Contingency Plan is to be implemented.

* If the event is of a minor or controllable nature and presents no potential hazard to human health, the site

operations, or the environment, the Emergency Coordinator(s) will insure that post-emergency (clean-up) procedures are implemented and the necessary reporting is completed. The Contingency Plan is not implemented under these conditions.

* If the event poses a threat to human health, the site operations, or the environment, the Emergency Coordinator(s) will implement the Contingency Plan. The Emergency Coordinator(s) will take control of the affected areal. He will use any resources necessary until the emergency has been eliminated and any needed clean-up or restoration is completed.

2.1 NOTIFICATON OF EMERGENCY COORDINATOR(S)

Normal Working Hours

During normal working hours the Operations Manager serves the primary Emergency Coordinator. If the Operations Manager not on-site, the Shift Supervisor (or Security Guard) will erence the list of Emergency Coordinators (Table 2-2) and tact an alternate Emergency Coordinator(s).

After Normal Working Hours

On or before the first of every calendar month, the General nager shall post an on-call schedule for the month. The -call schedule will identify the Emergency Coordinators who e on duty during other than normal working hours during the nt. There shall be two Emergency Coordinators on duty at all ch times. Emergency Coordinators shall be managers and pervisors at the facility.

FIGURE 2-1

INITIAL RESPONSE ACTIVITIES
CHEMICAL WASTE MANAGEMENT, INC.

Fire and/or Explosion

Natural Incident

Spill or Material Release

Observe
Sound Alarm, and
Secure Area

Contact Emergency Coordinator
Relay Your Name, Location,
and Nature of Incident

Emergency Coordinator Assesses Potential Hazard to Human Health or Environment

No Hazard

Emergency Coordinator Initiates Control and Containment Measures

Potential Hazard

Not Contained

Implement
Contingency Plan

Incident Controlled
Conduct Necessary
Clean-up and Reporting
Activities

Contained

PROPOSED ANALYTICAL SCHEME
FOR
APPENDIX VII (SEVEN COMPOUNDS)

1. WATER: Direct aqueous injection (GC/MS)
   SLUDGE: Water extraction prior to direct aqueous injection (GC/MS)

   Isobutanol
   Chloroacetaldehyde
   Dichloropropanol
   Methanol

2. WATER: Volatiles - P & T by GC/MS
   SLUDGE: Volatiles - Dynamic head space purge and trap by GC/MS

   Pyridine
   Tetrachloroethylene
   Methylene Chloride
   Trichloroethylene
   1,1,1-Trichloroethane
   Carbon Tetrachloride
   1,1,2-trichloro-1,2,2-trifluoroethane
   Trichlorofluoromethane
   Chlorobenzene
   Toluene
   Methyl ethyl ketone
   Carbon dissulfide
   Chloroform
   Methyl Chloride
   Acrylonitrile
   1,2-Dichloroethane
   1,1,2-Trichloroethane
   1,1,1,2-Tetrachloroethane
   1,1,2,2-Tetrachloroethane
   Vinyl Chloride
   1,1-Dichloroethylene
   Benezene
   1,1,2-Trichloropropane
   1,2,3-Trichloropropane
   1,2,2-Trichloropropane
   Bis (chloromethyl) ether

3. WATER: Semi-Volatiles-Acid/Base/Neutral by GC/MS
   SLUDGE: Semi-Volatiles-Soxhlet extraction for Acid/Base/Neutral by GC/MS

   o-dichlorobenzene
   o-cresol
   m&p cresol

Nitrobenzene
Pentachlorophenol
Phenol
2-Chlorophenol
p-chloro-m-cresol
2,4-Dimethyl phenol
2,4-Dinitrophenol
2,4,5-Trichlorophenol
Bis (2-chloroethyl) ether
2,4,6 trichlorophenol
4 nitrophenol
4,6-dinitro-o-cresol
2,3,5,6-Tetrachlorophenol
2,3,4,6-Tetrachlorophenol
2,3,4,5-Tetrachlorophenol
Chrysene
Naphthalene
Fluoranthene
Benzo (b) Fluoranthene
Benzo (a) pyrene
Indeno (1,2,3-cd) pyrene
Benzo (a) anthracene
Dibenz (a) anthracene
Acenaphthalene
Benzyl Chloride
Hexachlorobenzene
Hexachlorobutadiene
Hexachloroethane
m-Dinitrobenzene
2,4-Dinitrotolune
2-Picoline
Hexachlorocyclopentadiene
2,4-Dichlorophenol
2,6-Dichlorophenol
Aniline
Siphenylamine
m-dichlorobenzene
p-dichlorobenzene
1,2,4-Trichlorobenzene
1,2,3-Trichlorobenzene
2,4,6-Trichlorobenzene
1,2,3,4-Tetrachlorobenzene
1,2,3,5-Tetrachlorobenzene
1,2,4,5-Tetrachlorobenzene
1,4-Naphthoquinone

4. WATER: Pesticides by GC/ECD or GC/FPD
SLUDGE: Pesticides by Soxhlet extraction for GC/MS

Chlordane
Heptachlor
Toxaphene

5. WATER: HPLC
SLUDGE: Soxhlet extraction prior to HPLC (meaningful results may not be achievable)

Acrylamide
Acetonitrile
2,4 Toluene Diamine
(o,m,p) Phenylenediamine

6. WATER: Metals
SLUDGE: Metals without hexavalent chromium

Cadmium
Hexavalent Chromium
Nickel
Lead
Arsenic
Mercury
Antimony
Chromium

7. WATER: Conventionals - Total Cyanide
SLUDGE: Total Cyanide

Cyanide, Total

* No analysis will be performed:

Formaldehyde (UV or HLPC options)
Epichlorohydrin (may be unstable in water)
Paraldehyde
Formic Acid (special GC/MS option)
Phosphorothloic acid esters

Phthalic Anhydride
Maleic Anhydride
Benzoltrichloride
Tolune Dissocyanate
Phorate

[redacted]

A F 204401

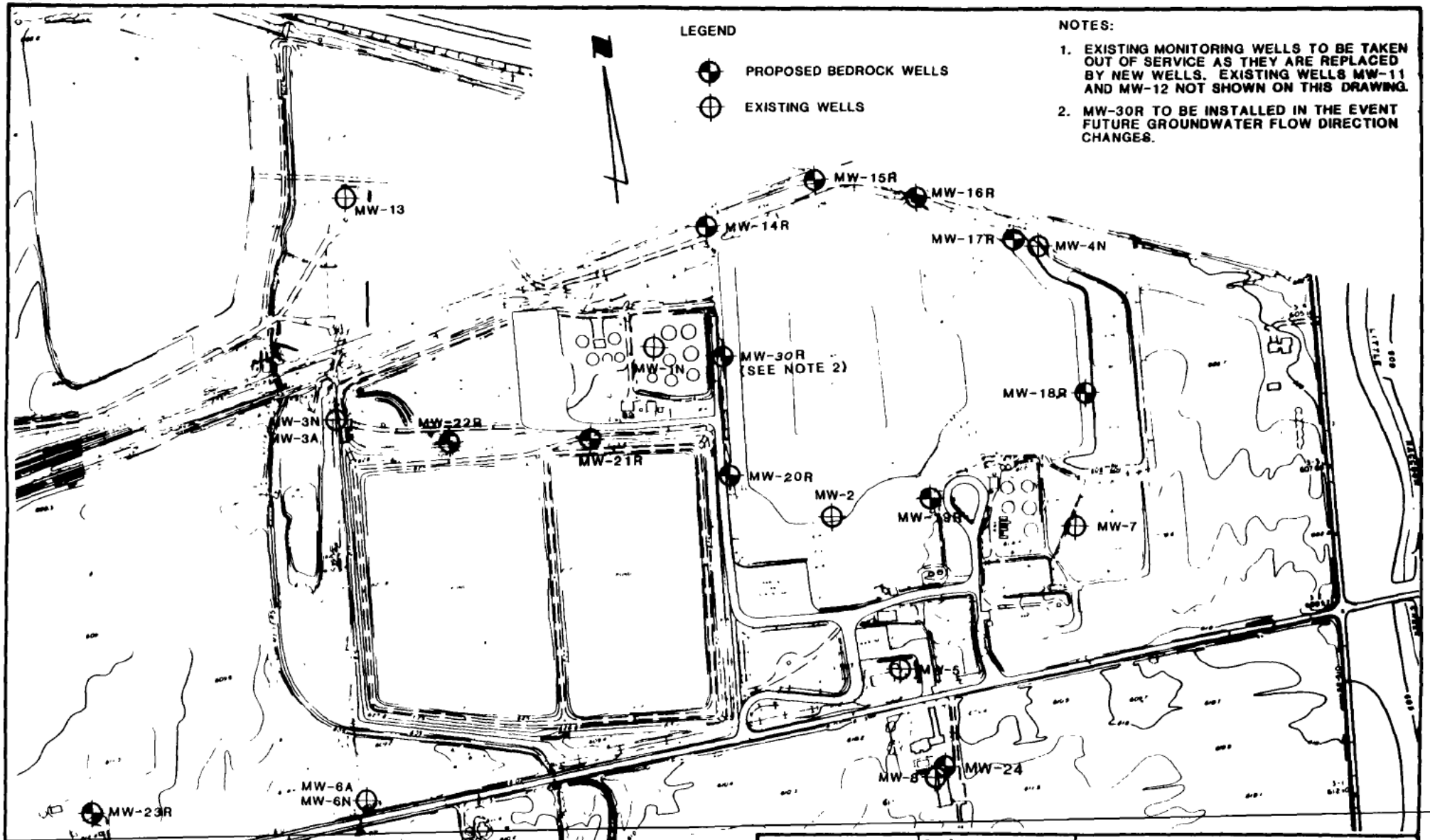
LEGEND

PROPOSED BEDROCK WELLS

EXISTING WELLS

NOTES:

1. EXISTING MONITORING WELLS TO BE TAKEN OUT OF SERVICE AS THEY ARE REPLACED BY NEW WELLS. EXISTING WELLS MW-11 AND MW-12 NOT SHOWN ON THIS DRAWING.
2. MW-30R TO BE INSTALLED IN THE EVENT FUTURE GROUNDWATER FLOW DIRECTION CHANGES.



JOB NO	834-1358	SCALE	1"-300'
DRAWN	SKB	DATE	3-20-85
CHECKED		DWG NO	246

Golder Associates

BEDROCK AQUIFER
MONITORING WELL LOCATIONS

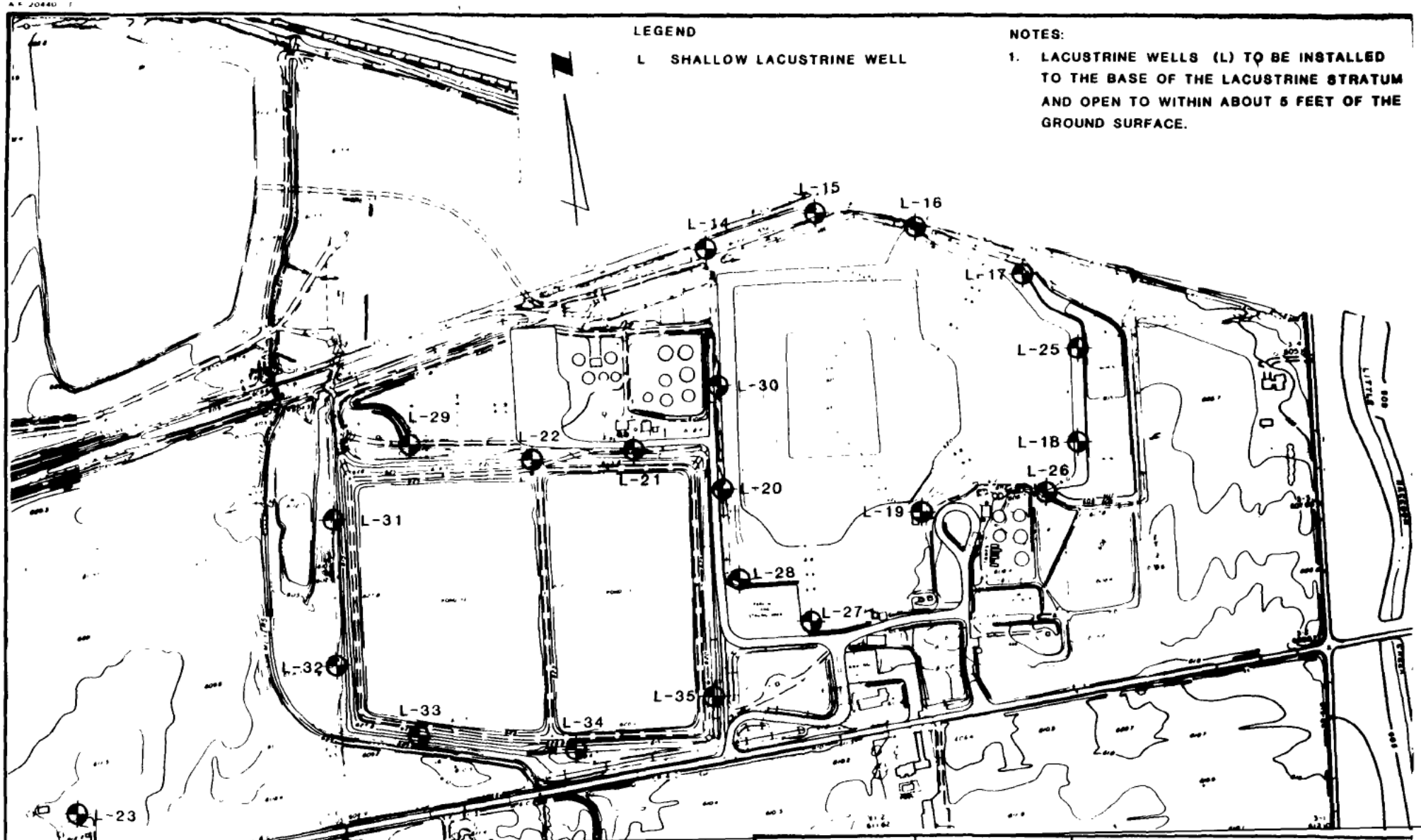
ATTACHMENT C

LEGEND

L SHALLOW LACUSTRINE WELL

NOTES:

1. LACUSTRINE WELLS (L) TO BE INSTALLED TO THE BASE OF THE LACUSTRINE STRATUM AND OPEN TO WITHIN ABOUT 5 FEET OF THE GROUND SURFACE.



834-1358	1"=300'	LACUSTRINE WELL LOCATIONS	
SKB	3-20-85		
	255		
Golder Associates		ATTACHMENT D	FIGURE

ATTACHMENT E

MONITORING PARAMETERS, FREQUENCY AND EVALUATION FOR AQUIFER MONITORING WELLS INSTALLED DURING INTERIM STATUS PERIOD

(MW-14R and MW-19R through MW-24R)

ANALYSIS PARAMETERS AND FREQUENCY

1) First Year of Installation

   a) Parameters characterizing drinking water standards, as per APPENDIX III - EPA Interim Primary Drinking Water Standards have been obtained from the existing monitoring well system.

   b) Establish groundwater quality parameters of Chloride, Iron, Manganese, Phenols, Sodium, and Sulfate; quarterly for first year.

   c) Monitor PCBs and indicator parameters of pH, specific conductance, Total Organic Carbon (TOC), and Total Organic Halogen (TOH), monthly for first year.

   d) Sample and analyze semi-annually for the following volatle organic constituents:
      - Chlorobenzene
      - Chloroform
      - Methylene Chloride
      - Toluene
      - 1, 1, 1- Trichloroethane
      - Trichloroethylene

   e) Sample and analyze quarterly [redacted] for the following metals:
      - Chromium
      - Cadmium
      - Arsenic
      - Lead
      - Zinc

   f) Measure groundwater levels monthly for first year.

2) After First Year of Installation

   a) Sample and analyze for the groundwater quality parameters annually.

   b) Sample and analyze for the indicator parameters and PCBs semi-annually.

   c) Sample and analyze for volatle organic constituents and metals as listed above semi-annually.

   d) Measure groundwater levels semi-annuallly.

ANALYTICAL EVALUATION

1. Indicator Parameters

a) Compare analytical results to background values using the Student's t-test and alternate CWM statistical method.

b) Obtain additional sample within 30 days if both statistical methods indicate a statistically significant increase (or pH decrease), analyze additional sample, and re-evaluate statistics.

c) A statistically significant increase (or pH decrease) from the additional sampling will require evaluation of volatle organic analyses and metals analyses prior to determining the need for an assessment plan to be submitted and/or implemented.

2. Volatle Organic Constituents

a) Analytical results will be evaluated against the method detection limits for the sample. Positive values of single constituents or multiple constituents up to a total of three will be considered false positive values and not require immediate re-sampling or compliance monitoring.

b) Positive values of four or more constituents will require an additional sample to be obtained within one month and that sample will be re-analyzed. This is on a well by well basis.

c) Positive values of the same four constituents from the re-sampling which cannot be attributed to laboratory or sampling error or methods will trigger compliance monitoring of the well exhibiting the positive results and the two adjacent wells. If two or more monitoring wells exhibit four or more positive values on re-sampling, an assessment plan will be provided for the monitoring wells around the regulated unit suspected of causing potential aquifer contamination within 15 days.

d) Positive results for the same three constituents from two successive semi-annual samplings will recessitate the action described in b) and c), above, for the three constituents.

3. PCBs

a) Analytical results will be evaluated against the method detection limits for the sample. Positive values will require an additional sampling within one month and that sample will be re-analyzed.

b) Positive values for the re-analysis which cannot be attributed to laboratory or sampling error or methods will necessitate submittal of an assessment plan within 15 days for those monitoring wells which are sampled and analyzed for PCBs.

4. Metals and Phenols

a) Metals and Phenols analyses results will be subjected to Student's t-test evaluation and the alternative CWM statistical evaluation.

b) A significant statistical increase will be considered a positive indication when such increase is noted for both statistical procedures.

c) A statistically significant increase, as determined by b), will necessitate a re-sampling of the groundwater from the well in question within one month and re-analysis of the sample.

d) A statistically significant increase by both statistical procedures using the re-analysis data, which cannot be attributed to laboratory or sampling error or methods, will necessitate submittal of an assessment plan within 15 days for the well in question and for the two adjacent monitoring wells. If two or more monitoring wells exhibit statistically significant increases by both statistical methods for the re-analysis samples, the assessment plan will include the monitoring wells around the regulated unit suspected of causing potential aquifer contamination.

5. Action for Sampling or Laboratory Error or Methods

Statistically significant increases or positive results which can be attributed to sampling or laboratory error or methods will require CWM to submit a plan to remedy the causes of such false results. This plan will be submitted to the regulatory agency within 15 days of the determination by CWM that sampling or laboratory error is the cause of such false results.

A STATISTICAL MODEL FOR GROUNDWATER MONITORING

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ABSTRACT

This paper describes a new statistical approach for the analysis of groundwater monitoring data from land disposal facilities. The procedure uses historical upgradient information (i.e. one or more wells measured quarterly for one or more years) in constructing confidence intervals that incorporate the systematic effects of season, location, temperature, etc. The model is described in both univariate and multivariate generalizations. The estimated confidence limits can then be used to test the hypothesis that a new downgradient observation was drawn from the upgradient population conditional on season.

INTRODUCTION

The quality of groundwater monitoring at land disposal facilities is of critical importance for public health and safety. Unfortunately, exact methods for determining if a facility is "leaking" are generally unavailable. Furthermore, harmful levels of specific constituents of groundwater are also generally unknown. In the absence of exact guidelines, The Environmental Protection Agency has proposed a statistical approach to estimating hazardous groundwater leakage (40 CFR 265.93 (b)(2)). Unfortunately, the regulation is based on a statistical strategy that is both flawed and inappropriate for these data. The proposed T-statistic is:

$$T = \frac{\bar{X}_m - \bar{X}_B}{S_t \sqrt{1/4 + 1/16}}$$

Where $S_t = \sqrt{(3S^2_M + 15S^2_B)/15}$

S^2_M is the variance of the 4 aliquots (i.e. replicate samples from the same well) for the monitoring well (i.e. downgradient)

S^2_B is the variance of the 16 upgradient measurements (i.e. 4 aliquots at each of 4 quarters)

$\bar{X}_M$ = the mean of the four background (downgradient) aliquots

$\bar{X}_B$ = the mean of the 16 (4 aliquot x 4 seasons) upgradient observations

The EPA suggests that this statistic has a t-distribution on 18 degrees of freedom. This is clearly not the case.

Table 1, displays specific conductance levels for groundwater at a land disposal facility. Four replicate samples (aliquots) were obtained for each of two wells over four quarters:

TABLE 1: SPECIFIC CONDUCTANCE DATA

SEASON	WELL	REPLICATE SAMPLE 1	2	3	4
Spring	1	930	930	930	930
	2	790	790	790	790
Summer	1	890	920	920	930
	2	780	790	800	800
Fall	1	1000	1000	1000	1000
	2	870	870	870	870
Winter	1	1000	1000	1000	1000
	2	860	860	860	860

Inspection of Table 1 reveals that the four replicate values are far from independent. However, the previously described t-statistic assumes that each measurement is independent and identically distributed. To further illustrate the dependency of these measurements, replicate 1 and 2 measurements (from Table 1) were related using simple linear regression. Inspection of figure 1 reveals that the replicate samples are almost perfect linear functions of each other. The correlation between the two aliquots was r=.98, which indicates that aliquot 1 accounts for 96% of the variance of aliquot 2. In Table 1 we clearly do not have 4 x 2 x 4 = 32 independent measurements (i.e. season x well x aliquot) but only 4 x 2 = 8 independent observations (i.e. season x well). Similarly, in the EPA regulations, there are not 20 independent observations (i.e. upgradient 4 seasons x 4 aliquots + downgradient 4 aliquots) but rather 5 independent observations (i.e. 4 seasons upgradient and one measurement downgradient).

The result of this statistical misspecification is a gross overestimate of the true number of degrees of freedom (i.e. 18 vs. 3) and a gross underestimate of true sampling variability. The impact of this error on groundwater management is that false positives approaches 100% whereas false negatives are artificially low.

A second problem with this strategy is that it makes no provision for the effects of endogenous variables such as season, that may systematically effect the levels of the constituents of groundwater. The specific conductance data in Table 1 clearly suggest that systematic seasonal effects have a large impact on specific conductance levels. In light of this, we would not want to compare a winter downgradient measurement with a background that was obtained in summer.

If replicate samples are not to be used, our problem is not one of comparing upgradient and downgradient mean values but rather determining if a new downgradient observation was drawn from a given population of upgradient wells conditional on season site and location. By rephrasing the hypothesis in this way, it becomes apparent that we are not dealing with a problem of estimating mean differences but rather interval estimation. In the following, a general statistical model is developed to determine seasonally adjusted confidence or "tolerance" intervals for upgradient data consisting of one or more upgradient wells measured quarterly for one or more years. Once these tolerance intervals are estimated, we may determine if a new downgradient observation is consistent with our upgradient samples for that particular season.

METHOD

The question posed is if a univariate or multivariate observation $\underline{Y}_{ixp}$ (e.g., pH, specific conductance, TOX and TOC levels), that is associated with given values of a set of independent variables $\underline{x} = (x_1 \ldots x_n$; e.g., season, geographic region, site location), can be regarded as having been drawn from a given population, distributed as $N(\beta'\underline{x}\Sigma)$, assuming that β_{nxp} (the matrix of regression coefficients of the independent variables) and Σ (the error variance covariance matrix) are only known through estimates from a larger multivariate normal distribution of measurements (e.g., upgradient wells for the previous year).

Bock (1975) has proposed the following multivariate technique to answer this question.

To begin we must first define the model which in the present example is the multivariate multiple linear regression model. When more than a single measure is of interest, the multivariate form of the univariate multiple regression model is appropriate. For review, the univariate multiple linear regression model for observation i is represented as

$$y_i = \alpha + \beta_1 x_{i1} + \beta_2 x_{i2} + \ldots + \beta_q x_i q + \varepsilon \qquad (1)$$

Where y_i is the value of a random outcome variable y for observation i. The linear regression model relates the dependent variable y_i to q antecedent on predictor variable x_j. These x_j predictor variables are characterized as having ordinal properties, however they may be coded dichotomously as nominal measures (Dummy coding, Winer [1971]). The β_j are known as partial regression coefficients, which are weights applied to each of the x_{ij} to optimally predict y_i. The term α is included as a factor to insure equality between the right and left sides of the model (1). It achieves this by absorbing scaling differences between the predictor (x_j) and criterion measure (y_i). Finally ε_j is the error component or the residual portion of y_i not predicted by the model. ε_j encompasses measurement error and both errors of selection and weighting estimation of the predictor variables.

In the case in which there is only a single predictor variable ($q = 1$) the model is known as a simple regression model. When $q > 1$ as in equation (1), the model is of the multiple regression form. A further generalization of this model pertains to cases in which there is more than a single outcome or criterion measure. This generalization results in the multivariate regression model which may also take the form of a simple or multiple multivariate regression model ($q = 1$ or $q > 1$, respectively). The present example involves the examination of approximately five such criterion measures. In order to determine the effect of contamination on these multiple criterion measures simultaneously and without redundancy, the multivariate regression model may be easily generalized from its univariate analogue. For observation i measured on $p > 1$ dependent variables and $q > 1$ predictor variables the model may be expressed in the form of p separate univariate equations considered simultaneously:

$$
\begin{aligned}
[y_{i1}\ y_{i2}\ \cdots\ y_{ip}] = {} & [\alpha_1\ \alpha_2\ \cdots\ \alpha_p] \\
& + x_{i1}\ [\beta_{11}\ \beta_{12}\ \beta_{13}\ \cdots\ \beta_{1p}] \\
& + x_{i2}\ [\beta_{21}\ \beta_{22}\ \cdots\ \beta_{2p}] \qquad (2) \\
& \quad \vdots \\
& + x_{ip}\ [\beta_{q1}\ \beta_{q2}\ \cdots\ \beta_{qp}] \\
& + [\varepsilon_{i1}\ \varepsilon_{i2}\ \cdots\ \varepsilon_{ip}]
\end{aligned}
$$

or, more succinctly in matrix form as

$$\underline{y}_i' = \underline{x}_i'\ B + \underline{\varepsilon}_i' \qquad (3)$$

where $\underline{y}_i'$ is the p-element outcome vector for observation i

$$\underline{y}_i' = [y_{i1}\ y_{i2}\ \cdots\ y_{ip}]$$

and, as in the univariate model, $\underline{x}_i$ represents the values of the predictor variables for observation i as

$$\underline{x}_i' = [x_{i1}\ x_{i2}\ .\ .\ .\ x_{iq}]$$

and B is the (q + 1)xp matrix of partial regression coefficients used in predicting each outcome measure from the independent measures:

$$B = \begin{matrix} \alpha_1 & \alpha_2 & . & . & . & \alpha_p \\ \beta_{11} & \beta_{12} & . & . & . & \beta_{1p} \\ . & & & & & \\ . & & & & & \\ . & & & & & \\ \beta_{q1} & \beta_{q2} & . & . & . & \beta_{qp} \end{matrix}$$

Similarly, we may represent the models for N subjects in matrix form by juxtaposing the N models. This procedure yields

$$Y = XB + E \tag{4}$$

where Y is the Nxp observation matrix, with elements y_{ik}, X is the Nx(q+1) matrix of predictors (also known as the model matrix), and E is the Nxp matrix of errors with elements ε_{ik}. Hence each row of Y, X, and E corresponds to a single observation, whereas each column of Y and E describes a single criterion measure. Similarly B has p columns of weights used to optimally predict variable y_k from the q predictor variables x_j.

Letting $\hat{B}$ be the (q + 1)xp estimate of B which is obtained from the data, the observational equation for the multivariate case becomes

$$Y = X\hat{B} + E \tag{5}$$

where E is the Nxp matrix of sample residuals (errors) containing elements $\hat{\varepsilon}_{ik} = \varepsilon_{ik}$. In order to achieve our final goal of comparing observed outcome measures $\underline{y}$ with the predicted outcome measures from an independent sample ($\hat{y}$), given values on one or more predictor variables $\underline{x}$, we must begin by calculating the partial regression coefficients $\hat{B}$. These estimates will in turn be multiplied by x to yield the predicted outcome vector $\hat{y}$.

The estimation of $\hat{B}$ is in accordance with the least squares estimation procedure described in Bock (1975). Briefly $\hat{B}$ is estimated by minimizing the squared residuals for all outcome measures. The least squares estimate $\hat{B}$ is then the solution of

$$X'X\hat{B} = X'Y$$

which has the unique solution

$$\hat{B} = (X'X)^{-1}X'Y \qquad (6)$$

it should be noted that estimation of the multivariate matrix of regression coefficients $\hat{B}$ differs from the estimation of the univariate vector of regression coefficients only in the respect that the outcome matrix Y is substituted for the outcome vector $\hat{y}$.

The previously presented multivariate multiple regression model now allows us to solve the problem of statistical prediction; i.e. could a new p-variate observation with given values on x be regarded as having been drawn from a population distributed as $N(\beta'\underline{x}, \Sigma)$ where β (the matrix of partial regression coefficients) and Σ (the p x p variance-covariance matrix (7)) are only known through estimates derived from an independent sample.

$$\Sigma_{ne} = \begin{matrix} \sigma_1^2 & \sigma_{12} & \cdots & \sigma_{1p} \\ \sigma_{21} & \sigma_2^2 & \cdots & \sigma_{2p} \\ \vdots & & \ddots & \vdots \\ \sigma_{p1} & \sigma_{p2} & \cdots & \sigma_p^2 \end{matrix}$$

In addressing this problem it is helpful to begin with the univariate case in which $p=1$ and $\Sigma=\sigma^2$.

We begin by computing the variance for the component $\hat{y}|x$ where $\hat{y}$ is the predicted value of y given value on a single measured predictor variable x, or in multiple regression, given the vector of predictor variables $\underline{x}$, where

$$\underline{x}_i' \; [1 \; x_{i1} \; x_{i2} \; . \; . \; . \; x_{iq}]$$

hence the value of y predicted from the value of x may be represented as

$$\hat{y} = \underline{x}'\hat{B}$$

where $\hat{B}$ is the estimated vector of partial regression coefficients used in predicting the single outcome measure. Since $\underline{x}$ is fixed, the variance of $\hat{y}|\underline{x}$ is

$$\xi \; (\hat{y}|\underline{x}) = \underline{x}' \; [\xi(B)]\underline{x}$$

$$= \sigma^2\underline{x}' \; (X'X)^{-1}\underline{x}$$

Since the variance of the new univariate observation is simply

$$\xi(y) = \sigma^2$$

and y and $\hat{y}$ are independent, the variance of the deviation from prediction is

$$(y-\hat{y}|\underline{x}) = \sigma^2[1+\underline{x}' \; (X'X)^{-1}\underline{x}]$$

with tolerance interval

$$(\hat{y}|\underline{x}) \pm \{F_{\alpha} \; \sigma^2[1+\underline{x}' \; (X'X)^{-1}\underline{x}]\}^{1/2}$$

which yields the variance ratio

$$F = \frac{(y-\hat{y}|\underline{x})^2}{\sigma^2[1+\underline{x}'(X'X)^{-1}\underline{x}]} \tag{8}$$

which is distributed as a central F statistic on 1 and ne degrees of freedom.

Within the context of the present example, the above variance ratio is a univariate statistic which may take the place of the t-statistic used in the original analyses.

In the case of multiple dependent measures, the task is quite similar. y becomes a p-variate observed outcome vector $\underline{y}$, associated with a given value of $\underline{x}$. $\hat{y}|\underline{x}$ becomes $\hat{\underline{y}}|\underline{x}$ which refers to the vector of predicted outcome values given $\underline{x}$. These predicted values are obtained from an independent sample considered to represent the normal population. Similar to the univariate case the value of the vector y predicted from x is presented as

$$\hat{\underline{y}}|\underline{x} = \underline{x}'\hat{B}$$

where $\hat{B}$ is the qxp matrix of partial regression coefficients in which each of the p columns corresponds to one of the p criterion variables. Since x is unchanged and therefore remains fixed, the variance of $(\hat{y}|\underline{x})$ is

$$\xi(\hat{y}|\underline{x}) = \underline{x}\ [\xi(B)]\underline{x}$$

$$= \Sigma\underline{x}'(X'X)^{-1}\underline{x}$$

Once again the variance of the p-variate new observation is

$$\xi(\underline{y}) = \Sigma$$

and since $\underline{y}$ and $\hat{\underline{y}}$ are also independent the variance of the deviation from prediction is

$$\xi\ (\underline{y}-\hat{y}|\underline{x}) = \Sigma(1+\underline{x}'(X'X)^{-1}\underline{x})$$

and the multivariate tolerance interval is

$$(\hat{\underline{y}}|\underline{x})\pm\{F\ \Sigma[1+\underline{x}^{1}(X'X)-^{1}\underline{x}]\}^{1/2}$$

Applying Hotelling's T^2, the multivariate generalization of the t statistic, we may evaluate the probability that $\underline{y}$ (observed) was drawn from the given population. Hotelling (1931) showed that

$$T^2 = N(\bar{\underline{y}} - \underline{\mu})'\Sigma^{-1}(\underline{y} - \underline{\mu}) \qquad (9)$$

where $\bar{\underline{y}}$ is the mean outcome vector of a sample of N, Σ is the variance covariance matrix and $\underline{\mu}$ is the mean vector for the population. Within the context of the present example $\underline{\mu}$ is known through estimates $(\underline{x}'\hat{B})$ from an indenpendent sample considered to represent the population (i.e. historical data on upgradient wells). For the purpose of the present demonstration $T^2 = (\frac{1}{n} + \underline{x}'\ (X'X)^{-1}\underline{x})\ (\bar{\underline{y}} - \hat{B}'\underline{x})\ \Sigma^{-1}(\bar{Y} - \hat{B}'\underline{x})$

or T^2 may be transformed into an F statistic (Anderson, 1958)

$$F = \frac{(ne-p+1)T^2}{Pne} \qquad (10)$$

which follows an F distribution with p and ne-p+1 degrees of freedom, where ne represents the degrees of freedom for the variance-covariance matrix. With respect to the regression model ne=N-q-1. Thus,

$$F = \frac{ne-p=1}{Pne}\ \ (\frac{1}{N} + \underline{x}'(X'X)^{-1}\underline{x})(\underline{y}-\underline{x}'\hat{B})\Sigma^{-1}(\underline{y}-\underline{x}'\hat{B}) \qquad (11)$$

is distributed with p and (N-q-1)-p+1 degrees of freedom.

The data in Table 2 represents quarterly specific conductance levels for 4 upgradient wells.

TABLE 2

Specific Conductance Levels for 4 Upgradient Wells

WELL	SPRING	SUMMER	FALL	WINTER
1	930	920	1000	1000
2	790	800	870	860
3	1020	1050	1000	1100
4	788	770	795	770

The predicted mean values for spring, summer, fall, and winter respectively were:

880	885	916	932

The estimated pooled standard deviation was 113. Tolerance intervals for these data were:

Spring:	561 - 1198
Summer:	566 - 1203
Fall:	610 - 1222
Winter:	641 - 1223

In terms of computational speed, the calculation required 3 seconds on an IBM Personal computer.

The tolerance interval estimated for the data in Table 2 may now be used for the purpose of testing new downgradient observations. The upgradient data set may be expanded by obtaining data for a second year or adding observations from additional upgradient wells. The greater the number of upgradient observations the narrower the tolerance interval and therefore the lower the false negative rate (i.e. increased power decreased TYPE II error rate). With 16 observations (i.e. 4 wells x 4 quarters) the test is sensitive to deviations of 2 to 3 standard deviation units.

A STATISTICAL MODEL FORGROUNDWATER MONITORING

SUMMARY

The statistical method described here provides a new approach to the analysis of groundwater data. The approach incorporates systematic seasonal effects and constructs conditional confidence or tolerance intervals that can be used in testing new downgradient (monitoring well) observations. Although notationally complex, the method may quickly and easily be applied even on microcomputers.

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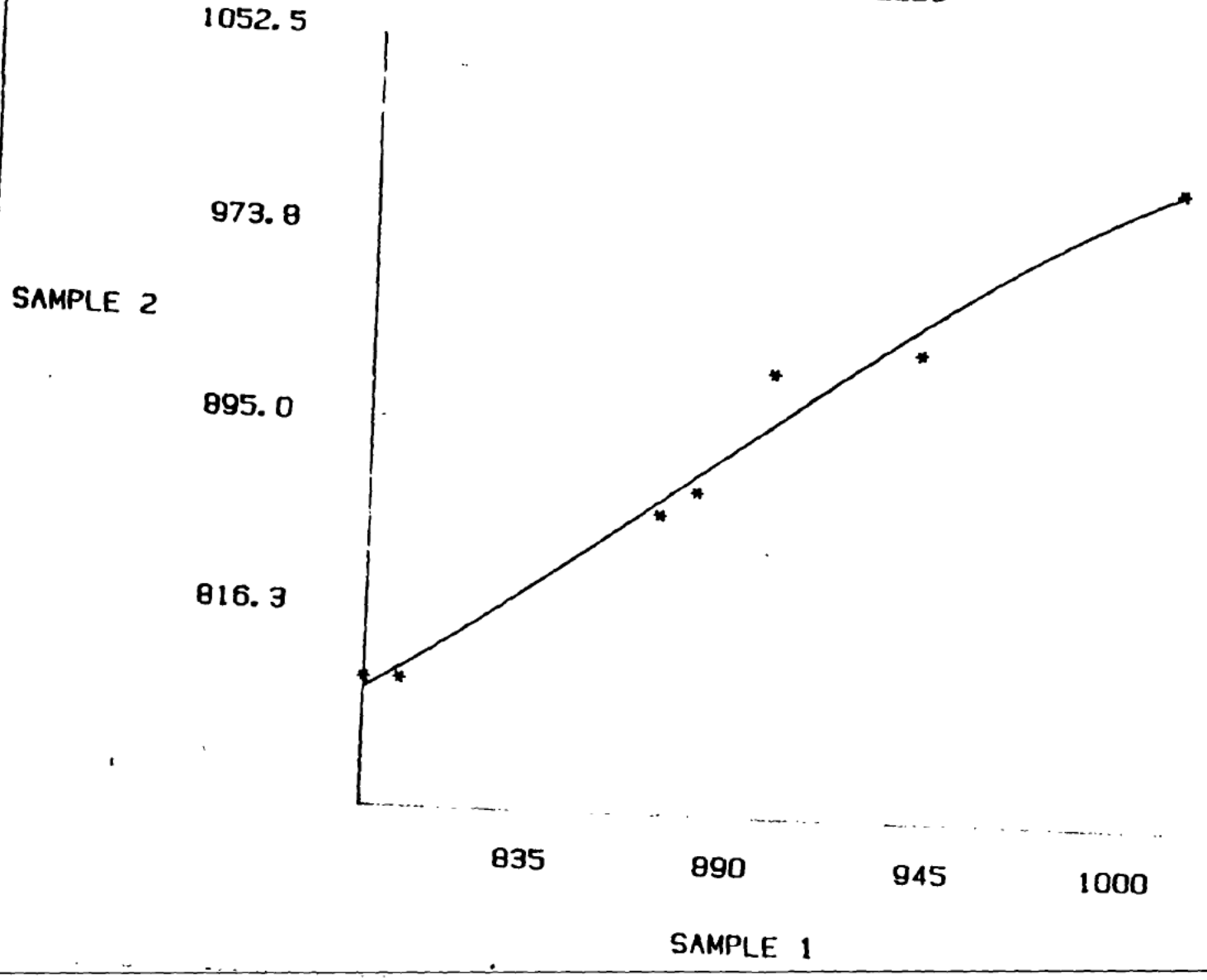
REGRESSION OF ALIQUOT 1 ON ALIQOUT 2

SPECIFIC CONDUCTANCE FOR FOUR SEASONS AND TWO WELLS



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Office of Solid Waste
U.S. Environmental Protection Agency
401 'M' Street, S.W. (WH-562)
Washington, D.C. 20460

RECEIVED
MAR 11 1985
GAI-ATL

Dear Dr. Skinner:

At our meeting with you and members of your staff on January 30, 1985, on the subject of groundwater monitoring at hazardous waste disposal facilities, we focused on the matter of monitoring requirements above the uppermost aquifer, in which monitoring wells regulatorily might constitute compliance points. We noted that EPA regions, apparently with encouragement and support of headquarters, have been requesting that applicants for RCRA Part B permits provide monitoring in non-aquifer saturated zones which do not yield significant quantities of water to wells or springs.

There appeared to be at that meeting a general agreement on a number of points, which included the following:

- Monitoring in portions of the saturated zones located above the uppermost aquifer may be used to provide an early indication of performance of the disposal containment system and thus serve as an early warning system for possible failure of the disposal site to perform as designed or predicted.

- Monitoring system design and monitoring techniques in non-aquifer (low permeability) saturated zones must necessarily be different from those used in aquifers as commonly defined and accepted by the hydrogeological community terms of number and location of monitoring wells, well completion details, parameters to be monitored, frequency of monitoring, sampling protocols and the statistical procedures used to evaluate the analytical data.

- The appropriate response to monitoring data obtained from non-aquifer zones must not necessarily be the same as the response required by regulations to monitoring data obtained in aquifer systems.

We agreed that members of NSWMA's Institute of Chemical Waste Management and Professional Services Council would prepare a draft of expanded guidance for monitoring in non-aquifers for consideration by the Agency and, hopefully, transmittal to the EPA regions and states for their use in permit application reviews. Ultimately, it may be desirable to incorporate specific rules for monitoring above the uppermost aquifer in Subpart F of 40 CFR 264.

Our working groups have met and drafted proposed language for this expanded guidance and that language is transmitted with this letter. In the interest of enabling permitting activities to move forward, we urge that you review this draft and, if you find it meets your needs, transmit it to your permit writers. Should you find that there are areas that are unclear or with which you disagree, we are ready to meet with you on very short notice to resolve any difficulties.

Very truly yours,

Charles A. Johnson
Technical Director

CAJ/bjm

Attachments

cc: E. Wingerter
R. Hanneman
S. Pirages
B. Parker

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF

1/3/85

To: Schaefer
Ullrich
Gade
Walker
Brossman

Attached is a copy of the RCRA-only draft CAFO. It does not contain any provisions relating to UIC or closure of open lagoons at present.

I would appreciate any comments.

R. Field

P.S. I have E-mailed this to Mays/Onsdorff

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

IN RE:	)	
	)	
CHEMICAL WASTE MANAGEMENT, INC.	)	DOCKET NO. RCRA-V-C-000
OAK BROOK, ILLINOIS,	)	
	)	
	)	CONSENT AGREEMENT AND ORDER
Respondent.	)	
	)	

CONSENT AGREEMENT

WHEREAS:

A. The above-captioned civil administrative proceeding was initiated pursuant to Section 3008 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6928;

B. A Complaint and Notice of Opportunity for Hearing was filed by Complainant, Basil G. Constantelos, Director, Waste Management Division, on January, 1985, charging that Respondent violated Section 3005 of RCRA, 42 U.S.C. §6925 and implementing regulations at 40 C.F.R. 261, 262, 265, and 270, et seq. The Complaint alleges that certain violations occurred at Respondent's facility located at 3956 State Route 412, Vickery, Ohio (the "Facility"). The Facility is an existing hazardous waste management facility, as defined in 40 C.F.R. §260.10.

WHEREFORE, for the purpose of the above-captioned proceeding and without prejudice to any other proceeding:

A. This Consent Agreement and Final Order (CAFO) of the Regional Administrator is in full and complete settlement of all civil liabilities which might have attached as the result of said proceeding. No waiver, release, impairment, or other effect upon the possible criminal liability of any person, corporation, or any other entity is granted, conveyed, or implied by this CAFO, nor does this CAFO constitute a waiver, release, impairment or otherwise effect the liability of Respondent with respect to a civil administrative proceeding initiated pursuant to Section 16(a) of the Toxic Substances Control Act (TSCA)(TSCA V-C-000);

B. Other than as set forth in paragraph D below, Respondent neither admits nor denies the factual allegations of the Complaints and Respondent agrees not to contest the jurisdictional allegations contained in the Complaints or the authority of Regional Administrator to issue this CAFO.

C. Respondent expressly waives its right to request an adjudicatory hearing on the allegations of the Complaints and consents to the relief and civil penalties stated in

the following Order; and

D. Respondent stipulates:

1. That on or about May 22, 1984, Respondent, CWM, and the State of Ohio entered into a Consent Decree (the "State Consent Decree"), which was filed in the Court of Common Pleas for Sandusky County, Ohio, in which Respondent agreed, among other things, to cease the sale of oil products from waste oil receipts recycled at the facility subsequent to entry of the state decree until it had developed a comprehensive oil management program that was acceptable to the Ohio Environmental Protection Agency and to decontaminate and close certain surface impoundments and other areas of the facility alleged to be contaminated by polychlorinated biphenyls (PCBs);

2. That said Decree requires that PCB-contaminated soils, sludges and other materials from the facility be placed into a closure cell to be constructed and operated in compliance with 40 C.F.R. §761.75;

3. That Respondent has, in fact, submitted an application to the Regional Administrator, Region V, for said closure cell pursuant to the State Consent Decree;

4. That Respondent has removed or will remove or decontaminate the buried oil/water separation tank, the concrete pit and oil/water trench, and that portion of a buried pipeline between sampling points identified in Section XVI, paragraph 29,

of the State Consent Decree;

5. That Respondent has removed or shall remove all sludge with PCBs in concentrations over 500 parts per million (ppm) and all free oil containing PCBs, and dispose of said material off-site in accordance with 40 C.F.R. Part 761, et seq, as set forth in Section XVI, paragraph 29, of the State Consent Decree;

6. That prior to construction of the closure cell, non-liquid PCB material in concentrations below 500 ppm shall be placed in a temporary storage area to be clay lined, covered and located adjacent to Pond 4, as specified in Section XV Schedule for Closure of the State Consent Decree;

Based upon the foregoing stipulations, the parties agree to the following ORDER:

A. Except as provided below, U.S. EPA inspectors shall have full access to all operating areas of the Facility without delay upon presentation of credentials to company security personnel at the Facility's gate. Except as provided below, full access includes the right to obtain samples (providing split samples to CWM) and to record observations of site conditions, including photographs, without restriction, interference, or prior approval of Respondent's personnel or other agents of the company. Nothing in this paragraph is intended to limit any other lawful rights of access or

inspection which U.S. EPA may have with respect to the Facility. Prior to access to the Facility, U.S. EPA inspectors shall complete CWM's safety training briefing, including signing an acknowledgment of the same.

B. Within thirty (30) days of the effective date of this Agreement, CWM shall implement the Inspection Program for PCB-contaminated solids and liquids in storage, attached hereto as Appendix A.

1. CWM agrees to cooperate with U.S. EPA, upon proper notice, but without warrant, during lawful inspections conducted to monitor compliance with this Agreement, provided, however, that during such inspections U.S. EPA shall not request or seek to obtain any environmental audit or internal compliance documents which are not required to be maintained by law or regulation and which are prepared pursuant to the environmental management program described and evaluated in paragraph B of the Agreement.

2. If U.S. EPA requests the Audit report and documents prepared in connection with the Audit report by CWM's Environmental Management Department after six months following the date of delivery of the Audit recommendations described in subsection 3, CWM shall provide such documents. Any documents prepared by CWM in connection with the Audit report, excluding documents prepared by CWM's lawyers, or at their direction, shall be made available to U.S. EPA in accordance with the above. U.S. EPA agrees that

such documents shall not be used to initiate a civil enforcement action or as direct evidence of a violation, but may be used as evidence of the existence of any violation which may remain uncorrected beyond six months after the delivery of the Audit report and as evidence of knowledge or duration of a violation provided, however, that CWM does not waive any legal rights it may have to object to the admissability of such evidence. It is intended that documents prepared for CWM pursuant to paragraph B are not required by law or regulation.

3. CWM shall propose to U.S. EPA's Office of Enforcement and Compliance Monitoring (OECM), through Basil Constantelos, within thirty (30) days of the effective date of this Agreement, the scope of work for the services of a third-party consultant, as well as its proposed consultant, who shall be expert in environmental auditing, environmental management systems and RCRA and TSCA waste management operations. This scope of work and consultant shall be agreed upon by U.S. EPA and CWM in writing, prior to the consultant commencing the performance of the professional services as more fully set forth herein below. The consultant will be retained and the scope of work will be designed to review waste operation and environmental management systems at the Vickery facility.

4. Within one hundred eighty (180) days after agreement upon the scope of work and the consultant, said third-party consultant shall report in writing to CWM. This report shall:

a. Identify and describe the existing facility waste management operations and the Environmental Management Department environmental management systems, policies and prevailing practices as they affect RCRA and TSCA compliance at the Vickery facility to the extent they are different from such systems, policies and practices as they affect RCRA and TSCA compliance at the Emecle facility.

b. Evaluate such operations and systems, practices and policies and identify and describe fully the perceived weaknesses in such operations and systems, practices and policies by comparing them, to the extent practicable, to:

(1) their ability to promote compliance with applicable RCRA and TSCA requirements;

(2) the existing practices, programs and policies of other RCRA/TSCA waste management corporations operating within the continental United States;

(3) the history of Vickery operations in terms of its compliance programs, its compliance record and its environmental management practices over the previous five years;

(4) the available literature and consultant's experience pertinent to regulatory compliance programs, practices and policies currently operative in the chemical and waste management industries in the continental United States;

The consultant shall apply its expertise and judgment to the foregoing data base, utilizing such factors as the consultant believes to be relevant and appropriate (which factors shall be stated in the report).

c. Based on the evaluation required in paragraph B.4.a. and b. above, the consultant shall identify and describe fully, with supporting rationales, the perceived areas, if any, where CWM's waste management operations and environmental management systems, practices and policies may be improved as they affect Vickery regarding RCRA and TSCA compliance obligations, listing specific options for any improvements at Vickery in the following specific areas:

(1) compliance and waste management operation, staffing, education and experience requirements;

(2) compliance management budget, lines of authority to CWM's corporate Environmental Management Department and relationship to the operating facility manager;

(3) personnel training for individual employee compliance obligations and emergency spill response;

(4) Operations and Maintenance (O&M) procedures for pollution prevention and waste management equipment;

(5) preparation of self-monitoring reports required to be filed with the State and U.S. EPA;

(6) evaluation of waste management operations and pollution prevention equipment in terms of adequacy of design and compatibility with wastes being passed through said equipment;

(7) preparation of Quality Assurance (QA) and Quality Control (QC) programs for sampling and analysis and for environmental testing procedures, including Vickery laboratories and contract laboratories for Vickery;

(8) preparation and review of Incident Reports, with specific recommendations for corrective steps and preventive O&M, along with reporting procedures for these recommendations to corporate headquarters.

5. CWM shall notify U.S. EPA upon receipt of such report, and within ninety (90) days after receipt of a final report, CWM shall submit to U.S. EPA that portion of the report containing all of the recommendations of the consultant, together with CWM's evaluation of each option it has selected for adoption and the reasons for rejecting other options. The report by CWM shall set forth the specific actions the company shall take and a schedule for implementation of the recommendations adopted by CWM.

6. All documents submitted to U.S. EPA pursuant to paragraph B shall be kept confidential to the extent authorized by law.

C. On or before July 1 of each calendar year, CWM shall

submit to U.S. EPA a copy of its annual PCB report for the previous calendar year, prepared pursuant to 40 U.S.C. §761.180. CWM shall submit to U.S. EPA copies of the monthly reports prepared to document compliance with the remedial requirements of the State Consent Decree, pursuant to paragraph 45 of the State Consent Decree, and shall include in such reports the amounts of materials contaminated with PCBs for the preceding month, chemically fixed and temporarily stockpiled, disposed of in the closure cell referred to in paragraphs D.2. and 3. of the stipulations, or removed from the Facility. For materials contaminated with more than 500 ppm PCB's which have been removed from the facility, such reports shall indicate the concentration of PCBs in such materials, based on analyses undertaken by CWM, and shall identify the destination of any such materials removed from the Facility.

D. CWM waives all claims that all operating records of the Facility previously submitted by CWM to U.S. EPA are subject to TSCA Confidential Business Information claims, except for customer lists or documents for which customer lists may be compiled.

E. CWM waives all claims that records pertaining to the design and operating methodology of pollution control equipment at the Facility previously submitted to U.S. EPA and/or the Ohio Environmental Protection Agency for issuance of a permit, license or the like are subject to Confidential Business Information claims.

F. To assure that the Facility is properly managed and supervised during emergency events, CWM shall implement the procedures in Attachment A. The reports prepared and submitted pursuant to paragraphs B.2. and 4. shall address whether such measures are sufficient to provide adequate management and supervision at the Facility during emergency events, and if they are not, shall recommend additional measures to meet that objective.

G. Within fifteen (15) days of entry of this CAFO, Respondent shall develop and implement a program for monitoring NOx emissions from surface impoundments by use of Draegger tubes. Said program shall include periodic monitoring of said emissions and continuous monitoring during any period of visible emissions. Respondent shall maintain written records of all such monitoring and make the same avialable to U.S.EPA upon request.

H. Except as longer periods of compliance are contemplated in this CAFO or in the State Consent Decree or otherwise provided in paragraph I below, Respondent shall immediately, upon the signing of this CAFO, achieve and maintain compliance at the Facility with applicable regulations for hazardous waste treatment facilities, as set forth in 40 C.F.R. Parts 265 and 270. The foregoing shall include, but not be limited to, compliance with 40 C.F.R. §270.72 in the event of creation of new waste piles or the addition of new processes in the treatment, storage or disposal of hazardous waste. U.S. EPA shall promptly process and take

final action upon any submissions made by CWM pursuant to this paragraph. U.S. EPA represents that all claims of U.S. EPA under RCRA based on facts or circumstances known to it as of October 12, 1984 are set forth in the complaint.

I. Respondent shall implement a groundwater monitoring program in full compliance with 40 C.F.R. §265.90 through 40 C.F.R. §265.94. To carry out the foregoing, Respondent agrees to do the following:

1. Respondent shall install 10 groundwater monitoring wells into the bedrock geological strata beneath the Facility at the locations and depths designated on the map attached hereto as Exhibit ___ ("The Bedrock Wells"). In the event the operation of any new water production well at the Facility alters the groundwater gradient, Respondent shall modify the bedrock groundwater monitoring system to accomodate changes in groundwater flow direction.

2. At the 21 locations designated __ to __ on Exhibit __, Respondent shall install groundwater monitoring wells into the lacustrine geological strata (the "Lacustrine Wells").

3. At the 21 locations designated ___ to ____ on Exhibit __, Respondent shall drill and continuously take core samples to bedrock the purpose of ascertaining the water levels, geological formations and paths of contamination underlying the facility.

4. Respondent shall also install at least six groundwater monitoring wells into the glacial till underlying the Facility (the "Till Wells"). One such well shall be for background

monitoring and is designated as ___ on Exhibit _____. The remaining Till Wells shall be installed as follows: In the event that continuous sampling at the locations described above in subparagraph (3) reveals the presence of sand layers in the till beyond the Lacustrine layer, Respondent shall install additional groundwater monitoring wells at each such location which shall be screened in the uppermost sand layer(s) in the till strata. In the event no sand layers are discovered, Respondent shall install Till Wells at each of the 5 locations, and depths designated ___ to ___ on Exhibit ___. In the event that at least one but fewer than five such sand layers are discovered, Respondent shall first install Till Wells into said sand layers as aforesaid and thereafter install additional Till Wells in one or more of the locations designated as ___ to ___ on Exhibit such that the total number of locations is equal to 5.

5. The Bedrock Wells, Lacustrine Wells and Till Wells shall be monitored as part of the groundwater monitoring program required by 40 C.F.R. §265.90 through §269.94. The semi-annual evaluation required by 40 C.F.R. §265.93 shall utilize the statistical procedure and indicator parameters set forth in Exhibit ___ hereto.

6. Respondent shall conduct a full assessment of the effects of Respondent's waste disposal, storage and/or treatment activities at the Facility on groundwater quality, both within and beyond the site boundries, in conformity with 40 C.F.R.§265.93(d). Respondent shall submit the plan required under 40 C.F.R.§265.93(d)(2)

in the manner set forth in subparagraph 7 herein. The number, location, and depth of wells to be specified in said plan submitted pursuant to 40 C.F.R. §265.93(d)(2) shall be the Bedrock Wells, the Lacustrine Wells and the Till Wells except as otherwise marked on Exhibits _ and _. Said plan shall conform to the requirements of 40 C.F.R. §265.93(d)(3), except that the hazardous wastes and hazardous waste constituents to be analyzed for shall be as listed on Exhibit __. Respondent shall implement said plan in accordance with its terms and any modifications or amendments made by U.S. EPA to conform to the specific requirements of 40 C.F.R. §265/93(d) or this CAFO. Any modification or amendment made by U.S. EPA may be disputed in accordance with the procedure set forth in paragraph M. Upon completion of said plan, Respondent's obligation to continue with assessment pursuant to 40 C.F.R.§265. 93(d)(7) shall be determined in accordance with the standards set forth in 40 C.F.R.§265.93(d)(6).

7. Respondent shall:

   a. Submit a workplan to U.S.EPA for installatilon of the Bedrock Wells, Lacustrine Wells and Till Wells and continuous core sampling of the boreholes to bedrock within 45 days of entry of this CAFO.

   b. Submit a plan to U.S.EPA for an assessment of groundwater quality pursuant to 40 C.F.R. §265.93(d) and Paragraph 6 hereof.

c. Install Bedrock Wells within 90 days after approval of the workplan by U.S.EPA.

d. Install boreholes within 90 days after approval of the workplan by U.S.EPA.

e. Install Lacustrine Wells and Till Wells by August 31, 1985 provided that the workplan is approved by March 15, 1985. If the workplan is timely submitted, but is not approved by said date, the deadline shall be extended by the number of days beyond March 15, 1985 until approval.

f. Complete assessment of groundwater quality by December 15, 1985 as set forth in subparagraph 6 provided that the workplan is approved by March 15, 1985. If the workplan has been timely submitted but is not approved by said date, the deadline shall be extended by the number of days beyond March 15, 1985 until approval.

e. Bedrock Wells marked __, Lacustrine Wells marked _ and Till Wells marked ____ on Exhibits _ and _ shall be installed or completed within 90 days after the completion of closure of Ponds 4, 5 and 7. These wells will thereafter be sampled to complete the assessment of groundwater quality pursuant to 40 CFR §265. 93(d) and paragraph 6.

8. The number and location of the monitoring wells specified in this Paragraph I shall be deemed in conformance with the requirements of 40 C.F.R.§265.90 through 40 C.F.R. §265.94.

J. The agreement of U.S. EPA to entry of this CAFO is contingent upon Respondent's full compliance with the terms of the State Consent Decree. In the event of a material violation of a material requirement of the State Consent Decree, U.S. EPA expressly retains the right to commence enforcement proceedings for penalties provided by RCRA Section 3008 for any associated violation of RCRA, and CWM expressly retains the right to contest any such action, including U.S. EPA's jurisdiction to take such action. U.S. EPA may not collect penalties under this paragraph and under paragraph O for the same violation.

K. Notwithstanding any other provision of this Order, an enforcement action may be brought pursuant to Section 7003 of RCRA or other statutory provision should U.S. EPA find that the handling, storage, treatment, transportation or disposal of

solid waste or hazardous waste at the Facility presents an imminent and substantial endangerment to human health or the environment. Nothing herein shall be construed to prevent U.S. EPA from seeking legal or equitable relief to enforce the terms of this CAFO in the event Respondent fails to comply with the terms hereof. Nothing herein shall relieve Respondent of either civil or criminal liability for any violation not alleged in the Complaint and, without limitation on the foregoing, shall not limit U.S. EPA from taking further enforcement action to abate any groundwater contamination attributable to the Facility.

L. All documents, plans, or other communications pursuant to this CAFO shall be directed to:

Director
Waste Management Division (5H)
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604
Attn: James Brossman

M. In the event that Respondent disputes any modification or amendment to any work plan to be submitted to U.S. EPA for approval hereunder, the parties shall attempt to resolve such dispute informally for a period not to exceed thirty (30) days. In the event the dispute cannot be resolved informally, the determination of U.S. EPA shall be final and binding unless and until overturned by an Administrative Law Judge as follows: In the event a dispute is not resolved within thirty (30) days, Respondents may petition an Administrative Law Judge to modify U.S. EPA's determination provided

that any such petition must be made within sixty (60) days of said dispute and the burden of proof shall be upon Respondent to show that the determination of U.S. EPA is unreasonable.

N. In consideration of the foregoing stipulations, for cooperation shown to the government, and Respondent's commitment's hereunder, Complainant agrees to mitigate the proposed civil penalty to which sum represents costs incurred by Complainant under RCRA with respect to the Facility. Payment will be remitted within twenty (20) days of receipt of the fully executed Consent Agreement and Order by sending a cashier's or certified check in the amount of $_____ made payable to the Treasurer of the United States of America, to the Regional Hearing Clerk (5C-16), U.S. Environmental Protection Agency, Region V, 230 South Dearborn Street, Chicago, Illinois 60604.

O. Failure to remit the civil penalty will result in a referral of this matter to the United States Attorney for the initiation of a collection action.

P. Respondent shall pay to U.S. EPA stipulated penalties, in the amount of five hundred dolllars ($500.00) per day for failure to meet any requirement contained in this CAFO, except for the requirements of paragraphs H and

J. If the Respondent is rendered unable, wholly or in part, by force majeure to perform the actions specified in this CAFO, Respondent shall give Complainant prompt written notice of the force majeure no later than 30 days from the date of such occurence with reasonable particulars concerning it, and the obligation of the Respondent shall be suspended during, but no longer than the continuance of the force majeure. Failure of Respondent to notify U.S. EPA of the fact of such occurences shall constitute a waiver of the defence of force majeure. The term "force majeure" shall mean an act of God, act of the public enemy, war, blockade, public riot, lighning, fire, storm, flood, explosion, and any other cause which is not reasonable within the control of Respondent despite the exercise of reasonable efforts. Failure to implement the groundwater monitoring program specified in paragraph I hereof in accordance with the approvals, modifications, and/or amendments of U.S. EPA, stipulates penalties in the amount of five thousand dollars ($5,000) per day.

_____
Chemical Waste Management, Inc.
Oak Brook, Illinois

Dated: _____

Basil G. Constantelos
Director
Waste Management Division
U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Dated: _____

It is so ORDERED as agreed to by the parties as stated in the Consent Agreement.

Valdas V. Adamkus
Regional Administrator
U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Dated: _____

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

JAN 2 1985

REPLY TO ATTENTION OF:

MEMORANDUM

RECEIVED
JAN 3 1985
WASTE MANAGEMENT BRANCH

SUBJECT: Chemical Waste Management, Inc.
Vickery, Ohio Facility

FROM: Michael J. Walker
Associate Regional Counsel

TO: Dale S. Bryson, Deputy Director
Water Division

Attached please find a copy of the Consent Decree that was signed by the State of Ohio and Chemical Waste Management concerning the Vickery, Ohio facility. As you may be aware, the Region is currently proceeding to resolve federal TSCA and RCRA claims through administrative consent agreements and final orders.

With respect to several UIC issues that have been raised by your staff, i.e., closure plans for the injection wells and a compatibility analysis of waste streams being injected, I have mentioned these concerns to Mr. George Vander Velde, Vice President, Chemical Waste Management, and he is agreeable to meeting with the UIC personnel to describe existing procedures and plans for addressing these concerns. I would be happy to arrange such a meeting.

If you or your staff have any questions about any aspect of the state Consent Decree, please do not hesitate to call me at 6-6662.

cc: R. Hilton w/attachment
E. Tebo w/attachment
S. Sylvester w/attachment
S. Nieman w/attachment
M. Sabadaszka w/attachment
K. Kamath w/attachment
A. Price w/attachment
J. Garl w/attachment
D. Ullrich w/o attachment
M. Smith w/o attachment
M. Gade w/o attachment
R. Field w/o attachment

Chemical Waste Management, Inc.
3003 Butterfield Road
Oak Brook, Illinois 60521
312/654-8800

June 25, 1985

RECEIVED
JUL 1 1985
U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE ENFORCEMENT BRANCH

Director
Waste Management Division (5H)
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, IL 60604
Attn: Mr. James Brossman
and
Director
Environmental Services Division
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, IL 60604
Attn: Mr. Karl Bremer

Dear Messrs. Brossman and Bremer:

The Consent Agreement and Final Order (CAFO) which were entered into by CWM and the U.S. EPA regarding the CWM Vickery Facility contain the following provision (pg. 7):

> B.3. "b. On or before June 30, 1985, Respondent shall submit to U.S. EPA a copy of the audit report prepared by an independent auditor of Respondent's audit of RCRA and TSCA compliance at the Facility completed pursuant to the State Consent Decree."

We are pleased to submit the report of that audit which was performed by A.D. Little per mutual agreement with the State of Ohio. The report is attached to this letter.

The Arthur D. Little report (p.8) includes the following overall assessment:

> "On the basis of our discussions with key management and staff at Chemical Waste Management and Waste Management, Inc., and visits to Chemical Waste Management's four Ohio operating facilities, we believe that Chemical Waste Management is genuinely committed to developing an effective environmental management system. Chemical Waste Management has made significant strides in the development of an effective environmental management system for the Ohio operating facilities. In addition, the environmental audit program developed by Waste Management, Inc., is a well-designed audit program that appears to be functioning smoothly. On the basis of our evaluation *and our general familiarity with environmental management systems* in place at other industrial facilities involved in the treatment, storage, and disposal of hazardous waste, we believe that the environmental management programs in place or currently under

development by Chemical Waste Management for its Ohio facilities provide an appropriate framework for effective environmental management."

In the course of their review, Arthur D. Little identified several areas where the Company's programs could be improved and the report includes several recommendations, each of which will be implemented. These recommendations and our responses are summarized below:

A. Environmental Compliance Management Systems

1. Arthur D. Little recommends that CWM appoint a full or part time environmental coordinator at each site reporting to the site general manager.

   This recommendation will be implemented by establishing a new full time environmental coordinator on the Vickery, Ohio, facility and by designating specific individuals to act as environmental coordinators at the other Ohio CWM sites on a part time basis.

2. Arthur D. Little recommends that the internal reporting system be expanded to better document compliance situations.

   The Environmental Compliance Officers have been directed to specifically note areas of progress and compliance with key regulatory requirements.

3. Arthur D. Little recommends that CWM continue current training programs and complete planned training by September, 1985.

   CWM is implementing an aggressive training program directed toward all facility personnel with additional regulatory training for supervisors and managers. The initial presentation of this training to all CWM personnel in Ohio will be completed by September of 1985.

B. Environmental Audit Program

1. Arthur D. Little recommends that WMI either expand its audit staff or reduce scheduled audit frequency to make staffing and state goals consistent.

   WMI will add an environmental auditor to insure that all major CWM facilities ban be audited annually. The schedule for smaller facilities will be adjusted to provide bi-annual audits.

Chemical Waste Management Inc

2. Arthur D. Little recommends that WMI auditors (a) increase documentation of compliance situations and (b) explicitly state in the audit report the period under review to insure representative sampling.

   WMI will implement these recommendations.

C. Employee Reporting Mechanism

1. Arthur D. Little recommends that internal publicity and procedures for the employee hot line be updated. CWM has recently issued an all employees memorandum on compliance systems and the availability of the hot line. Hot line procedures have been modified to insure timely responses to inquiries. In addition, all employees will receive bi-annual notices on the availability of the hot line.

In general, we're pleased with the Little audit and its endorsement of the program we've established. We feel the program has been very effective and is without a peer within the industry. We will continue to strengthen and improve the program.

Sincerely yours,

George Vander Velde/SD

George Vander Velde
Vice President - Technical Services and Development

Attachment

cc: Steve White (OEPA - letter only)

GVV:sd

Chemical Waste Management, Inc.
[illegible]
[illegible]
[illegible]

June 25, 1985

Mr. Steve White
Division of Solid & Hazardous Waste Management
Ohio Environmental Protection Agency
361 East Broad Street
Columbus, OH 43215

Dear Mr. White:

Paragraph 42 of the Consent Decree entered into by Chemical Waste Management and the State of Ohio required Chemical Waste Management to perform through an independent auditor an audit of "the effectiveness of the compliance, audit and employee reporting mechanism implemented by CWM at their operating facilities in Ohio." As previously agreed upon with your agency, Arthur D. Little was selected as the independent auditor and has performed that audit.

The Arthur D. Little report (p.8) includes the following overall assessment:

> "On the basis of our discussions with key management and staff at Chemical Waste Management and Waste Management, Inc., and visits to Chemical Waste Management's four Ohio operating facilities, we believe that Chemical Waste Management is genuinely committed to developing an effective environmental management system. Chemical Waste Management has made significant strides in the development of an effective environmental management system for the Ohio operating facilities. In addition, the environmental audit program developed by Waste Management, Inc., is a well-designed audit program that appears to be functioning smoothly. On the basis of our evaluation and our general familiarity with environmental management systems in place at other industrial facilities involved in the treatment, storage, and disposal of hazardous waste, we believe that the environmental management programs in place or currently under development by Chemical Waste Management for its Ohio facilities provide an appropriate framework for effective environmental management."

In the course of their review, Arthur D. Little identified several areas where the Company's programs could be improved and the report includes several recommendations, each of which will be implemented. These recommendations and our responses are summarized below:

A. Environmental Compliance Management Systems
   1. Arthur D. Little recommends that CWM appoint a full or part time environmental coordinator at each site reporting to the

Chemical Waste Management Inc

site general manager.

This recommendation will be implemented by establishing a new full time environmental coordinator on the Vickery, Ohio, facility and by designating specific individuals to act as environmental coordinators at the other Ohio CWM sites on a part time basis.

2. Arthur D. Little recommends that the internal reporting system be expanded to better document compliance situations.

   The Environmental Compliance Officers have been directed to specifically note areas of progress and compliance with key regulatory requirements.

3. Arthur D. Little recommends that CWM continue current training programs and complete planned training by September, 1985.

   CWM is implementing an aggressive training program directed toward all facility personnel with additional regulatory training for supervisors and managers. The initial presentation of this training to all CWM personnel in Ohio will be completed by September of 1985.

B. Environmental Audit Program

1. Arthur D. Little recommends that WMI either expand its audit staff or reduce scheduled audit frequency to make staffing and state goals consistent.

   WMI will add an environmental auditor to insure that all major CWM facilities ban be audited annually. The schedule for smaller facilities will be adjusted to provide bi-annual audits.

2. Arthur D. Little recommends that WMI auditors (a) increase documentation of compliance situations and (b) explicitly state in the audit report the period under review to insure representative sampling.

   WMI will implement these recommendations.

C. Employee Reporting Mechanism

1. Arthur D. Little recommends that internal publicity and procedures for the employee hot line be updated.

Chemical Waste Management Inc

CWM has recently issued an all employees memorandum on compliance systems and the availability of the hot line. Hot line procedures have been modified to insure timely responses to inquiries. In addition, all employees will receive bi-annual notices on the availability of the hot line.

Chemical Waste Management is pleased with the Little audit and its endorsement of the program we've established. We feel the program has been very effective and is without a peer within the industry. We will continue to strengthen and improve the program.

Sincerely yours,

George Vander Velde

George Vander Velde
Vice President - Technical Services and Development

Attachment

cc: James Brossman (U.S. EPA - letter only)
Karl Bremer (U.S. EPA - letter only)

GVV:sd

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: June 19, 1985

SUBJECT: CWM Monthly Report for May 1985

FROM: Patricia Polston
Toxic Materials Section (P&TSB-16)

TO: Jim Brossman, Unit Chief
Ohio/Minnesota Unit

CWM Monthly Report for May 1985, has been received. The report appears to meet the reporting requirements under the CAFO.

It sounds like CWM has already initiated their "decommissioning" plan. If they are allowed to complete work under that decommissioning plan, then the proposed cleanup plan for the contaminated soil is inadequate. CWM proposed to cleanup only the visual oil-stained soil. The cleanup plan should go beyond just the visual oil-stained areas.

If you are putting together any comments for CWM, please send a copy.

Chemical Waste Management Inc

Chemical Waste Management, Inc
555 Metro Place [illegible]
Dublin, Ohio 43[illegible]
614/766-1100

June 1, 1985

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
#P590331300

Director
Waste Management Division (5)
U. S. ENVIRONMENTAL PROTECTION AGENCY
230 South Dearborn Street
Chicago, IL 60604

Attn: James Brossman

Re: Chemical Waste Management, Inc. - Vickery Facility
Consent Agreement and Final Order
Paragraph H(4)

Subject: Submission of The Workplan

Dear Mr. Brossman:

In accordance with paragraph H(4) of the Consent Agreement and Final Order entered between Chemical Waste Management, Inc. ("CWM") and the U.S. EPA on April 5, 1985, CWM is hereby submitting the workplan attached specifying the details of well installation and location. Simultaneously, CWM is submitting this workplan to Ohio EPA for their approval.

In support of the location of the proposed well screen intervals, CWM has finalized the report on the continuous sampled boreholes completed in January and March, 1985. This report should be considered a companion document to the workplan. These reports were prepared for CWM by its consultant, Golder Associates.

CWM and its consultant would welcome the opportunity to review this workplan with you at your convenience. Should you wish to establish a meeting time or contact me with questions or comments, you can reach me at 614/766-1100 or 419/547-7791.

Please acknowledge receipt of the enclosures by signing the attached copy and returning it to me at the above address.

Very truly yours,

Kathy Trent

Kathy Trent
Region Environmentalist

KT/ch

Enclosures:
1. Golder Associates, "Continuous Overburden Borehole Sampling Results"
2. Golder Associates, "The Groundwater Program Workplan"

Acknowledged and Received

_____
Name and Title

_____
Date

cc: Certified Mail - Return Receipt Requested
Karl Bremmer, USEPA - #P575465188
Edward Kitchen, OEPA - #P590331227
Tom Carlisle, OEPA - #P590331297
Ben Chambers, OEPA - #590331298
Kate Wilson, OEPA - #P590331299

OH^ -020-273-819

Chemical Waste Management, Inc.
3003 Butterfield Road
Oak Brook, Illinois 60521
312/654-8800

HWEB

RECEIVED
MAY 6 1985

FEDERAL EXPRESS

May 3, 1985

Mr. James Brossman ✓
United States Environmental
Protection Agency
Waste Management Division (5H)
230 South Dearborn Street
Chicago, IL 60604

Mr. Karl Bremmer
United States Environmental
Protection Agency
Environmental Services Division
230 South Dearborn Street
Chicago, IL 60604

Subject: CWM/Vickery Facility
Consent Agreement
Paragraph B(3)a

Gentlemen:

Pursuant to Paragraph B(3)a of the Consent Agreement and Final Order entered between Chemical Waste Management, Inc. ("CWM") and the USEPA on April 5, 1985, CWM is hereby submitting a scope of work for the services of a third party consultant, Arthur D. Little. This scope of work has been prepared to meet the requirements of an environmental audit as described in Paragraph B(3)a.

Commencement of the services provided by Arthur D. Little in conjunction with this audit will not be initiated until an agreement has been reached on its acceptability.

Both CWM and its consultant are available to review the attached scope of work at your convenience. Please contact me at 312/654-8800 if you have any questions, comments, or would like to review this proposal further.

Very truly yours,

Joseph G. Homsy/mlk

Joseph G. Homsy
Counsel

JGH/mlk

Attachment

cc: Dr. George Vander Velde

'orn Park
ıbridge, Massachusetts 02140-2390
617 864-5770 Telex 921436

Arthur D. Little, Inc.

May 2, 1985

Mr. Joseph G. Homsy
Environmental Counsel
Waste Management, Inc.
3003 Butterfield Road
Oak Brook, IL 60521

Dear Jerry: 1-3629

Arthur D. Little, Inc., is pleased to submit this proposal for an independent assessment of both: (1) the waste management operation systems, procedures, and practices and (2) the environmental management systems, procedures, and practices for Chemical Waste Management, Inc.'s Vickery, Ohio, facility.

This proposal presents our specific qualifications for and outlines our approach to this important assignment.

SPECIAL QUALIFICATIONS OF ARTHUR D. LITTLE, INC.

Arthur D. Little, Inc., is uniquely qualified to perform this assignment. Not only are we widely acknowledged as a leader in environmental auditing, we have extensive experience in all aspects of environmental management and hazardous waste management.

Our experience in environmental auditing is unparalleled. We pioneered this discipline in 1977. Since then, our work has included not only numerous assignments conducting environmental audits, but also assistance to dozens of companies in developing and implementing their own internal environmental audit programs and appraising and evaluating many companies' established audit programs. We have conducted in-depth environmental compliance audits of more than

300 operating facilities including many chemical and hazardous waste facilities. In addition, we have frequently surveyed the practices of leading corporate environmental auditing programs and have conducted seminars and training programs in environmental auditing for representatives of more than 250 companies.

Our Center for Environmental Assurance was established in 1978 to help companies more effectively manage the environmental, health, and safety hazards associated with their operations. Building on Arthur D. Little's more than two decades of work in the environmental, health, and safety fields and drawing on Arthur D. Little's 2,300-member staff, the Center serves as a focal point to help advance the state of the art of environmental management. The Center is a leader in designing and developing management systems to help companies more effectively manage their environmental affairs. During the past seven years, we have assessed or developed environmental management systems for more than two dozen major corporations, including a major waste management firm and several chemical companies. In addition, the staff of our Center for Environmental Assurance has assisted companies with a wide variety of environmental management issues and surveyed the environmental management practices of leading corporations. Thus, we have the experience and perspective that are needed to make the comparative review and evaluation that you desire of the environmental management systems at Vickery.

Our expertise in RCRA/TSCA waste management operations is equally extensive. Since our pioneering work in 1972 to assist the U.S. Environmental Protection Agency in preparing the first Report to Congress on Hazardous Waste, we have had numerous assignments regarding hazardous waste treatment, storage, and disposal. These assignments have been conducted on behalf of waste generators, hazardous waste management firms, investors, legal counsel, and federal, state, and local regulatory agencies. Our experience encompasses the following technical and managerial areas: RCRA/TSCA compliance systems planning and implementation,

remedial action planning, technology evaluation, market assessment and competitive analysis, regulatory analysis, environmental modeling, environmental impact assessments, and field testing of hazardous waste treatment, incineration, and land application systems. In the course of our work, we have visited and become familiar with practices and programs of more than 100 hazardous waste treatment and disposal facilities.

Our proposed project staff has extensive experience in all aspects of conducting environmental compliance audits, including reviewing and evaluating facility compliance with RCRA and TSCA requirements. Dr. Joan Berkowitz, assisted by five experienced environmental auditors, will be responsible for project work involving the review and evaluation of compliance with RCRA and TSCA regulations. Dr. Berkowitz is a nationally recognized expert in the field of hazardous waste management and an experienced environmental auditor in her own right, having been responsible for the RCRA and TSCA work of all major environmental compliance audit assignments undertaken by Arthur D. Little's Center for Environmental Assurance.

A summary of selected client assignments particularly relevant to this proposed program is attached.

PURPOSE AND SCOPE

The purpose of our proposed program will be to provide Chemical Waste Management with an independent review and assessment of both: (1) the waste management operation systems and (2) the environmental management systems at the Company's Vickery, Ohio, facility as they affect RCRA and TSCA compliance at the facility.

The scope of our work will include both the waste management operation systems, programs, and current practices and the environmental management systems, programs, and current practices at the Vickery facility as well as the

Chemical Waste Management Environmental Management Department systems, policies, and practices, as they impact on current TSCA and RCRA compliance at Vickery.

The output of our assessment will be a written report that:

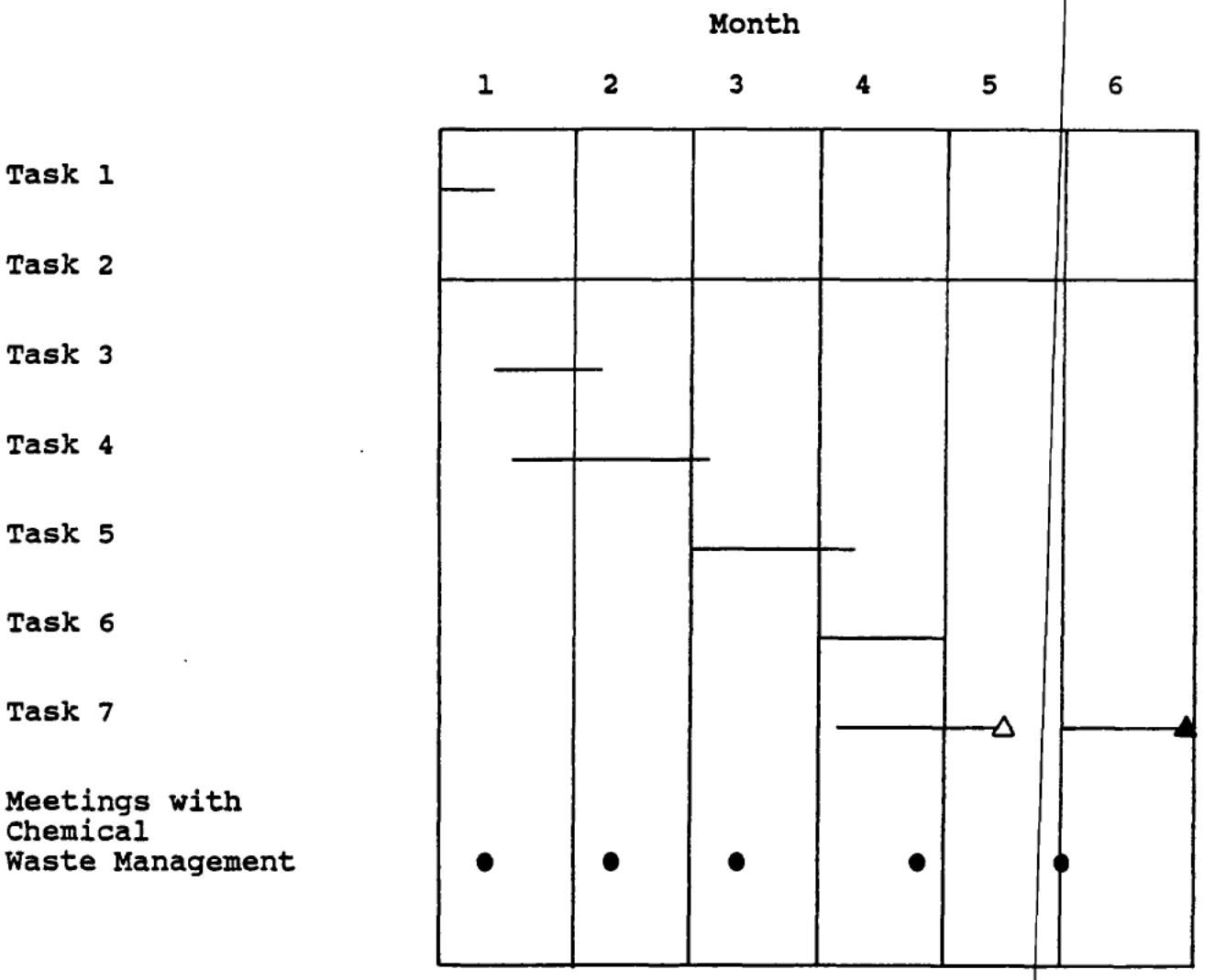
- Identifies and describes, to the extent that they are different from such systems, policies, and practices as they affect RCRA and TSCA compliance at Chemical Waste Management's Emelle, Alabama, facility, both:
  - The existing facility waste management operation systems, policies, and prevailing practices as they affect RCRA and TSCA compliance at the Vickery facility; and
  - The Environmental Management Department environmental management systems, policies, and prevailing practices as they affect RCRA and TSCA compliance at the Vickery facility;
- Presents Arthur D. Little's independent evaluation of the strengths and limitations of these systems, policies, and practices as they affect such compliance and describes those significant improvements, if any, which may be made in those areas set forth more fully in Task 6 below; and
- Presents one or more specific options for addressing such improvements.

APPROACH

We envision a seven-task approach to this assignment with frequent interaction with you or your designated representative. Figure 1 provides an overview of the timing and sequence of these tasks. Note that these seven tasks overlap and that several of the tasks involve iterative learnings. Each of these seven tasks is described below:

Figure 1

TIMING AND SEQUENCE OF TASKS



△ Draft Report

▲ Final Report

Mr. Joseph G. Homsy
Environmental Counsel
Waste Management Inc.

Task 1: Review Available Background Information

To help us prepare for our discussions with members of Chemical Waste Management's Environmental Management Department and the staff of the Vickery facility, we will review any readily available and relevant literature, reports, and memos pertaining to Vickery's waste management operation systems or environmental management systems. This could include organization charts, corporate environmental policies or guidelines, department mission statements, job descriptions for environmental and facility management, and other documents relevant to our assignment. The list is intended only to be indicative of the types of background information desired in advance of our initial discussions with managers and key staff of the Environmental Management Department.

Task 2: Document Inventory

Arthur D. Little will inventory all documents prepared by Chemical Waste Management and provided to Arthur D. Little in connection with the audit report. Arthur D. Little will also prepare a bibliography of all literature sources used.

Task 3: Understand Chemical Waste Management's Environmental Management Department

To help us understand the goals, objectives, and philosophy of the Environmental Management Department of Chemical Waste Management as well as its priorities, programs, day-to-day activities, and interrelationships within the corporation as they affect the Vickery facility, we plan to have in-depth discussions with you and the key staff within your department. Of particular importance are the managers or staff responsible for the compliance officer program, environmental operations, environmental training, environmental engineering, permitting, and public affairs. As part of this task, we will also review Chemical Waste Management's written environmental procedures and protocols,

bylaws, and other guidelines and directives to understand Chemical Waste Management's philosophy of environmental management, and the roles and responsibilities of various groups and individuals (e.g., Board of Directors, compliance officers, corporate lawyers).

To sharpen our understanding of the role your department plays in environmental management at Vickery, we also plan to talk with a few selected individuals outside Chemical Waste Management's Environmental Management Department such as the environmental counsel responsible for legal issues at Vickery, the corporate officer with responsibility for Vickery, selected managers and staff members of Waste Management, Inc.'s corporate Environmental Management Department, and the officer to whom you and your department report. The purpose of these additional interviews will be to understand how your department's role in environmental management at Vickery is viewed by corporate and line management.

We expect that some 15-20 interviews will be required to complete this task.

Task 4: Understand Vickery's Waste Management Operation Systems and Environmental Management Systems

During this task, we will develop an in-depth understanding of both: (1) the waste management operation systems and (2) the environmental management systems at the Vickery facility, as both affect RCRA and TSCA compliance at Vickery. To accomplish this, we will conduct in-depth interviews with facility management and staff, observe all facility operations involving RCRA and TSCA wastes to identify prevailing practices, and review a representative number of all types of records, reports, and documents to confirm and sharpen our understanding of Vickery's management systems, policies, procedures, and practices that affect the facility's compliance with RCRA and TSCA. We will also speak with representatives of any contract laboratories and other Chemical Waste Management facilities that affect Vickery's RCRA and TSCA compliance.

Accomplishment of this task will require a substantial amount of interaction with Vickery management and staff. After reviewing any readily available background information on Vickery's operations and management systems, we will meet with Vickery facility management to discuss the objectives of our visits to Vickery, introduce our key staff, and explain the methods we will use to develop an accurate understanding of Vickery's waste management operation systems and environmental management systems, procedures, and practices.

We will also want to take a detailed tour of the Vickery facility to enhance our understanding of the operations and activities that come under the requirements of RCRA and/or TSCA and to identify areas for detailed investigation.

With the advance information and tour as background, we will investigate the details of all waste management operation systems and environmental management systems, procedures, and internal controls. This is likely to involve in-depth interviews, guided discussions, and often, additional tours of specific aspects of the Vickery operation.

The final output of Task 4 will be a written description of both (1) the waste management operation systems, policies, procedures, and prevailing practices that affect the Vickery facility's RCRA and TSCA compliance to the extent that they are different from such systems, policies, and procedures at the Emelle, Alabama, facility; and (2) the environmental management systems, policies, procedures, and prevailing practices that affect the Vickery facility's RCRA and TSCA compliance to the extent that they are different from such systems, policies, and procedures at the Emelle, Alabama, facility. This written description will be incorporated into our final report (Task 7) and will include the information developed during Task 3 to fully describe the systems, procedures, and prevailing practices that affect Vickery's compliance.

Mr. Joseph G. Homsy
Environmental Counsel
Waste Management Inc.

Task 5: Evaluate the Systems, Policies, and Practices Affecting Vickery's Compliance

Unlike the previous tasks which are fact finding in nature, this task is evaluative and requires a strong working knowledge of the environmental activities and practices of many other companies with both similar environmental hazards and effective environmental organizations. Drawing on our extensive knowledge of environmental management programs, we will assess: (1) the waste management operation systems, policies, and practices affecting the Vickery facility's compliance with RCRA and TSCA and (2) the environmental management systems, policies, and practices affecting the Vickery facility's compliance with RCRA and TSCA. Both of these assessments will be made in terms of:

- Their ability to promote compliance with applicable RCRA and TSCA requirements including their capability to provide management with assurance that compliance is being achieved.
- The appropriateness of the facility's environmental management organization, lines of authority, staffing levels, and experience.
- Personnel training programs for both individual employee responsibilities and emergency response.
- The appropriateness of the compliance management budget and environmental budget planning and management procedures.
- Waste management and other environmental control equipment in terms of adequacy of design and compatability with wastes being handled at the site.
- Operating and maintenance procedures for waste management and other environmental equipment.

- Environmental self-monitoring and reporting.

- Quality assurance and quality control programs for sampling and analysis and for environmental testing procedures including the Vickery laboratories and any contract laboratories for Vickery. Included in this will be review and evaluation of the Waste Analysis Plan and sampling procedures for upcoming waste shipments.

- Internal reporting procedures and practices including:

  - The preparation, review, and evaluation of incident reports covering malfunctions, breakdowns, and improper handling.

  - Specific recommendations for corrective actions and preventive maintenance.

  - Internal communications and reporting procedures.

In making our assessment, we will pay particular attention to the environmental management programs of other hazardous waste management firms and of chemical industry firms. Our assessment will identify and describe perceived weaknesses that may adversely affect compliance with RCRA and TSCA. It will also identify and describe strengths and any areas for significant improvement, along with supporting rationales in the current approach for Vickery's waste operation systems and environmental management programs.

Task 6: Develop Options for Improving the Current Systems

Based on our considerable experience in developing and assessing effective environmental and waste management systems, we will prepare one or more specific options that address any areas where Chemical Waste Management's waste management operation systems and environmental management

systems, practices, and policies may be significantly improved as they affect Vickery regarding RCRA and TSCA compliance obligations. We will include specific options for any improvements at Vickery in the following areas:

- Staffing, education, and experience requirements for compliance and waste management operating personnel.
- Compliance management budget, lines of authority to Chemical Waste Management's corporate Environmental Management Department and relationship to the operating facility manager.
- Personnel training for individual employee compliance obligations and emergency spill response.
- Operations and Maintenance (O&M) procedures for pollution prevention and waste management equipment.
- Preparation of self-monitoring reports required to be filed with the State and EPA.
- Evaluation of waste management operating and pollution prevention equipment in terms of adequacy of design and compatability with wastes being passed through said equipment.
- Quality Assurance (QA) and Quality Control (QC) programs for sampling and analysis and for environmental testing procedures, including QA and QC programs for Vickery laboratories and for contract laboratories for Vickery.

- Chemical Waste Management's procedures for preparation and review of Incident Reports that describe causes of pollution prevention and waste management equipment malfunctions, improper waste handling, and/or breakdowns. We will investigate procedures for developing specific recommendations for corrective steps and preventive O&M, and assess the adequacy of reporting procedures for forwarding these recommendations to corporate headquarters.

- Use of computers to enhance recordkeeping and management's role in tracking RCRA and TSCA compliance.

It is important to recognize that the precise manner in which an environmental management system achieves its objectives is often as much a matter of the corporation's overall organization and culture as it is of the nature of the hazards involved. An assessment of Vickery's environmental management system and procedures must recognize and pay attention to not only the regulatory requirements but also the expectations of corporate management and management styles and culture at the facility and corporate levels. Our recommendations will take into account our understanding of Chemical Waste Management culture and will be tailored so that the desired results are achieved in the manner best suited to and most readily implementable by Vickery and Chemical Waste Management.

Task 7: Report Observations and Options

As we analyze our observations and develop conclusions and options, we propose to discuss our progress with you. We will describe our assessment of the strengths and weaknesses of your current approach and also discuss the practices of other U.S. corporations highlighting similarities with and differences from Vickery's current approach.

Our experience suggests that the long-term benefits to Chemical Waste Management can be greatly enhanced if this task is conducted as a series of iterative, in-depth discussions with an internal Chemical Waste Management working group of Chemical Waste Management and Vickery staff who will be involved in this study. Interaction of this nature can be highly desirable in terms of developing shared perspectives of your current activities, of trends in environmental management as practiced by other corporations, and of their potential implications for Chemical Waste Management's Environmental Management Department.

Accordingly, we propose that Task 7 involve a series of monthly half-day joint Arthur D. Little and Chemical Waste Management working sessions that conclude with a full-day joint session.

As our work draws to a close, we will prepare a written report of our review and assessment of both (1) the waste management operation systems, policies, and prevailing practices at the Vickery facility and (2) the environmental management systems, policies, and prevailing practices at the Vickery facility. As previously discussed (in more detail) under the Purpose and Scope section, this report will describe both the waste operation systems, policies, and prevailing practices, and the environmental management systems, policies, and prevailing practices; identify the strengths of the systems, policies, and prevailing practices; identify and fully describe perceived weaknesses where, in Arthur D. Little's judgment, these systems can be significantly improved; and present our specific options for addressing areas for improvement. Our options will be discussed fully in a separate section of the report with sufficient background and context that this section of our report can be sent to EPA by Chemical Waste Management.

DURATION

As previously indicated in Figure 1, the work described above will be completed within six months of your authorization to proceed.

Arthur D. Little, Inc.

May 2, 1985

Mr. Joseph G. Homsy
Environmental Counsel
Waste Management Inc.

STAFF RESPONSIBILITY

I will be in charge of the program, and understand that you will provide general direction and policy decisions on behalf of your organization. A core team of senior Arthur D. Little professional staff members, each with a special set of skills and experience, will work closely with me throughout the program. Our resumes are attached.

Additionally, on an as-needed basis, we will draw on selected members of Arthur D. Little's 2,300-member staff, including experts in sampling and analysis, hydrogeology, environmental engineering, environmental fate and effects, toxicology, exposure and risk assessment, hazardous waste treatment and disposal, facility design and operation, hazardous waste management systems, ecology, air pollution control, water pollution control, and occupational health and safety.

ACCEPTANCE

We appreciate the opportunity to work with you on this important assignment which will be governed by the Agreement for Consulting Services between us dated January 1, 1985. We will be able to proceed with this scope of work upon execution of an appropriate addendum.

Sincerely,

J. Ladd Greeno

J. Ladd Greeno

Approved for
ARTHUR D. LITTLE, INC.

By Martha Colton
Authorized Contracting Officer

RESUMES OF ARTHUR D. LITTLE STAFF

J. LADD GREENO

Mr. Greeno is a senior staff member in Arthur D. Little's Chemical Industries Section and Director of the Center for Environmental Assurance. Mr. Greeno established Arthur D. Little's environmental auditing practice and is a nationally recognized authority on environmental auditing. He has also worked extensively in the areas of environmental management and organization.

Examples of his recent client assignments include:

- Assessing the effectiveness of the corporate environmental programs for a variety of large U.S. firms.
- Assisting companies in the development of internal environmental auditing and review systems to enhance management's capability to monitor environmental compliance and verify environmental performance of the corporation's facilities and operations.
- Conducting environmental audits of pollution control, occupational health, worker safety, loss prevention, and product safety activities in a wide range of industrial settings, including a large number of chemical operations.
- Developing environmental management and control systems that provide a suitable level of assurance to corporate management.
- Conducting a study of U.S. industry's organizational responses to environmental risk mandated by regulatory requirements and societal pressures.
- Leading Arthur D. Little's assignment for the United States Environmental Protection Agency to: characterize current practices in environmental auditing; analyze the benefits of environmental auditing; and conduct workshops for EPA staff on environmental auditing concepts, technology, and practices.

Mr. Greeno graduated from the University of Oklahoma and received an M.B.A. from the Harvard Graduate School of Business Administration. He is the author of several papers on environmental auditing, including three chapters in the Environmental Auditing Handbook published by McGraw-Hill and the forthcoming book Environmental Auditing: Fundamentals and Techniques, to be published by John Wiley & Sons.

JOAN B. BERKOWITZ

Dr. Berkowitz is Vice President in charge of the Hazardous Waste Management Section of Arthur D. Little, Inc. Since joining Arthur D. Little in 1957, Dr. Berkowitz has directed and participated in many multi-disciplinary projects involving fate and effects of chemicals in the environment, water quality modeling, environmental impact analysis, and risk assessment. She has concentrated her efforts in the area of solid and hazardous waste disposal. Some examples of her work include:

- Principal author of an EPA report on physical, chemical, and biological treatment methods for the management of hazardous wastes. This report was published in hardcover in its entirety by Noyes Data in 1978.

- Directed the first regional study of hazardous waste generation and facility needs. Undertaken for the New England Regional Commission, this work has had a significant influence on the development and implementation of hazardous waste management plans in New England and elsewhere in the United States.

- Performed an analysis for the State of Maryland on types and quantities of hazardous wastes manifested over a three-year period, as well as the need for additional recovery, treatment, and disposal capacity, and associated costs.

- Responsible for the RCRA and TSCA aspects of all of Arthur D. Little's major environmental auditing assignments. In addition, she has visited numerous plants that generate hazardous waste and a large fraction of the commercial facilities that treat, store, and dispose of hazardous wastes to assist companies in determining whether they are in compliance with laws, regulations, and corporate policies applicable to the management of hazardous wastes.

- For the U.S. EPA, Cincinnati, directed a field study on the environmental impacts of land treatment of industrial sludges at six operating sites.

- For the U.S. Army, conducted a technical and economic assessment of methods for cleaning up an old chemical dump site at Rocky Mountain Arsenal that had begun to leach toxic materials to groundwater.

- Directed a program to develop a computerized model of the transport of contaminants from landfills to ground and surface water and the ecology.

JOAN B. BERKOWITZ (Continued)

Dr. Berkowitz is a nationally recognized expert in the hazardous waste management field. She is active in a variety of industry groups and task forces on hazardous waste. Dr. Berkowitz is the recipient of the prestigious National Achievement Award by the Society of Women Engineers for her work in the field of hazardous waste management. Dr. Berkowitz holds a B.A. in Chemistry from Swarthmore College, and a Ph.D. in Physical Chemistry from the University of Illinois.

Arthur D. Little, Inc.

MARYANNE DIBERTO

Ms. DiBerto is a member of Arthur D. Little's Center for Environmental Assurance. During her fourteen years at Arthur D. Little, she has worked extensively on environmental auditing and other environmental organization and management assignments. Some recent examples of her work include:

- Principal investigator for a study of Current Practices in Environmental Auditing, an in-depth look at leading corporate environmental auditing programs, sponsored by the Environmental Protection Agency.

- Co-authoring the Environmental Auditing Workbook on behalf of the Edison Electric Institute. This first-of-its-kind workbook is designed to help familiarize those interested in environmental auditing with the basic concepts, techniques, and methodologies of the field.

- For an industry association, she led a study to characterize environmental management and auditing activities at a number of their member companies. The report is being used as a guide for companies interested in understanding the options available in setting up an environmental auditing program.

- Conducting environmental audits in a variety of industrial settings including electronics manufacturing and assembly operations; chemical operations; chemical research laboratory; liquid propane gas distribution centers; and refractory operations.

- Developing environmental audit protocols, questionnaires, and other audit program materials in the areas of air pollution, water pollution, solid and hazardous waste, product safety, and occupational safety and loss prevention.

- Managing the day-to-day activities of a large corporate environmental auditing project for the past five years. Her duties include analyzing audit findings, preparing audit reports, assisting in the site selection and prioritization process.

- Leading Arthur D. Little's recent study of environmental auditing reporting practices. Ms. DiBerto analyzed current audit reporting practices of selected leading environmental audit programs within the industrial chemicals, specialty chemicals, automotive, utility, electronics, and iron and steel industries to obtain a perspective on current corporate practices in reporting audit results.

She is the author of a chapter in the recently published McGraw-Hill Environmental Auditing Handbook, and co-author of the forthcoming book Environmental Auditing: Fundamentals and Techniques, to be published by John Wiley & Sons.

Arthur D. Little, Inc.

GILBERT S. HEDSTROM

Mr. Hedstrom is a senior staff member in Arthur D. Little's Center for Environmental Assurance where he has worked extensively in the area of hazardous waste management. His professional interests and client assignments are primarily in the areas of environmental auditing and management control.

Examples of projects Mr. Hedstrom has recently been involved in at Arthur D. Little that are particularly relevant to this assignment include:

- Assisting a major chemical waste services firm in the development of a more effective environmental management system. The purpose of the system is to provide an efficient mechanism for informing management of the regulatory status of individual facilities and to enable the corporation to demonstrate environmental compliance.

- Leading Arthur D. Little's analysis of the compliance and enforcement provisions of major environmental statutes. Particular emphasis in this study was placed on sorting out the complex enforcement provisions of federal hazardous waste laws.

- Directing a study which provided assistance to a U.S. corporation in the development and implementation of a corporate program designed to audit the hazardous waste vendors used by the company's operating facilities. This study involved designing an audit checklist and training company staff in audit techniques.

- Providing ongoing staff assistance to the corporate environmental audit program of a major U.S. corporation. This assignment includes participating on selected hazardous waste audits and recommending ways to further develop and strengthen the program.

Mr. Hedstrom has written extensively on the subject of environmental auditing. He was a principal author of the Environmental Auditing Workbook written for Edison Electric Institute, a first-of-its-kind text. He co-authored two chapters for the Environmental Auditing Handbook published by McGraw-Hill, including a chapter on evaluating the strengths and limitations of your audit program.

Prior to joining Arthur D. Little, Inc., Mr. Hedstrom served as Manager, General Accounting for a major business division of the General Electric Company. After successfully completing the General Electric Financial Management Program, he was responsible for managing the general accounting activities of the division.

Mr. Hedstrom received an M.S. in natural resource management and an M.B.A. from the University of Michigan. He received his undergraduate degree in geology and economics from Hamilton College.

Arthur D. Little, Inc.

WILLIAM G. KELLY

Mr. Kelly is a senior staff member at Arthur D. Little. He recently joined the company after 36 years of experience with the Atlantic Richfield Company. A primary focus of his activities at Arthur D. Little is corporate environmental management consulting.

For 12 years, Mr. Kelly worked for ARCO Chemical Company and assisted in building the company's environmental group. He was Director, Environmental Operations East, later became Director of Environmental Operations for Products, Chemicals and Transportation Divisions, and then Manager, Environmental Operations.

When ARCO decentralized into 11 operating companies, Mr. Kelly became Manager, Environmental Services on the Corporate Technology staff, responsible for developing corporate environmental policy and programs. He developed ARCO's Environmental Review Program--a unique peer-review system which has been much copied in industry.

Mr. Kelly developed ARCO's CHAWSAR (Closed Hazardous Waste Sites Assessment and Response) Program. He also assisted the American Petroleum Institute, the Chemical Manufacturers Association, and other associations in environmental auditing studies.

Mr. Kelly received a B.S. in Chemistry from the University of Michigan.

Arthur D. Little, Inc.

NOBLE ROBINSON

Mr. Robinson is a senior staff member who joined Arthur D. Little, Inc., in 1982 after 25 years of experience at Mallinckrodt, Inc. The primary focus of his work at Arthur D. Little is to assist clients with technical and management problems related to environmental matters.

While at Mallinckrodt, Mr. Robinson organized and directed the corporation's Environmental Affairs Department, He was responsible for all facets of environmental control, administration of Superfund and TSCA, energy management, and nuclear regulatory matters. He developed corporate regulatory policies and management systems and was responsible for planning, capital projects, and government liaison related to regulatory affairs.

Prior to becoming Environmental Affairs Director, Mr. Robinson was plant manager of a multi-product organic chemical facility. Before that position, he held a series of progressively more responsible jobs in research and development and production management related to the processing of uranium.

During his career, Mr. Robinson has gained practical, hands-on experience with the design, operation, and maintenance of manufacturing plants and pollution control facilities. This includes chemical and pharmaceutical plants, pilot plants, laboratories, secondary waste treatment plants, land disposal systems, and air pollution control systems.

Mr. Robinson's experience with the management of solid and hazardous waste and with the Toxic Substances Control Act includes:

- Directing the establishment of management systems to assure corporate compliance with the Resource Conservation Recovery Act, Superfund, and the Toxic Substances Control Act.
- Directing the clean-up of a site contaminated with PCBs.
- Directing an extensive assessment of residual mercury contamination at a former production site.
- Managing an in-depth analysis of the proposed National Priority List under Superfund.
- Assisting in the development of RCRA and Superfund regulatory strategies on behalf of the Chemical Manufacturers Association and the State of Missouri.
- Conducting numerous audits of manufacturing plants to determine compliance with RCRA and TSCA rules.

NOBLE ROBINSON (Continued)

Mr. Robinson received a B.A. and B.S. in chemical engineering from Rice University and an M.S. in chemical engineering from Washington University. He is a registered professional engineer, a member of the American Institute of Chemical Engineers and of Tau Beta Pi, and a former member of the environmental committees of the Chemical Manufacturers Association and the Pharmaceutical Manufacturers Association.

Arthur D. Little, Inc.

INDEPENDENT AUDIT OF THE EFFECTIVENESS OF THE ENVIRONMENTAL COMPLIANCE MANAGEMENT SYSTEMS, ENVIRONMENTAL AUDIT PROGRAM, AND EMLOYEE REPORTING MECHANISMS FOR CHEMICAL WASTE MANAGEMENT'S OPERATING FACILITIES IN OHIO

Selected Qualifications of Arthur D. Little, Inc.

Arthur D. Little, Inc.

QUALIFICATIONS FOR INDEPENDENT AUDIT OF ENVIRONMENTAL MANAGEMENT SYSTEMS, ENVIRONMENTAL AUDIT PROGRAM, AND REPORTING MECHANISM

Presented below are selected aspects of recent assignments in environmental auditing, environmental management systems, and RCRA/TSCA waste management operations that are particularly relevant to the proposed independent audit of the effectiveness of the environmental compliance management systems, environmental audit program, and employee reporting mechanisms for Chemical Waste Management's operating facilities in Ohio.

ENVIRONMENTAL AUDITING

Arthur D. Little, Inc., has a broad and extensive range of experience in the field of environmental auditing. We have conducted more than 300 in-depth environmental audits, helped companies set up audit programs, and worked with companies to increase the effectiveness of their established audit programs. Recent environmental auditing assignments include:

- Working for a committee of the Board of Directors of a major, diversified corporation, Arthur D. Little served as external auditors and conducted an independent environmental verification program, as well as assisted the corporation to further develop and strengthen its internal environmental surveillance program.

- For a leading corporation, we independently conducted comprehensive audits of the environmental compliance status of several of the corporation's major plants with respect to corporate policy and federal, state, and local laws and regulations. Our audit reports included audit findings about the compliance status of each plant, as well as observations on the plant's overall approach to environmental management.

- We independently evaluated the design of a specialty chemical company's internal environmental audit program. In addition to assessing the strengths and weaknesses of the environmental auditing program, we provided counsel to management on environmental auditing practices, procedures, principles, standards, and trends.

- For outside counsel, we conducted in-depth environmental audits of two hazardous waste management facilities. The objectives of the audits were to (1) determine compliance with federal, state, and local environmental regulations; (2) assess whether operations and practices at the facility pose potentially serious health or safety risks; and (3) determine conformance with corporate policies and procedures.

- For the past five years, we have been providing staff to the corporate environmental auditing program of a major U.S. corporation. Arthur D. Little professionals provide both added environmental and auditing/verification expertise. In addition to participating in all aspects of each audit, we provide assistance in prioritization and selection of their more than 400 industrial facilities, ongoing development and refinement of the corporation's audit procedures, and regular reporting on the program's status to a committee of the Board of Directors.

- We assisted a growing high technology company develop an environmental audit program and train its audit team. We now participate as outside auditors in each of their facility audits and report to the Chairman of the Board as to the status of their program.

- We were asked to assess the internal audit program of a major U.S. corporation. The objective of this work was to determine whether the corporation's audit program was consistent with good environmental auditing practices and to identify what changes in audit approach, if any, should be considered to increase the program's effectiveness during their second round of audits.

- For the U.S. Environmental Protection Agency's Regulatory Reform Staff, we have provided technical support in their exploration of environmental auditing techniques and applications. Our work has included characterization of environmental auditing practices, analysis of environmental auditing benefits, and conducting environmental audit training for EPA staff.

- For Edison Electric Institute, we wrote the Environmental Auditing Workbook, a handbook to provide electric utilities with the information needed to develop environmental auditing programs. Also, we have conducted environmental auditing workshops for representatives of their member companies.

- We authored four chapters in The McGraw-Hill Environmental Auditing Handbook and the forthcoming Environmental Auditing: Fundamentals and Techniques, a comprehensive text on environmental auditing soon to be published by John Wiley & Sons, Inc.

ENVIRONMENTAL MANAGEMENT SYSTEMS

Arthur D. Little staff have worked for several clients in developing environmental management systems, procedures, and controls, and integrating these into the overall corporate structure of their corporations. Recent examples of our work in this area include:

- For a solid and hazardous waste management corporation, we designed and assisted in the implementation of a corporate environmental management system. This program included: (1) assessing the company's current corporate environmental management organization, policies, procedures, and programs; (2) identifying and describing the principal components of the new system; and (3) recommending specific actions to be taken.

- At the request of a committee of the Board of Directors of a Fortune 100 Company, we assessed the company's compliance status with respect to regulatory requirements and corporate policies in the areas of pollution control, waste management, industrial hygiene, occupational safety, and medical programs, and helped the company develop an integrated approach to environmental, health, and safety management.

- Based on our recommendations from an environmental assessment, a specialty chemicals company asked Arthur D. Little, Inc., for assistance in building an environmental management system that included an anticipatory approach to environmental risks, as well as a capability to be in compliance with environmental laws and regulations. This work has included developing policies and procedures, defining roles and responsibilities, and management development workshops.

- Arthur D. Little, Inc., was asked by a major company with hazardous waste management operations to design a management control system. The purpose of the control system was to provide company management with the data and information they need to be aware of the regulatory compliance status of the individual facilities, and enable plant, divisional, and corporate management to demonstrate environmental compliance to regulatory authorities, customers, and others.

- The Center for Environmental Assurance assisted a major Canadian corporation by acting as staff to the corporate environmental and occupational health managers. Our responsibility was to: visit each facility; identify potential risks, including issues of noncompliance and good management practice; obtain samples of workplace atmospheres and/or effluents and perform the necessary analyses of those samples; develop a draft report that identifies actual and potential problem areas and makes recommendations for their solution; meet with the facility and corporate managements to review the report; and issue a revised final report. All management levels within our client's organization have found this approach to be very helpful. In addition to defining what needs to be done, it has served as a very effective communications mechanism between corporate and facility managements.

- Working for the President and Chief Operating Officer of a large diversified Fortune 500 company, we reviewed and evaluated the corporation's environmental protection programs. Our work led to the strengthening of the company's internal control for managing environmental hazards and to the development of an environmental review program to periodically apprise management of the corporation's environmental compliance and hazard management status.

- Arthur D. Little developed a facility level environmental compliance assurance system for a hazardous waste management company. This system defined the specifications, procedures, accountabilities, and documentation required to ensure compliance with hazardous waste regulations and company policies.

- Arthur D. Little has reviewed the environmental management systems of many companies which generate, treat, store, or dispose of hazardous wastes. In a recent assignment for one of the world's largest companies, Arthur D. Little conducted an environmental management system review of a large natural gas processing complex. The purpose of the review was to ensure that management systems were in place to achieve and maintain compliance with regulatory and company requirements.

- We developed a description of the environmental management system and its key components at a Fortune 500 firm. This management system template enhanced the organization's ability to communicate its environmental management approach.

- We assisted a major materials manufacturer in designing and implementing an information reporting system for corporate management. To do this, we identified the information about environmental performance that should be provided to the chief executive officer, chief operating officer, and other members of corporate management. This was one of several tasks, all of which were oriented towards developing an effective corporate environmental function.

RCRA/TSCA WASTE MANAGEMENT OPERATIONS

Arthur D. Little has been continuously active in the area of hazardous wastes since 1972 and has extensive experience in all aspects of hazardous waste management. The examples below have been selected to show the diversity of our experience in this area:

- For the Hazardous Waste Management Division of the Environmental Protection Agency, Arthur D. Little, Inc., analyzed the costs and impacts on industry segments of various drafts of RCRA Subtitle C Regulations. The work involved a critical review of available data on rates of waste generation by industry segment, current methods of disposal, and probable methods of future disposal as a result of the RCRA regulations. Cost data were developed for construction and operation of: secure chemical landfills under various hydrogeological conditions, environmentally acceptable incinerators, lined lagoons, and land farms. Costs of transportation, monitoring and testing, administration, financial responsibility, and long-term care were also derived.

- For the Office of Solid Waste of the U.S. Environmental Protection Agency, Arthur D. Little, Inc., conducted an environmental review of approximately 40 hazardous waste listing background documents prepared by various EPA offices relative to Section 3001 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA). The Act requires EPA to publish a list of hazardous wastes which establishes those materials subject to hazardous waste management requirements of Section 3002 through 3010 of the RCRA. We reviewed these 40 documents, and in some cases rewrote portions or all of them, to confirm with published EPA criteria for listing hazardous wastes. In particular, we reviewed the documents: to point out errors or misstatements in environmental data or information contained therein, to suggest additional literature information or documents that might be included in the document, to indicate any additional readily available data associated with environmental pathways or environmental effects of the waste streams considered, and to examine any damage scenarios provided and supplement these with others readily available in the literature. We entirely rewrote ten of the background documents, which included wastes produced in the manufacture of such chemicals of aniline, trichloroethylene, perchloroethylene, ethyl chloride, methylethylpyridines, as well as petroleum and copper refining, and iron and steel production.

- In a joint Arthur D. Little, Inc./TRW Systems program for EPA, Arthur D. Little, Inc., developed and applied an analytical protocol for comprehensive characterization of potential incinerable hazardous industrial wastes. The waste materials were subjected to thorough organic and inorganic analysis in order to determine suitable thermal destruction methods and potential for harmful emissions. The analysis protocol included directed analysis for those specific contaminants suspected to be present based on information from the hazardous waste generator. The protocol also provided for survey analysis by infrared spectroscopy, mass spectroscopy, and X-ray fluorescence analysis to identify any unexpected species that might be of potential concern.

  Wastes analyzed and characterized included:

  - API separator bottoms
  - Styrene-butadiene rubber manufacturing wastes
  - Still bottoms from styrene monomer production
  - Hexachlorocyclopentadiene production wastes
  - Still bottoms from perchloroethylene production
  - Aqueous coke plant waste (black liquor)
  - Waste from production of amiben herbicide
  - Polyvinyl chloride production waste
  - Wastes from production of nitrochlorobenzene

- For the EPA, under a technical assistance contract in conjunction with the identification and listing of hazardous wastes, Arthur D. Little, Inc., conducted sampling, chemical analyses, and biological tests to support the wastes already listed and to identify new wastes appropriate for listing. Industry categories studied include: aromatic amine and aromatic nitro compound production, organometallic chemical production, carbamate pesticide manufacture, organobromine production, and synfuel process wastes. Method development and validation studies have addressed: analysis of cyanides, extraction procedures for stabilized and nonstabilized wastes, and capillary GC/MS methods for low-level organic species in wastes.

- We have assessed PCB management practices at more than five industrial facilities in the U.S. and Canada. Our assessments included review of compliance with applicable laws and regulations, including TSCA, as well as the adequacy of the design and operation of control facilities.

- For an industrial client, Arthur D. Little, Inc., evaluated the degrees of hazard potentially associated with several abandoned hazardous waste disposal sites. Arthur D. Little had prime responsibility for:

  - Reviewing and organizing all existing chemical and analytical data applicable to these sites, identifying the need for and performing additional analytical work as appropriate;

  - Estimating the chemical migration from the site as influenced by the dynamics of ground and surface waters;

  - Articulating the probable pathways for these migrating chemicals as well as their concentration in surrounding ground and surface waters;

  - Predicting the effectiveness of a variety of remedial programs as regards minimizing or eliminating chemical migration into the environment;

  - Calculating the predicted concentration of chemicals (if any) in the surrounding environment, ground, or surface waters after remedial work is completed;

  - Developing risk assessments on worker safety and health and the environment as a result of the construction activities associated with the implementation of the remedial programs; and

  - Formulating monitoring programs suitable for determining the overall effectiveness of the remedial actions taken at the site.

In other recent studies for industry clients, we have performed technical environmental and economic evaluations of hazardous and "problematic" waste disposal alternatives, and investigated the opportunities and constraints associated with the waste disposal business.

- Under contract to the Environmental Protection Agency (68-01-0556), Arthur D. Little, Inc., completed a study to define and evaluate on technical, economic, risk, and legal grounds the various alternatives for processing hazardous wastes. Most of the study effort was devoted to waste forms containing heavy metals, cyanides, pesticides, chloro-organic solvents, and some other miscellaneous toxic chemical species.

  To help in the economic analysis, the wastes were grouped according to the processes that should be applied for effective treatment. With this as a goal, all wastes of interest were grouped so that four basic processes could be applied; precipitation of metals, followed by burial; oxidation to destroy cyanides; reduction to destroy oxidants; and incineration of organics.

  The economic analyses were based on decision maps developed for this study, and for future programs requiring economic comparisons between alternative strategies. These graphical decision maps permitted a comparison of on-site and off-site treatment in terms of the source (or sources) that generate the waste and can help frame the optimum approach for establishing a system of regional processing facilities. A mathematical equation was developed that describes all of the unit operating costs associated with the treatment and disposal of hazardous wastes. The data for these decision maps were derived from a series of field studies conducted to identify waste sources, including types and quantities of wastes.

  Federal and state laws and legislative frameworks were studied to learn whether any legal or institutional factors would militate against the conclusions made on economic grounds. Finally, each alternative was evaluated to determine whether any factors of risk would override the economic decision.

- Over the years we have performed several studies for federal and state agencies on waste generation and treatment/disposal alternatives in the tanning industry. The work has included surveys of current practice, technical and economic evaluation of chromium recovery processes, and field evaluation of land treatment.

- For the U.S. EPA, we developed data on hazardous waste generation and disposal in the pharmaceutical industry. The report characterizes types and quantities of wastes generated by the various segments of the industry, and describes "typical" and "best" hazardous waste management practices.

- For the U.S. EPA, we have sampled and analyzed waste streams generated by manufacturers of pesticides, organo-metallics, halogenated organics, aromatics, paints, and synthetic fuels.

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. CHEMICAL WASTE MANAGEMENT, INCORPORATED, Defendant.	)	CIVIL ACTION NO.

PLAINTIFF'S FIRST SET OF INTERROGATORIES AND FIRST REQUEST FOR THE PRODUCTION OF DOCUMENTS TO DEFENDANT CHEMICAL WASTE MANAGEMENT, INCORPORATED

Pursuant to Rules 26, 33 and 34 of the Federal Rules of Civil Procedure ("Fed. R. Civ. P."), the United States directs Chemical Waste Management, Incorporated, ("Chem Waste") to answer the following interrogatories, and to produce requested documents for inspection and copying, at the offices of the United States Department of Justice, Environmental Enforcement Section, Washington, D.C. 20530, within the time provided by the Rules.

I. INSTRUCTIONS

1. Pursuant to Rule 33(a) of the Federal Rules of Civil Procedure these interrogatories are to be answered separately and fully in writing under oath, unless objected to, in which event the reasons for objection are to be stated in lieu of an answer. If only part of an interrogatory is objected to, the balance of the interrogatory should be answered in full. Answers are to be signed by the person making them and objections by the attorney making them.

employer, (c) position or job title, (d) addresses and telephone numbers at which the person may be contacted. For a partnership, corporation or other organization, (a) correct name, (b) address of the main office and of any other office which was involved in the matters addressed by the interrogatory, (c) place of incorporation and (d) the names and positions of the natural persons representing the organization in the matters addressed by the interrogatory. Also, for anyone identified, provide the person's last known addresses and telephone numbers if you do not know the correct current addresses and telephone numbers.

6. When asked to identify information or documents, provide the following facts: for documents, the author, recipient, date, number of pages, identification numbers of copies furnished in response to plaintiff's first request for the production of documents, and if not furnished in such response, the substance of the documents and the identification of the persons who have possession or control of the original and copies of the documents; for information which is not identified as "documents," its form, substance, the author or speaker, the recipient and date.

7. When asked to identify a "communication" or "submission", provide the following facts: whether it was oral or written, its date, the identities of the person issuing or making it and of each other person present or receiving it, its substance and of any response thereto, and the identity of the document.

other person, that is in the possession, custody, or control of Chem Waste. The term includes but is not limited to: agreements; contracts; letters; telegrams; interoffice communications; memoranda; reports; records; instructions; specifications; notes; notebooks; scrapbooks; diaries; plans; drawings; sketches; blueprints; diagrams; photographs; photocopies; charts; graphs; descriptions; drafts; minutes of meetings; conferences; telephone or other conversations or communications; invoices; purchase orders; bills of lading; recordings; published or unpublished speeches or articles; publications; transcripts of telephone conversations; deposition transcripts; ledgers; financial statements; microfilm; microfiche; tape or disk recordings; and computer printouts. The term "document" also includes electronically stored data from which information can be obtained either directly or by translation through detection devices or readers; any such document is to be produced in a reasonably legible and usable form. The term "document" includes the original document (or a copy thereof if the original is not available) and all copies which differ in any respect from the original, including any notation, underlining, marking, or information not on the original.

Documents Requested

1. All documents that relate to the presence of leachate or liquid, amount of leachate or liquid, or time(s) when

leachate or liquid was present, in the drainage ditch or retention basin of the stockpile.

2. All documents that relate to the presence of leachate or liquid, amount of leachate or liquid, or time(s) when leachate or liquid was, seeping, draining or otherwise leaving the stockpile.

3. All documents that relate to the amount of, or time(s) when, leachate or liquid was transferred from the stockpile, drainage ditch or retention basin, to pond 12.

4. All documents that relate to the amount of leachate or liquid from the stockpile, drainage ditch and retention basin, which was present in pond 12 at any time.

5. All documents that relate to any analysis of, or the composition of, or constituents of, leachate or liquid from the stockpile, drainage ditch, retention basin or pond 12.

6. All documents that relate to any analysis of, or the composition of, or constituents of, the stockpile or any sludges or materials placed in the stockpile.

7. All documents that relate to any treatment, storage or disposal of hazardous waste in pond 6W, 9 or 10.

8. All documents that relate to any closure activities relating to pond 6W, 9 or 10.

9. All documents that relate to any activities, including digging, excavating, earthmoving, fixation, filling or covering, at or related to, pond 6W, 9 or 10.

17. All organization charts, employee and telephone directories for the facility and any other subsidiary or affiliate of Chem Waste which had any operational or supervisory responsibility for the facility.

18. All photographs, drawings and other documents that illustrate or depict the facility, or the stockpile, drainage ditch, retention basin, ponds 6W, 9, 10 or 12.

19. All documents that relate to any knowledge by plaintiff of defendant's closure of ponds 6W, 9 and 10 prior to execution of the CAFO.

20. Regarding defendant's third affirmative defense, all documents which relate to any such instructions, advice or counsel of authorized representatives of plaintiff regarding the Part B application which is contrary to the position taken in the First Claim for Relief of the Complaint.

21. Regarding defendant's fourth affirmative defense, all documents which relate to any violation by U.S. EPA of such terms of paragraph G of the CAFO.

22. Regarding defendant's fifth affirmative defense, all documents which relate to any such review by U.S. EPA, or to how closure of pond 12 has been prevented.

23. Regarding defendant's sixth affirmative defense, all documents which relate to any approval by Ohio EPA of the use of pond 12 for liquids from the retention basin.

24. Regarding defendant's seventh affirmative defense, all documents not furnished in response to any other request

identify the sentences or parts of each page of such application which defendant claims constitutes such permit application for each such pond.

9. If defendant claims that plaintiff had knowledge of defendant's closure of ponds 6W, 9 and 10 prior to execution of the CAFO, identify each communication and other circumstance upon which defendant relies to support such claims.

10. If defendant denies that it did not submit to U.S. EPA a report on the initial groundwater analyses, or the October 1986 and the first 1988 semi-annual analyses, during the 15 day period provided by paragraph O.1. of the CAFO, then identify each document and other communication in which defendant contends it submitted each such report.

U.S.C. Section 2615 ("TSCA") and Section 3008 of the Resource Conservation and Recovery Act of 1976, as amended ("RCRA"). 42 U.S.C. §§6928(a)(1) and (g).

B. The objectives of this Agreement include, without limitation:

1. Assuring the disposal of the existing inventory of liquid PCBs currently in storage at CWM's Emelle, Alabama facility in conformance with the disposal schedule set forth in paragraph IV, below;

2. Resolving all civil claims or civil causes of action under any environmental law or regulation that the Complainant or the State may have with respect to the Emelle facility based upon facts known to the Complainant or the State on or before October 12, 1984;

3. Assuring that the environmental audit provisions set forth herein will be implemented in accordance with this Agreement to evaluate and modify, as may be appropriate, CWM's waste operation and environmental management systems, practices, and policies as they affect RCRA and TSCA compliance at the Emelle facility;

4. Authorizing and approving CWM's treatment, storage and disposal of PCBs at the Emelle facility under modified conditions which specify the requirements to be met by CWM by synthetically lining new PCB cells, shallow PCB well monitoring, and PCB leachate collection at the facility;

5. Assuring that provisions specified herein regarding groundwater monitoring, surface impoundments and facility records, and RCRA liquid waste solidification are implemented; and

6. Assuring that the waste impact/hydrogeological study as set forth herein will be implemented in accordance with this Agreement.

C. For purposes of this Agreement only and in order to avoid litigation and settle the civil claims which EPA or the State of Alabama may have against CWM as of October 12, 1984, Respondent consents to the entry of this Agreement. The parties agree that this Agreement does not constitute evidence or admission by CWM of any violation of law or regulation. For purposes of this Agreement only, CWM agrees that EPA or the State may properly bring an action to compel compliance with the terms and conditions contained herein in Federal District Court or before an Administrative Law Judge appointed pursuant to 40 C.F.R. §22. By signing this Agreement, CWM does not prejudice and specifically preserves any right, remedy or defense it may have with respect to any action related or unrelated to the subject matter of this document, provided however, that in any action brought by EPA or Alabama to compel compliance with the terms of this Agreement CWM shall be limited to the defenses of Force Majeure, compliance with this Agreement and physical impossibility. By signing this Agreement, EPA and the State agree to act reasonably in performing their obligations under this Agreement.

D. In part, it is the intent of this Agreement to resolve civil allegations of violations of TSCA and RCRA referred to in this Agreement. In implementing the provisions of this Agreement and except to the extent provided for herein, the parties are not authorizing violations of federal laws or regulations, or state and local laws not inconsistent with or preempted by federal requirements.

E. EPA will publish notice of this Agreement in the Federal Register.

II. PARTIES BOUND

A. The parties to this action are:

1. Complainant, the United States Environmental Protection Agency and its Administrator ("EPA");

2. Intervenor, State of Alabama, on behalf of all branches, agencies, departments, establishments, instrumentalities, bureaus, subsidiaries, boards or commissions and any other entity of the Government of the State of Alabama (the "State"); and

3. Respondent, Chemical Waste Management, Inc., ("CWM"), a corporation organized and existing under the laws of Delaware with its headquarters in Oak Brook, Illinois.

B. This Agreement shall apply to and be binding upon all parties to this Agreement, their directors, officers,

all persons or entities acting under or for them. Each signatory to this Agreement certifies that he/she is fully authorized by the party or parties whom he/she represents to enter into the terms and conditions of this Agreement, to execute the Agreement on behalf of the party represented and to legally bind such party.

III. FINDINGS OF FACT

A. CWM is a domestic corporation incorporated under the laws of the State of Delaware.

B. CWM is in the business of transportation, storage, and disposal of waste materials including PCBs and RCRA wastes.

C. CWM owns and operates a facility in Emelle, Alabama for inter alia, storage of waste materials including PCBs and RCRA wastes ("Emelle facility"). The Emelle facility is an existing hazardous waste management facility as defined in 40 C.F.R. §260.10, which treats, stores, or disposes of hazardous waste, as defined by section 1004(5) of RCRA, 42 U.S.C. §6903(5) and 40 C.F.R. Part 261.

D. EPA filed an administrative complaint on January 24, 1984, alleging that CWM had violated 40 C.F.R. §761.65(a) by the storage of PCBs beyond January 1, 1984 at the Emelle facility.

E. CWM filed an answer denying any violations and raising affirmative defenses.

F. CWM is the owner and operator of the "M/T Vulcanus I and II," two ships designed for the incineration of liquid materials, including liquid wastes such as PCBs.

G. EPA, under authority of the Marine Protection, Research, and Sanctuaries Act of 1972, 33 U.S.C. §§1401 et seq., issued a research permit (HQ-81-002) to CWM which became effective on October 21, 1981.

H. Research permit, HQ-81-002, allowed CWM to use its ships and their incinerators in a number of test burns in order to determine whether PCBs could be disposed of by shipboard incinerators, and if so, under what conditions.

I. CWM entered into contracts to receive PCBs at the Emelle facility and to receive PCBs at other locations and to transport these materials to the Emelle facility for three test burns pursuant to the research permit referred to in Paragraph H.

J. Two test burns occurred during the periods December 22, 1981 - January 2, 1982 and August 15-23, 1982.

K. On September 15, 1982, EPA informed CWM that no further test burns would be necessary. The term of the research permit expired on October 12, 1982.

L. Following this research project, CWM still has PCB materials remaining in storage at the Emelle facility.

M. CWM applied for special operating permits for both the M/T Vulcanus I and II as incineration vessels in 1981.

N. Following October 12, 1982, CWM had committed to and stored additional PCBs at the Emelle facility prior to anticipated permit issuance.

O. 40 C.F.R. §761.65(a) states:

> Any PCB Article or PCB Container stored for disposal before January 1, 1983 shall be removed from storage and disposed of as required by this part before January 1, 1984. Any PCB Article or PCB Container stored for disposal after January 1, 1983, shall be removed from storage and disposed of as required by Subpart D within one year from the date when it was first placed into storage.

P. On July 2, 1983, Frank R. Krohn, Vice President of CWM, informed EPA that as of January 1, 1984 some PCBs might be in storage for more than one (1) year and, assuming that 40 C.F.R. §761.65(a) might apply to such storage, asked for a waiver of 40 C.F.R. §761.65(a).

Q. By letter of August 23, 1983, EPA notified CWM that waivers of 40 C.F.R. §761.65(a) were not available.

R. CWM has attempted to secure alternate disposal methods for its PCB inventory.

S. On January 1, 1984, some of the PCBs in storage at the Emelle facility had been in storage for more than one (1) year.

T. On March 23, 1984, EPA and CWM executed a proposed agreement to resolve the administrative enforcement action and submitted it for consideration by the EPA Judicial Officer.

U. The State moved to intervene in the administrative enforcement action.

V. On May 22, 1984, EPA denied CWM's applications for permits to utilize its incinerator ships for disposal of PCBs.

W. On May 23, 1984, EPA's Judicial Officer granted the motion of the State to intervene in the administrative enforcement action and referred the matter to an Administrative Law Judge for disposition.

X. On December 19, 1984, EPA filed an amended complaint alleging violations of the following regulations:

1) 40 C.F.R. §265.74; Availability Retention and Disposition of Records

2) 40 C.F.R. §265.314; Special Requirements on Liquid Wastes

3) 40 C.F.R. §265.90(c); Ground Water Monitoring Applicability

4) 40 C.F.R. §265.91(a)(2); Ground Water Monitoring System

5) 40 C.F.R. §265.15(d); General Inspection Requirements

Y. On December 19, 1984, CWM filed an answer to the amended complaint denying any violations and raising affirmative defenses.

Z. CWM has cooperated with EPA and the State in good faith in resolving the matters covered by this Agreement.

IV. DISPOSAL SCHEDULE

In order to dispose of the 2.8 million gallon inventory of liquid PCBs stored at the Emelle facility as of August 1, 1984 subject to this Agreement, CWM shall undertake the following actions:

A.1. The inventory of liquid PCBs shall be removed from the Emelle facility for shipment to EPA permitted incinerators no later than the following schedule:

Date	Cumulative Amount Shipped (gallons)
December 31, 1984	430,000
March 31, 1985	970,000
June 30, 1985	1,510,000
September 30, 1985	2,050,000
December 31, 1985	Entire Inventory of 2.8 Million Gallons Depleted

A.2. Notwithstanding the disposal schedule in Subparagraph IV.A.I. above, with respect to each PCB storage tank at the Emelle facility, the PCBs in each such tank shall not be removed for shipment unless the tank sampling and analysis pursuant to Appendix B below shows that no 2,3,7,8 tetrachlorodibenzo-p-dioxin (TCDD) is detected. For each tank in which 2,3,7,8 TCDD is not detected, the PCBs in that tank shall be removed for shipment promptly in accordance with the above schedule, provided, however, that each of the milestones contained in such schedule shall be extended for a period of time equal to the period from December 11, 1984 to the date negative analytical results required by Appendix B for respective quantities as shown in such schedule are received by CWM and EPA. For each tank in which 2,3,7,8 TCDD is detected, the PCBs in that tank shall remain in storage until EPA identifies in

writing to CWM a facility which has all necessary Federal and State authorizations for the disposal of such waste. When such a facility is identified, CWM shall make reasonable efforts to utilize such facility for disposal of the waste, but CWM shall not be obligated to violate any law by such utilization or be obligated to sustain unreasonable disposal costs. A schedule for such disposal shall be mutually agreed upon by EPA and CWM provided, however, that in the event of a dispute, any party may petition the Administrative Law Judge for an order resolving the dispute.

B. It is the intent of this Agreement that, except as set forth in Paragraph IV.C. below, each load of PCBs from the Emelle facility shall be incinerated within 90 days after receipt by the PCB incinerator. CWM agrees that, if the PCB incinerator is owned by CWM (or its parents, subsidiaries or affiliates), each load of PCBs from the Emelle facility shall be incinerated within 90 days after receipt. CWM will use its best efforts to require any contracting owners or operators to incinerate each load within 90 days after receipt and will monitor to determine whether this 90 day period has been met. CWM shall provide to EPA certificates of incineration for all PCBs disposed of in accordance with the terms of the disposal schedule contained in this paragraph.

C. With respect to any PCB material which may be stored in the approximately 150,000 gallon tank dedicated to the temporary storage of Emelle PCBs at ENSCO's El Dorado, Arkansas PCB incinerator facility, such PCBs shall be transferred to the

ENSCO PCB liquid feed system for incineration within 90 days of the receipt of the final shipment of PCBs from the Emelle facility.

D. The disposal schedule contained in paragraph IV.A above contemplates utilization of two currently permitted PCB incinerators. Circumstances beyond the control of CWM despite the exercise of all reasonable efforts may occur which impair or prevent the operation of these incinerators such that the disposal schedule of this Agreement is not achievable. Such circumstances shall result in the extension of the disposal schedule for necessary repairs to be made. Such extension shall be for a reasonable period of time as determined by EPA in consideration of the circumstances. In the event CWM fails to resume use of the incinerators within such time period, CWM will pursue all reasonably available disposal options taking into account impact on nationwide PCB storage or disposal capacity, market costs, and other factors bearing on the reasonableness of such alternatives.

V. RECEIPT OF PCBs

A. Except as provided in Paragraph V.B. below, as of the effective date of this Agreement, CWM shall not enter into new contracts for the receipt of shipments of bulk liquid or drummed liquid PCBs at the Emelle facility.

B. CWM may enter into new contracts for the receipt of bulk liquid or drummed liquid PCBs at the Emelle facility,

subject to 40 C.F.R. §761 and applicable requirements, if:

1. CWM is acting as a PCB disposal "broker";

"Broker" means any entity or person who:

a. disposes or arranges for the disposal of any PCBs at a facility owned by another person or entity not a parent, subsidiary or affiliate of CWM, or

b. stores or transports PCBs that have been removed from service prior to disposal at a facility owned by another person or entity not a parent, subsidiary or affiliate of CWM

or;

2. At the time such contract is entered CWM has the ability to dispose of such PCBs in compliance with disposal regulations and 40 CFR §761.65(a) and without commingling newly received PCBs with the existing PCBs subject to the disposal schedule in Section IV.A.; or

3. EPA has approved in writing of such receipt.

C. CWM may continue to enter into contracts for the disposal of capacitors and transformers containing PCBs and may honor existing contracts for the disposal of PCBs consistent with federal regulations.

D. By this Agreement, CWM is authorized to treat, store or dispose in accordance with 40 C.F.R. §761, PCBs specified in subparagraph 3 below, with the following modified requirements:

1. <u>Groundwater Requirement</u>

For the Emelle facility, EPA waives the requirement for landfill bottoms to be at least fifty (50) feet from

the historical high water table (40 C.F.R. § 761.75(b)(3)). The Regional Administrator of EPA Region IV may revoke the waiver of the fifty (50) foot separation requirement with respect to the construction of any future disposal cell, if there is evidence showing that the operation of such a cell will present an unreasonable risk of injury to health or the environment from PCBs, or, if the Regional Administrator finds that changes of law require revocation for future cells to be constructed after such findings.

2. New PCB Disposal Cells

New PCB disposal cells (PCB disposal cells only) will be designed in accordance with the plans and specifications as submitted to EPA on June 11, 1984, as amended on June 21, 1984, and as approved by EPA on July 12, 1984, together with such design requirements which may legally be required in the future. The design documents describe the type of liner to be used, the leachate collection and removal system, the cover system, and the run-on/run-off control measures. CWM also will provide three (3) feet of compacted chalk as a base on which to place the liner.

3. PCB Waste Types

The following categories of PCB waste may be disposed of in PCB disposal cells:

Solid PCBs (less than or greater than 500 ppm)

Incinerator ash

Drained and flushed transformers and small capacitors

Solidified liquid PCBs less than 500 ppm

Any other PCBs or PCB articles which under EPA regulations may be disposed of in PCB disposal cells.

4. Leachate Management

Leachate in lined cells will be measured, sampled, and pumped, as required, on a minimum 31 day basis. At no time shall the leachate in lined trenches exceed 30 cm above the rim of the leachate collection sump. Records will be maintained of the disposal of all leachate removed from the trenches. Records will be maintained on leachate depth measurements and said leachate samples will be monitored for quantity and detailed physical and chemical analysis of the characteristics of the leachate.

5. Amended Approval

The existing PCB approval under 40 C.F.R. §761.75 will be revised to be consistent with these requirements in coordination with the issuance of any RCRA permit(s) for the Emelle facility issued to the facility's operator.

6. Shallow Well Monitoring

EPA and the State will be consulted on all shallow (chalk monitoring wells) well locations and specifications to be installed pursuant to 40 C.F.R. §761.41. Prior to construction, CWM will consult with the State regarding well locations

and specifications and will obtain EPA approval in writing in accordance with EPA regulations.

7. EPA Findings

This waiver and authorization is based on findings of fact issued by the Regional Administrator of Region IV on November 6, 1984, pursuant to 40 C.F.R. §761.75. Such findings for this landfill approval are found in the docket for this case.

E. EPA has inspected the Emelle PCB storage facilities and at the time of such inspection found the Emelle PCB storage facilities to be in compliance with the applicable PCB storage requirements of 40 C.F.R. §761.65(b).

VI. INSPECTION AND ENVIRONMENTAL AUDIT PROGRAM

A.1 Within thirty (30) days of the effective date of this Agreement, CWM shall implement the Inspection Program for PCB liquid storage attached hereto as Appendix A.

2. CWM agrees to cooperate with EPA, upon proper notice but without warrant, during lawful inspections conducted to monitor compliance with this Agreement, provided, however, that during such inspections EPA shall not request or seek to obtain any environmental audit or internal compliance documents which are not required to be maintained by law or regulation and which are prepared pursuant to the environmental management program described and evaluated in Section VI of the Agreement.

3. If EPA requests the Audit report and documents prepared in connection with the Audit report by CWM's

Environmental Management Department after six months following the date of delivery of the Audit recommendations described in subsection B.3., CWM shall provide such documents. Any documents prepared by CWM in connection with the Audit report, excluding documents prepared by CWM's lawyers, shall be made available to EPA in accordance with the above. EPA agrees that such documents shall not be used to initiate a civil enforcement action or as direct evidence of a violation, but may be used as evidence of the existence of any violation which may remain uncorrected beyond six months after the delivery of the Audit report and as evidence of knowledge or duration of a violation provided; however, that CWM does not waive any legal rights it may have to object to the admissability of such evidence. It is intended that documents prepared for CWM pursuant to this Section VI and VII are not required by law or regulation.

B. ENVIRONMENTAL AUDIT

1. CWM shall propose to EPA's Office of Enforcement and Compliance Monitoring (OECM) through Barrett Benson within thirty (30) days of the effective date of this Agreement the scope of work for the services of a third party consultant, as well as its proposed consultant, who shall be expert in environmental auditing, environmental management systems and RCRA and TSCA waste management operations. This scope of work and consultant shall be agreed upon by EPA and CWM in writing, prior to the consultant commencing the performance

of the professional services as more fully set forth herein below. The consultant will be retained and the scope of work will be designed to review waste operation and environmental management systems at the Emelle facility and in the CWM corporate Environmental Management Department as they affect RCRA and TSCA compliance at the Emelle facility.

2. Within one hundred eighty (180) days after agreement upon the scope of work and the consultant, said third party consultant shall report in writing to CWM. This report shall:

a. Identify and describe the existing facility waste management operations and the Environmental Management Department environmental management systems, policies and prevailing practices as they affect RCRA and TSCA compliance at the Emelle facility.

b. Evaluate such operations and systems, practices and policies and identify and describe fully the perceived weaknesses in such operations and systems, practices and policies by comparing them, to the extent practicable, to:

i. their ability to promote compliance with applicable RCRA and TSCA requirements;

ii. the existing practices, programs and policies of other RCRA/TSCA waste management corporations operating within the continental United States;

iii. the history of Emelle operations in terms of its compliance programs, its compliance record

and its environmental management practices over the previous five years;

iv. the available literature and consultant's experience pertinent to regulatory compliance programs, practices and policies currently operative in the chemical and waste management industries in the continental United States.

The consultant shall apply its expertise and judgment to the foregoing data base utilizing such factors as the consultant believes to be relevant and appropriate (which factors shall be stated in the report).

c. Based on the evaluation required in paragraphs VI.2.a. and b. above, the consultant shall identify and describe fully with supporting rationales the perceived areas, if any, where CWM's waste management operations and environmental management systems, practices and policies may be improved as they affect Emelle regarding RCRA and TSCA compliance obligations, listing specific options for any improvements at Emelle in the following specific areas:

i. compliance and waste management operation, staffing, education and experience requirements.

ii. compliance management budget, lines of authority to CWM's corporate Environmental Management Department and relationship to the operating facility manager.

iii. personnel training for individual employee compliance obligations and emergency spill response.

and cation and anion exchange capacity before and after the test. Leachate samples will be obtained from PCB landfill cells utilized after November 19, 1980 and each sample characterized using EPA approved methodology for "priority pollutants" and metals. Leachate samples will also be obtained from each RCRA landfill cell utilized after November 19, 1980 and each sample characterized using EPA approved methodology for "priority pollutants" and metals. After analysis of the leachates, CWM will select one RCRA landfill leachate sample and one TSCA landfill leachate sample, or a composite of the RCRA leachate and a composite of the TSCA leachate (selection to be approved by ADEM in consultation with EPA) and test with the core samples as follows: Sufficient pore volumes of leachate sample will be passed through the core samples in order to provide adequate volume for analysis by EPA approved methodology for the same parameters found in the initial characterization.

2. Based on the above testing and analyses by the contractor, a report describing these test results will be produced by CWM and submitted to the State and OECM.

B.1. By means of one or more independent contractors agreed to by CWM and ADEM in consultation with EPA, CWM will perform a study of the chalk in the area of trenches 1, 3, 4, 5, 6, and 7. CWM, in agreement with ADEM, and in consultation with EPA, will develop a sampling and analytical program as described herein to characterize the study area. This program will consist

of a field investigation to determine the nature of the chalk, the depth of the zone of saturation, and groundwater sampling and analysis. The groundwater samples will be analyzed for priority pollutants and metals. Groundwater sampling and analysis will utilize five to ten groundwater monitoring wells installed for purposes of this study. Such wells will be located after consultation with ADEM and will be sampled upon completion and development, then quarterly for one year for a total of four samplings. CWM will not grout and seal these wells without the prior approval of ADEM in consultation with EPA.

2. Individual leachate samples from trenches 1, 3, 4, 5, 6 and 7 also will be individually analyzed by EPA approved methodology for "priority pollutants" and metals. Further, to the extent practicable based upon available records, CWM's contractor will describe the construction and historical operation of these trenches to include types of compounds and state of compounds.

3. The above study by the contractor and a report to be produced by CWM will be submitted to the State and OECM describing the results of the study regarding the integrity of the study area and effects, if any, of disposal on the area.

IX. RCRA COMPLIANCE REQUIREMENTS

With respect to interim status standards at the Emelle facility:

A. CWM shall record inspections in inspection logs as required by 40 C.F.R. §265.15(d), including but not

limited to, the daily recordation of accurate surface impoundment freeboard measurement levels recorded by rounding down to the next six inch level (e.g., between 2' and 2'6" is recorded as 2') from the top of the dike for each surface impoundment in operation.

B. CWM shall retain and furnish upon request, in accordance with 40 C.F.R. §265.74, all records required by 40 C.F.R. §265, and such records shall be made available at all reasonable times for inspections, by any officer, employee, or representative of EPA who is duly designated by the Administrator.

C. On October 11, 1984, EPA's Region IV and the State found CWM's groundwater assessment plan and analytical protocol acceptable to meet the requirements of 40 C.F.R. §265.93. CWM has begun and shall continue to implement said plan and protocol as follows:

1. All deep wells #1-8 shall be sampled and the samples analyzed for Appendix VIII constituents using the protocol proposed by the Environmental Testing and Certification Corporation and approved by EPA Region IV on October 11, 1984.

2. CWM will begin a workover (rescreening) of well #5 upon completion of the groundwater assessment and review of the analytical results by EPA and the State. Well #5, presently screened in the Lower Eutaw Formation will be recompleted by CWM in the sands of the Upper Eutaw Formation. Once the workover has been completed, water level measurements shall be made by CWM in wells #5-8 and the groundwater gradient shall be reevaluated for the Upper Eutaw Formation.

3. Upon completion of subparagraph 2 above, CWM shall present its gradient reevaluation to EPA Region IV and ADEM.

4. Depending on whether the gradient is determined to be due north or northeast, a new well will be constructed at one of the two locations which have been agreed to by EPA, ADEM, and CWM, and which have been physically marked by stakes at the Emelle facility.

5. Within fifteen days following the effective date of this Agreement, CWM shall produce and thereafter maintain a demonstration for a waiver of the groundwater monitoring requirements set out in 40 CFR §265.91(a)(2). The waiver demonstration shall document the low potential for migration of hazardous wastes or constituents from the facility via the uppermost aquifer to water supply wells or surface waters. The waiver demonstration must meet the requirements of 40 C.F.R. §265.90(c). The waiver demonstration shall also confirm the assumption that the time of travel for waste constituents to reach the Eutaw Formation or the nearest surface waters at the Emelle facility exceeds one thousand years.

6. Forty-five (45) days after the effective date of this Agreement, CWM shall provide to EPA and to ADEM a Proposed Plan and Protocol the purpose of which is to confirm the assumption set out in Subsection 5 above. The Proposed Plan and Protocol must include the following:

a. Locations and numbers of monitoring wells to be completed at varying depths within the chalk and intersecting

known fractures and sited approximately but not more than twenty (20) feet from the top of the trench wall (where the trench wall location is known) and approximately but not more than fifty (50) feet from the trench wall (where the trench wall exact location is unknown), adjacent to the waste management boundary as defined by EPA. The proposal shall specify well location, design, construction methods and completion methods. For any existing well to be used to satisfy the requirements set out above, complete construction data must be submitted, e.g., all construction materials, depth of screened zone, type of sealant in annulus and method of well development used. It is anticipated that the plan will provide for approximately twenty (20) cored wells around the outside perimeter of the waste management area, completed to a depth below the bottom of the adjacent trenches, with a minimum of one (1) well adjacent to the outside wall for each perimeter trench and a minimum of two (2) background wells. In addition, it is anticipated that fifteen (15) more wells will be installed in areas along the perimeter to be determined on the basis of the core examination. The wells to be installed as a part of the Waste Impact/Hydrogeological Study set forth in Paragraph VIII of this Agreement may be used as part of this program. To the extent that existing wells are determined to be appropriate for this monitoring purpose, they may be proposed for approval in lieu of new wells.

b. The results of the hydrogeologic study of the chalk outlined in Paragraph VIII of this Agreement must also be

used in the analysis done to verify the aforementioned assumption.

c. Detailed well sampling, analysis and chain of custody procedures including identification of contract laboratories to be used. Prior to any sampling of these wells by CWM, the company shall give to EPA and ADEM at least fourteen (14) days notice of such sampling. EPA and ADEM shall have a right of access for the sampling and independent analysis of all wells subject to this Plan and Protocol. CWM shall have the right to split all such samples. Sampling and analysis required in Subparagraph five above shall include water elevation, TOC, TOX, specific conductance, pH, lead, chromium, cadmium, mercury, arsenic, barium, selenium, phenols, toluene, trichloroethane, ethyl benzene, napthalene, methylene chloride, 1,2-dichloroethane, 1,1,1,-trichloroethane, trichloroethylene, tetrachloroethylene and carbon tetrachloride.

7. Following receipt of the above Proposed Plan and Protocol, EPA and ADEM shall review such proposal and shall, within thirty (30) days, present to CWM comments on and recommended modifications to such proposal.

8. If CWM agrees to the recommended modifications, CWM shall submit to EPA and ADEM a Proposed Final Plan and Protocol which incorporates such modifications, and shall begin to implement such plan within twenty (20) days.

9. If CWM disagrees with one or more of the recommended modifications, Walter Barber (CWM), Barrett Benson (EPA), and

Buddy Cox (ADEM) shall meet for a period not to exceed thirty (30) days to attempt to resolve such disagreements. Upon resolution, CWM shall modify its plan as appropriate to begin to implement it within twenty (20) days. In the event the disagreement cannot be resolved as set forth above, any party may petition the Administrative Law Judge for an order resolving the dispute.

10. Following completion of each analysis required by the above plan, CWM shall report all results to EPA and ADEM.

11. If the sampling results and analysis of the wells required by this Plan or other hydrogeologic data demonstrate that the assumption used as the basis of the waiver is no longer valid, EPA may take appropriate legal action.

D. CWM shall solidify bulk or noncontainerized liquid waste or waste containing free liquids in accordance with the requirements of 40 C.F.R. §265.314 as follows:

1. CWM shall construct and operate its waste solidification operations for new trenches in accordance with the criteria set forth in Subparagraph 2 below. CWM shall submit an amendment to its Part A application not later than December 7, 1984, and EPA will approve such amendment provided it meets the criteria in Subparagraph 2 below.

2. CWM shall construct such waste solidification operations to meet the following criteria:

a. Mixing areas will be provided with a liner of three (3) feet of recompacted chalk and will be built up with additional layers of chalk as the landfill is utilized.

b. CWM will maintain a minimum of two (2) feet of freeboard in mixing areas and will compact mixing area dikes to minimize erosion and to preserve structural integrity.

c. Mixing areas will be closed as landfills in conformance with 40 C.F.R. Subpart G and 40 C.F.R. §265.310.

3. CWM is authorized to utilize the above described waste solidification process until May 8, 1985. Nothing in this paragraph shall be construed to waive, impair, release or affect the respective rights, obligations, responsibilities or available remedies of the parties with regard to the liquid in landfills provisions of the Hazardous and Solid Waste Amendment of 1984 after May 8, 1985.

X. NEW SOLIDIFICATION TECHNOLOGY

CWM voluntarily agrees to complete the construction of a new mechanical out-of-ground liquid waste solidification technology by December 31, 1985 and agrees to test, startup, shakedown, and, if feasible, commence operation of the technology by no later than July 1, 1986. Nothing in this paragraph shall limit CWM's obligation to comply with applicable waste solidification requirements.

XI. STATUS REPORTS

A. CWM will provide EPA and the State with monthly reports identifying all bulk liquid PCBs stored at the Emelle facility which are intended for incineration. Each report shall contain: (1) the quantities of PCBs in storage at the facility; (2) the amounts of PCBs that were removed from storage during the month and their destination; (3) the amounts, date of receipt, and customer identity of additional shipments of PCBs received during the month; (4) a description of any inspections required by the Inspection Program described in pagragraph VI.A that took place during the previous month; and (5) for the initial report, the storage capacity of the facility. The reports for each month are due thirty (30) days after the end of the reporting period and must be certified as true and correct by knowledge and belief and signed by a responsible CWM official.

B. CWM shall provide EPA with quarterly reports of the amounts of bulk liquid PCBs which are intended for incineration and which are stored by CWM at all of its facilities, including CWM's subsidiaries and joint ventures but excluding the Emelle facility, transfer facilities, and recently acquired SCA facilities. These reports shall contain: (1) the amount of PCBs at the facility; (2) the location of the facility; (3) a listing of all additional shipments of PCBs received during the quarter; (4) the name of the customer of CWM supplying the PCBs during the quarter; (5) the date the additional PCBs were

received by CWM; (6) the amount of the additional PCBs received by CWM; and (7) for PCBs removed from the facility, the destination of each shipment. If CWM is acting as a PCB disposal "broker", CWM also shall provide the date when the PCBs are to be delivered to the disposer and the name of the disposer.

C. With respect to Waste Management, Inc.'s recently acquired SCA facilities (excluding transfer facilities), CWM shall provide EPA with semi-annual reports of the amounts of bulk liquid PCBs which are intended for incineration and which are stored by CWM at such facilities. These reports shall contain: (1) the amount of PCBs at the facility; (2) the location of the facility; (3) a listing of all additional shipments of PCBs received during the reporting period; (4) the name of the customer of CWM supplying the PCBs received during the period; (5) the date the additional PCBs were received by CWM; (6) the amount of the additional PCBs received by CWM; and (7) for PCBs removed from the facility, the destination of each shipment. If CWM is acting as a PCB disposal "broker," CWM also shall provide the date when the PCBs are to be delivered to the disposer and the name of the disposer.

D. With respect to all CWM facilities which receive transformers (exluding transfer facilities), CWM shall provide EPA semi-annual reports which shall contain: (1) the number of transformers received during the reporting period; (2) the number of transformers in storage at the end of the reporting period;

(3) the name of the customer supplying the transformer during the period; (4) the date the transformer was received; and (5) the destination of transformer removed from the facility.

E.1 All reports shall be sent to:

Barrett Benson
National Enforcement Investigations Center
Building 53, Box 25227
Denver, CO 80225

2. Reports required by paragraph XI.A involving only the Emelle facility also shall be sent to;

Joe E. Broadwater, Director
Alabama Department of Environmental Management

F. CWM may claim the information contained in the reports as confidential business information, and EPA and the State shall keep such information confidential to the extent authorized by law. Nothing herein shall be construed as limiting Alabama's belief that hazardous waste manifests should be considered public documents.

G. The reports for paragraphs XI.B, C, and D are due ninety (90) days after the end of the reporting period.

XII. PENALTIES

A. Within thirty (30) days of the effective date of this Agreement, the CWM shall remit to EPA a check in the amount of four hundred and fifty thousand dollars ($450,000) ($300,000 of which is in settlement of civil TSCA claims and $150,000 of which is in settlement of civil RCRA claims alleged in the

complaint) and to the State of Alabama Attorney General a check for one hundred fifty thousand dollars ($150,000).

B.1 In the event EPA believes that CWM has failed to:

a. Comply with a milestone contained in paragraph IV.A;

b. Comply with the requirements of paragraph IV.B;

c. Provide the reports described in the status report requirements of paragraph XI.A, B, C and D;

d. Perform the groundwater monitoring of paragraph IX.C; and

e. Comply with the liquid solidification requirements of paragraph IX.D.

EPA shall notify CWM of the alleged failure and shall provide CWM fifteen (15) days in which to remedy the alleged failure.

2. If CWM has failed to remedy the alleged failure within said fifteen (15) day period and it is not in compliance with this Agreement, CWM shall pay stipulated penalties from the date of violation as follows:

a. $500.00 per day for failure to comply with a milestone contained in paragraph IV until CWM has reduced the inventory to the milestone level;

b. $500.00 per day for failure to incinerate PCBs within ninety (90) days of receipt at a CWM incinerator until such incineration occurs.

c. $100.00 per day for failure to provide the status reports described in paragraph XI.A, B, C and D;

d. $5000.00 for failure to perform any of the following subparagraphs: subparagraphs IX.C. 1, 2, 3, 4, 5 and 6.

e. $100.00 per day for failure to comply with the liquid solidification requirements of paragraph IX.D.

3. Excluding paragraphs IX.A. and B., the above stipulated penalties are the exclusive penalties which EPA or the State may obtain from CWM for failure to comply with the requirements of this Agreement.

Nothing in this subparagraph shall be construed as limiting the ability of EPA or the State to compel specific enforcement of this Agreement or to seek injunctive relief to abate a condition which may present an imminent and substantial endangerment, or to take action under the Section 7 imminent hazard provision of TSCA as referred to in Paragraph XIV.

XIII. FORCE MAJEURE

If CWM fails to comply with any performance date or other requirement of this Agreement and such failure is caused by persons or events beyond the control of CWM, despite the exercise of all reasonable efforts, such failure shall not be considered a violation of this Agreement. When circumstances are occurring or have occurred which may delay the completion of any requirement of this Agreement, CWM shall notify EPA and the state in writing of the reason(s) for and duration or expected duration of such delay, the measures to be taken by CWM to prevent or minimize the delay and the timetable by which those

measures will be implemented. Such notice shall be sent no later than thirty (30) business days excluding Saturdays, Sundays, and holidays following the date CWM's Environmental Management Department becomes aware of the occurrence. CWM's Environmental Management Department will be responsible for monitoring the implementation of all aspects of CWM's performance under this Agreement. CWM's failure to notify EPA and the State of the fact of the delay shall constitute a waiver of claims or defenses under this provision. EPA will notify CWM no later than thirty (30) business days excluding Saturdays, Sundays, and holidays of its objection of such excuse. Failure of EPA to notify CWM of such objection shall constitute a waiver of the Agency's objection to such excuse. Any disputes which may arise under this provision shall be resolved in accordance Paragraph I.C. However, in such proceeding, the burden of proof of such Force Majeure defense shall lie with CWM.

XIV. COVENANT NOT TO SUE

A. In consideration of CWM's consent to this Agreement, EPA and the State hereby covenant not to initiate or maintain any civil claim or civil cause of action against CWM, its parent, subsidiaries, or present or former employees thereof, with respect to the Emelle facility based on facts or circumstances known by EPA or the State or their agents, employees, or contractors as of October 12, 1984. EPA also covenants not to initiate or maintain any civil claim or civil cause of action against CWM, its parent, subsidiaries, or present or former employees thereof, based on the storage or disposal of 2, 3, 7, 8 TCDD identified pursuant to subparagraph IV. A. 2. and Appendix B.

B. Nothing in this Agreement shall be construed to limit the ability of the United States or the State of Alabama to initiate or maintain any criminal proceeding or take any action against any person to abate, prevent, or order the abatement of any condition which now or hereafter may present an imminent and substantial endangerment or to expend and thereafter recover any moneys in responding to any release or threat of release of any hazardous substance, or bring an action under the Section 7 imminent hazard provisions of TSCA.

C. Except as noted above, this Agreement shall not operate to release, waive, limit or impair in any way any claims, rights, remedies or defenses of the United States, the State of Alabama or CWM against any person or entity not a party hereto, provided, however, that for any violations of 40 C.F.R. §761.65(a) by customers of CWM relating to the PCBs subject to the disposal schedule contained in Paragraph IV, this Agreement represents a full resolution of such violations.

XV. FINAL IMPLEMENTATION

Except for paragraphs V.D. and IV.A.2., CWM's obligations under this Agreement shall end when the PCBs from the tanks in which 2,3,7,8 TCDD is not detected pursuant to Subparagraph IV.A.2. and Appendix B have been incinerated at EPA approved PCB incinerators, provided, however, that with respect to the Environmental Audit required by paragraph VI.B., the Waste Impact/Hydrogeological Study required by paragraph VIII, and the New Solidification Technology required

by paragraph X, CWM's obligations to complete such audit, such study and such solidification technology will end respectively when the audit report has been submitted to EPA, the study report has been submitted to EPA and the State, and the solidification technology has been constructed and commenced operation in accordance with paragraph X.

XVI. NOTIFICATION

Wherever this Agreement requires notice or submission of reports, information, or documents to EPA, such information shall be submitted to the Barrett Benson, National Enforcement Investigations Center, Building 53, Box 25227, Denver, Colorado, 80225. Any notice and submission of reports, information or documents under paragraphs IV.D. (Disposal Schedule), VII. (Compliance Officer Program), XII.B.1 (Stipulated Penalties, and XIII. (Force Majeure) shall also be sent to Richard H. Mays, Senior Enforcement Counsel, Office of Enforcement and Compliance Monitoring, U.S.E.P.A., 401 M Street, S.W., Washington, D.C., 20460.

XVII. MODIFICATION

This Agreement may be modified upon written approval of all parties hereto.

XVIII. EFFECTIVE DATE OF AGREEMENT

This Agreement shall be considered binding and in full effect upon approval by the Administrative Law Judge to whom this matter has been assigned.

XIX. SINGLE AGREEMENT

All of the terms and conditions of this Agreement together comprise one agreement. Each of the terms and conditions is consideration for all of the other terms and conditions. In the event that this Agreement (or one or more of its terms and conditions) is held invalid or is not executed by all of the signatory parties in identical form or is not approved in such identical form by the Administrative Law Judge to whom it has been assigned, then the entire Agreement shall be null and void.

XX. CWM'S ENVIRONMENTAL COMMITMENT

CWM's implementation of the Waste Impact/Hydrogeological Study (paragraph VIII), Environmental Inspection and Audit (paragraph VI), Compliance Officer Program (paragraph VII), Status Reports (paragraph XI), and New Solidification Technology (paragraph X) represent a combined environmental monetary commitment by CWM in excess of $1.5 million.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

RICHARD H. MAYS
Senior Enforcement Counsel
Office of Enforcement and Compliance Monitoring
U.S. Environmental Protection Agency DATED: 12/18/84

A. E. CONROY II
Director Compliance Monitoring Staff
U.S. Environmental Protection Agency DATED: 12/19/84

GENE A. LUCERO
Director Office of Waste Programs Enforcement
U.S. Environmental Protection Agency DATED: 12/18/84

CHARLES JETER
Regional Administrator, Region IV
U.S. Environmental Protection Agency DATED: 12/19/84

DOUGLAS GREENHAUS
Attorney-Advisor
Office of Enforcement and Compliance Monitoring - Waste
U.S. Environmental Protection Agency DATED: 12/18/84

ARTHUR WILEY RAY
Attorney-Advisor
OECM-Special Litigation Division
U.S. Environmental Protection Agency DATED: 12/18/84

STATE OF ALABAMA

By: Charles A. Graddick
CHARLES GRADDICK
Attorney General
State of Alabama

DATED: Dec. 9, 1984

R. Craig Kneisel
R. CRAIG KNEISEL
Assistant Attorney General
State of Alabama

DATED: Dec 19, 1984

CHEMICAL WASTE MANAGEMENT

By: Roger C. Zehntner
ROGER C. ZEHNTNER
Senior Counsel
Chemical Waste Management, Inc.

DATED: 12/19/84

J. Brian Molloy
J. BRIAN MOLLOY
Wald, Harkrader and Ross
Counsel for Chemical Waste
Management, Inc.

DATED: 12/19/84

APPROVED

N. B. Yost
ADMINISTRATIVE LAW JUDGE

DATED: 12/19/84

ORDER

Upon U.S. EPA's consideration of the foregoing and the factors expressed in Section 16(a)(2)(B) of TSCA, 15 U.S.C. §2615(a)(2)(B), and Section 3008 of RCRA, 42 U.S.C. §6928, it is this ___ day of _____, 1984, ORDERED THAT: (1) the parties shall comply with the terms of the Consent Agreement; (2) Respondent shall remit within thirty (30) days of this Order a civil penalty to U.S. EPA in the amount of $450,000; (3) Respondent shall remit within thirty (30) days of this Order a payment of $150,000 to the State of Alabama. Payment to Alabama will be made by forwarding a check payable to the Alabama Attorney General to the Office of Attorney General, State of Alabama, 250 Administration Building, Montgomery, Alabama, 36130. Payment to U.S. EPA will be made by forwarding a check payable to the Treasurer, United States of America, to the Hearing Clerk (A-110), Environmental Protection Agency, Washington, D.C. 20460; (4) in the event that there is a dispute between EPA and Respondent as to whether Respondent is obligated to pay stipulated penalties, EPA, by motion, may request that an order be issued assessing penalties as set forth in the Agreement. Following such motion, a proceeding pursuant to 40 C.F.R. §22 will be convened for a ruling on the dispute. In such proceeding Respondent shall

be allowed to demonstrate that it has complied with the provisions of the Agreement or that its performance is acceptable because of Force Majeure or physical impossibility.

So Ordered

Administrative Law Judge

PUBLIC NOTICE

SUMMARY: This publication provides public notice of an administrative Agreement entered into by the U.S. Environmental Protection Agency ("EPA"), the State of Alabama ("State") and Chemical Waste Management, Inc. ("CWM") which, in part, provides for settlement of claims under the Toxic Substances Control Act ("TSCA"), 15 U.S.C. U.S.C. §2601 et seq., and the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §6902 et seq., among the parties regarding CWM's Emelle, Alabama facility.

CONTACT PERSON: For further information, contact Mr. Arthur Varela, Office of Enforcement and Compliance Monitoring, LE-134P, U.S. EPA, 401 M Street, S.W., Washington, D.C., 20460, telephone (202)475-8687.

BACKGROUND: On January 24, 1984, EPA filed an administrative Complaint alleging that CWM violated 40 C.F.R. §761.65(a) and CWM filed an Answer denying the allegations and asserting defenses. On March 23, 1984, EPA and CWM executed a proposed Settlement Agreement to resolve the January 24, 1984 enforcement actions. On May 23, 1984, the State was permitted to intervene in this case before action on this Settlement Agreement by the EPA Judicial Officer. The matter was then assigned to Administrative Law Judge Thomas P. Yost for disposition. In the course of further negotiations to settle this pending action,

the parties agreed to expand the settlement to include other matters. EPA filed an amended complaint on _____ alleging violations of RCRA. CWM filed an Answer denying these allegations and asserting defenses. CWM filed an application for approval of a new TSCA PCB landfill cell on June 11, 1984. On November 7, 1984, the Regional Administrator of EPA Region IV filed Findings of Fact regarding application of 40 C.F.R. §761.75(b)(3) to CWM's TSCA PCB landfill operations.

PURPOSE: To provide notice of the provisions of the Settlement Agreement and Order in this case.

DISCUSSION: While EPA is not required to publish notice of administrative Settlement Agreements and Orders in the Federal Register, it is doing so in this instance because of the attention that has been given to this matter. This Settlement Agreement in part contains the following terms: settlement of EPA claims under TSCA and RCRA; payment of civil penalties of $600,000; PCB reporting requirements; a schedule for the disposal of PCBs stored at CWM's Emelle facility; RCRA groundwater monitoring and compliance requirements; environmental audit and compliance officer program; waste impact/ hydrogeological study; and, amended approval of and technical requirements for landfill operations pursuant to 40 C.F.R. §761.75.

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REVIEW OF THE RECORD: The record for this case is found in docket numbers TSCA-84-H-03 located through either the:

Headquarters Hearing Clerk
U.S. EPA
401 M Street, S.W.
Washington, D.C. 20460
Telephone: (202)382-4865

or:

Region IV Hearing Clerk
EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365
Telephone: (404) 881-

Review of the record may be obtained by personal inspection or by mail. Written requests for a copy of the Consent Agreement and Order accompanied by a check to "U.S. EPA" in the amount of $8.00 to cover the costs of copying should be addressed to either Hearing Clerk at the addresses noted above. Some of the material in the record is restricted as confidential business information under §14 of TSCA, 15 U.S.C. §2613 and 40 C.F.R. §2.

DATES: The parties executed the Settlement Agreement on

_____ .

4/5

APPENDIX A

INSPECTION PROGRAM FOR PCB STORAGE AREAS

IDENTIFICATION OF PCB STORAGE UNITS

Figure 1 describes the existing facility layout of the Emelle site. The color coded areas denote the on-site locations in which PCBs are located. The following site specific locations are identified as PCB storage areas.

Building Number	Description
600	Special Projects Processing
602	Tank Storage and Loading Station #1
603	Tank Storage #2
604	Special Projects Storage #1
702	Special Projects #2
	Tank Farm #1
	Tank Farm #2

INSPECTION PROGRAM ADMINISTRATION

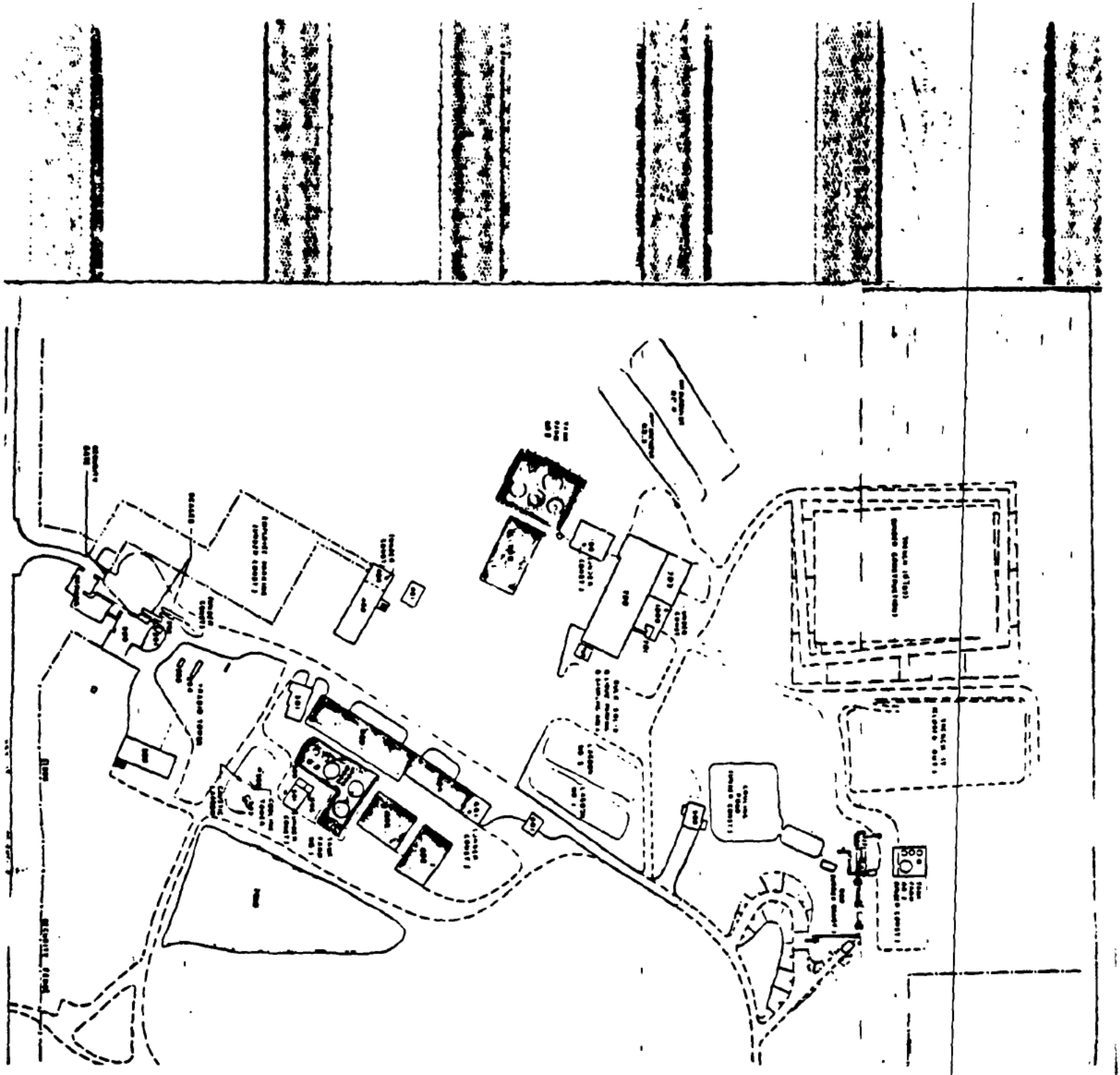
The General Manager is responsible for implementation of this Inspection Program. The Inspection Supervisor, who reports directly to the General Manager, is designated with the staff responsibility for performing the actual inspections. Reports of the results of the inspections, with appropriate documentation, are made by the Inspection Supervisor directly to the General Manager.

FREQUENCY OF INSPECTIONS

All buildings and tank farms containing PCBs are inspected daily.

DOCUMENTATION AND RECORDKEEPING

Inspections are conducted and documented using forms specifically designed to request all pertinent information.



Separate inspection forms are provided for each specific PCB storage area.

Completed inspection forms are given to the General Manager. They are accumulated in the facility operating records and retained at the facility.

LOCATION SPECIFIC PCB INSPECTION FORM

The following building and location specific inspection summary forms (Figure 2) are provided. These inspection summary forms are to be used at the Chemical Waste Management Emelle Site as described in this document.

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___ Hrs. Page 1 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Storage and Loading Station (602)

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Storage Tanks Tanks 605-616				
Tank Truck Loading Unloading Areas	Evidence of Spills Removal of absorbant cleanup material. Check sump, gratings, curbs for cracks and damage (W). Inspect hoses, couplings, valves for deterioration and leakage.			
Tank Storage Areas				
	Adequate Roof and Walls. Evidence of Rainwater			
	Adequate floor with 6" curbing, adequate secondary containment			
	No drains valves, floor drains, expansion joints, sewer lines or other openings			
	Floors & Curbing smooth, impervious			
	Storage areas properly marked			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 2 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Storage and Loading Station (602)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status Accept-able	Status Unaccept-able	If unacceptable, specifiy reasons
	All contaminated Equipment dedicated to building			
Tank 605 Tank 606 Tank 607 Tank 608 Tank 609 Tank 610 Tank 611 Tank 612 Tank 613 Tank 614 Tank 615 Tank 616				
Tank Storage Areas	Evidence of spillage. Disposal of absorbent Evidence of cracks in containment structures (W). Corrosion of sump gratings and drain gratings (M). Operability and accessibility of sump pumps. Evidence of seepage outside containment (W). Check for debris, clean up residue, improperly stored equipment. Inspect tank exterior for cracks, leaks, discoloration, and obvious deformation (W).			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 3 of 4
Mo D Yr Time

* Equipment/Proces Unit Name: Bulk Storage/Tank Storage and Loading Station (602)

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specifiy reasons
		Accept-able	Unaccept-able	
Tank 605 Tank 606 Tank 607 Tank 608 Tank 609 Tank 610 Tank 611 Tank 612 Tank 613 Tank 614 Tank 615 Tank 616				
	SPCC Plan prepared and implemented.			
	PCB records maintained for all PCB movements			
Access Hatches, Vents, sampling ports	Check for leaks and damage			
Tank 605 Tank 606 Tank 607 Tank 608 Tank 609 Tank 610 Tank 611 Tank 612 Tank 613 Tank 614 Tank 615 Tank 616				

* Emergency Coordinate Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

(M) Denotes Monthly
(W) Denotes Weekly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____Hrs. Page 4 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Farm #2 (603)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Fill Drain and Overflow piping	Inspect piping for leaks, inspect valve seals for leaks, check handles for damage and bent condition.			
Tank 605				
Tank 606				
Tank 607				
Tank 608				
Tank 609				
Tank 610				
Tank 611				
Tank 612				
Tank 613				
Tank 614				
Tank 615				
Tank 616				
Safety vents,	Check for blockage, tampering or rupture			
Tank 605				
Tank 606				
Tank 607				
Tank 608				
Tank 609				
Tank 610				
Tank 611				
Tank 612				
Tank 613				
Tank 614				
Tank 615				
Tank 616				

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 1 of 5
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Storage #2 (603)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status: Acceptable	Status: Unacceptable	If unacceptable, specify reasons
Storage Tanks 617-632				
Tank Truck Loading Unloading Areas	Evidence of Spills Removal of absorbant cleanup material. Check sump, gratings, curbs for cracks and damage (W). Inspect hoses, couplings, valves for deterioration and leakage.			
Tank Storage Areas	Adequate Roof and Walls. Evidence of Rainwater			
	Adequate floor with 6" curbing, adequate secondary containment			
	No drains valves, floor drains, expansion joints, sewer lines or other openings			
	Floors & Curbing smooth, impervious			
	Storage areas properly marked			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 2 of 5
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Storage #2 (603)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status: Acceptable	Status: Unacceptable	If unacceptable, specifiy reasons
	All contaminated Equipment dedicated to building			
Tank 617 Tank 618 Tank 619 Tank 620 Tank 621 Tank 622 Tank 623 Tank 624 Tank 625 Tank 626 Tank 627 Tank 628 Tank 629 Tank 630 Tank 631 Tank 632				
Tank Storage Areas	Evidence of spillage. Disposal of absorbent Evidence of cracks in containment structures (W). Corrosion of sump gratings and drain gratings (M). Operability and accessibility of sump pumps. Evidence of seepage outside containment (W). Check for debris, clean up residue, improperly stored equipment. Inspect tank exterior			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 3 of 5
Mo D Yr Time

* Equipment/Proces Unit Name: Bulk Storage/Tank Storage #2 (603)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status Accept-able	Status Unaccept-able	If unacceptable, specifiy reasons
	for cracks, leaks, discoloration, and obvious deformation (W)			
Tank 617 Tank 618 Tank 619 Tank 620 Tank 621 Tank 622 Tank 623 Tank 624 Tank 625 Tank 626 Tank 627 Tank 628 Tank 629 Tank 630 Tank 631 Tank 632				
	SPCC Plan prepared and implemented.			
	PCB records maintained for all PCB movements			
Access Hatches, Vents, sampling ports	Check for leaks and damage			

* Emergency Coordinate Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

(M) Denotes Monthly
(W) Denotes Weekly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____Hrs. Page 4 of 5
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Storage #2 (603)

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Tank 617				
Tank 618				
Tank 619				
Tank 620				
Tank 621				
Tank 622				
Tank 623				
Tank 624				
Tank 625				
Tank 626				
Tank 627				
Tank 628				
Tank 629				
Tank 630				
Tank 631				
Tank 632				
Fill Drain and Overflow piping	Inspect piping for leaks, inspect valve seals for leaks, check handles for damage and bent condition.			
Tank 617				
Tank 618				
Tank 619				
Tank 620				
Tank 621				
Tank 622				
Tank 623				
Tank 624				
Tank 625				
Tank 626				
Tank 627				
Tank 628				
Tank 629				
Tank 630				
Tank 631				
Tank 632				

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____Hrs. (M D Yr Time) Page 5 of 5

* Equipment/Process Unit Name: Bulk Storage/Tank Storage #2 (603)

DAILY INSPECTION CHECKLIST				
Equipment Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Safety vents, Rupture Discs Tank 617 Tank 618 Tank 619 Tank 620 Tank 621 Tank 622 Tank 623 Tank 624 Tank 625 Tank 626 Tank 627 Tank 628 Tank 629 Tank 630 Tank 631 Tank 632	Check for blockage, tampering, or rupture.			

* Emergency Coordinate Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

(M) Denotes Monthly
(W) Denotes Weekly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____Hrs. Page 1 of 3
Mo D Yr Time

* Equipment/Process Unit Name: Tank Storage/Special Projects Storage #1 (604)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status: Acceptable	Status: Unacceptable	If unacceptable, specify reasons
Storage Tanks 634-635				
Tank Truck Loading Unloading Areas	Evidence of Spills Removal of absorbant cleanup material. Check sump, gratings, curbs for cracks and damage (W). Inspect hoses, couplings, valves for deterioration and leakage.			
Tank Storage Areas				
	Adequate Roof and Walls. Evidence of Rainwater			
	Adequate floor with 6" curbing, adequate secondary containment			
	No drains valves, floor drains, expansion joints, sewer lines or other openings			
	Floors & Curbing smooth, impervious			
	Storage areas properly marked			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature:_____

* Name/Title:_____

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 2 of 3
Mo D Yr Time

* Equipment/Process Unit Name: Tank Storage/Special Projects Storage #1 (604)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status: Acceptable	Status: Unacceptable	If unacceptable, specifiy reasons
	All contaminated Equipment dedicated to building			
Tank 634 Tank 635				
Tank Storage Areas	Evidence of spillage. Disposal of absorbent Evidence of cracks in containment structures (W). Corrosion of sump gratings and drain gratings (M). Operability and accessibility of sump pumps. Evidence of seepage outside containment (W). Check for debris, clean up residue, improperly stored equipment. Inspect tank exterior for cracks, leaks, discoloration, and obvious deformation (W)			
Tank 634 Tank 635				
	SPCC Plan prepared and implemented.			
	PCB records maintained for all PCB movements.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 3 of 3
Mo D Yr Time

* Equipment/Proces Unit Name: Tank Storage/Special Projects #1 (604)

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specifiy reasons
		Accept-able	Unaccept-able	
Access Hatches, Vents, sampling ports Tank 634 Tank 635	Check for leaks and damage			
Fill Drain and Overflow piping Tank 634 Tank 635	Inspect piping for leaks, inspect valves seals for leaks, check handles for damage and bent condition.			
Safety vents, Rupture Discs Tank 634 Tank 635	Check for blockage, tampering, or rupture.			

* Emergency Coordinate Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

(M) Denotes Monthly
(W) Denotes Weekly

Chemical Waste Management, Inc.'

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___ Hrs.' Page 1 of 2
Mo D Yr Time

* Equipment/Process Unit Name: Container Storage/Special Processing 600

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Container Loading/ Unloading	Damage to containers Evidence of Spillage.' Disposal of absorbant/ cleaning materials.' Prompt container processing.'			
Container Storage Areas	Adequate Roof and Walls. Evidence of Rainwater Adequate floor with 6" curbing, maximum drum storage 2,644 drums No drains valves, floor drains, expansion joints, sewer lines or other openings Floors & Curbing smooth, impervious Storage areas properly marked All contaminated Equipment dedicated to building			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 2 of 2
Mo D Yr Time

* Equipment/Process Unit Name: Container Storage/Special Processing 600

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status Acceptable	Status Unacceptable	If unacceptable specifiy reasons
Container Storage Areas	Evidence of spillage. Disposal of absorbent. Evidence of cracks in containment structures (W). Corrosion of sump gratings and drain gratings (M). Operability and accessibility of sump pumps. Condition and availability of overpack containers.			
Stored Containers, Articles	Drums leaks or swelling. Drums closed. Drums properly located & stored. Adequacy of aisle space. Drums properly labeled.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___ Hrs. Page 1 of 2
Mo D Yr Time

* Equipment/Process Unit Name: Container Storage/Special Projects Storage #1 (604)

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Container Loading/ Unloading	Damage to containers Evidence of Spillage. Disposal of absorbant/ cleaning materials. Prompt container processing.			
Container Storage Areas	Adequate Roof and Walls. Evidence of Rainwater			
	Adequate floor with 6" curbing, maximum drum storage, 1,402 drums			
	No drains valves, floor drains, expansion joints, sewer lines or other openings			
	Floors & Curbing smooth, impervious			
	Storage areas properly marked			
	All contaminated Equipment dedicated to building			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 2 of 2
Mo D Yr Time

* Equipment/Process Unit Name: Container Storage/Special Projects Storage #1 (604)

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status		If unacceptable specifiy reasons
		Accept-able	Unaccept able	
Container Storage Areas	Evidence of spillage. Disposal of absorbent. Evidence of cracks in containment structures (W). Corrosion of sump gratings and drain gratings (M). Operability and accessibility of sump pumps. Condition and availability of overpack containers.			
Stored Containers, Articles	Drums leaks or swelling. Drums closed. Drums properly located & stored. Adequacy of aisle space. Drums properly labeled.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.'

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs.' Page 1 of 2
Mo D Yr Time

* Equipment/Process Unit Name: Container Storage/Special Projects Storage #2 (702)

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Container Loading/ Unloading	Damage to containers Evidence of Spillage.' Disposal of absorbant/ cleaning materials.' Prompt container processing.'			
Container Storage Areas	Adequate Roof and Walls. Evidence of Rainwater			
	Adequate floor with 6" curbing, maximum drum storage, 5,244 drums			
	No drains valves, floor drains, expansion joints, sewer lines or other openings			
	Floors & Curbing smooth, impervious			
	Storage areas properly marked			
	All contaminated Equipment dedicated to building			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs.' Page 2 of 2
Mo D Yr Time

* Equipment/Process Unit Name: Container Storage/Special Projects Storage #2 (702)

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable specifiy reasons
		Accept-able	Unaccept able	
Container Storage Areas	Evidence of spill-age. Disposal of absorbent.' Evidence of cracks in contain-ment structures (W).' Corrosion of sump gratings and drain gratings (M). Oper-ability and accessibility of sump pumps. Condition and availability of over-pack containers.			
Stored Containers, Articles	Drums leaks or swelling.' Drums closed. Drums properly located & stored.' Adequacy of aisle space.' Drums properly labeled.'			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 1 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Farm #1

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status: Accept-able	Status: Unaccept-able	If unacceptable, specify reasons
Storage Tanks 501-505, 711, 712, 638				
Tank Truck Loading Unloading Areas	Evidence of Spills Removal of absorbant cleanup material. Check sump, gratings, curbs for cracks and damage (W). Inspect hoses, couplings, valves for deterioration and leakage.			
Tank Storage Areas				
Containment Areas	Dikes properly constructed , adequate containment, no loose material, no drums, no openings.			
	Tanks properly spaced and vented.			
	Storage areas properly marked			
	All contaminated Equipment dedicated or decontaminated.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

WALD, H[illegible]

RECEIVED NOV 2 [illegible]

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 2 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Farm #1

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specifiy reasons
		Accept-able	Unaccept able	
Tank 501 Tank 502 Tank 503 Tank 504 Tank 505 Tank 711 Tank 712 Tank 638				
Tank Storage Areas	Evidence of spillage. Disposal of absorbent Evidence of cracks in containment structures. Corrosion of sump gratings (M). Operability and accessibility of sump pumps. Evidence of seepage outside containment. Check for debris, clean up residue, improperly stored equipment. Inspect tank exterior for cracks, leaks, discoloration, and obvious deformation.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 3 of 4
Mo D Yr Time

* Equipment/Proces Unit Name: Bulk Storage/Tank Farm #1

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Tank 501 Tank 502 Tank 503 Tank 504 Tank 505 Tank 711 Tank 712 Tank 638				
	SPCC Plan prepared and implemented.			
	PCB records mantained for all PCB movements			
Access Hatches, Vents, sampling ports	Check for leaks and damage			
Tank 501 Tank 502 Tank 503 Tank 504 Tank 505 Tank 711 Tank 712 Tank 638				
Fill Drain and Overflow piping	Inspect piping for leaks inspect valve seals for leaks, check handles for damage and bent condition.			

* Emergency Coordinate Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

(M) Denotes Monthly
(W) Denotes Weekly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____Hrs. Page 4 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Farm #1

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Tank 501 Tank 502 Tank 503 Tank 504 Tank 505 Tank 711 Tank 712 Tank 638				
Safety vents, Rupture Discs	Check for blockage, tampering or rupture.			
Tank 501 Tank 502 Tank 503 Tank 504 Tank 505 Tank 711 Tank 712 Tank 638				

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____Hrs. Page 1 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Farm #2

DAILY INSPECTION CHECKLIST				
Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Storage Tanks 601-604, 641				
Tank Truck Loading Unloading Areas	Evidence of Spills Removal of absorbant cleanup material. Check sump, gratings, curbs for cracks and damage (W). Inspect hoses, couplings, valves for deterioration and leakage.			
Tank Storage Areas				
Containment Areas	Dikes properly constructed , adequate containment, no loose material, no drums, no openings.			
	Tanks properly spaced and vented.			
	Storage areas properly marked			
	All contaminated Equipment dedicated or decontaminated.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature:_____

* Name/Title:_____

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 2 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Farm #2

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status: Acceptable	Status: Unacceptable	If unacceptable, specify reasons
Tank 601 Tank 602 Tank 603 Tank 604 Tank 641				
Tank Storage Areas	Evidence of spillage. Disposal of absorbent Evidence of cracks in containment structures. Corrosion of sump gratings (M). Operability and accessibility of sump pumps. Evidence of seepage outside containment. Check for debris, clean up residue, improperly stored equipment. Inspect tank exterior for cracks, leaks, discoloration, and obvious deformation.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____ Hrs. Page 3 of 4
Mo D Yr Time

* Equipment/Proces Unit Name: Bulk Storage/Tank Farm #2

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status: Accept-able	Status: Unaccept-able	If unacceptable, specifiy reasons
Tank 601 Tank 602 Tank 603 Tank 604 Tank 641				
	SPCC Plan prepared and implemented.			
	PCB records mantained for all PCB movements			
Access Hatches, Vents, sampling ports	Check for leaks and damage			
Tank 601 Tank 602 Tank 603 Tank 604 Tank 641				
Fill Drain and Overflow piping	Inspect piping for leaks inspect valve seals for leaks, check handles for damage and bent condition.			

* Emergency Coordinate Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature: _____

* Name/Title: _____

(M) Denotes Monthly
(W) Denotes Weekly

Chemical Waste Management, Inc.

Emelle, Alabama

INSPECTION REPORT

* Date & Time of Inspection ___/___/___/_____Hrs. Page 4 of 4
Mo D Yr Time

* Equipment/Process Unit Name: Bulk Storage/Tank Farm #2

DAILY INSPECTION CHECKLIST

Equipment/ Structure Item	Inspection Element	Status		If unacceptable, specify reasons
		Accept-able	Unaccept-able	
Tank 601 Tank 602 Tank 603 Tank 604 Tank 641				
Safety vents, Rupture Discs Tank 601 Tank 602 Tank 603 Tank 604 Tank 641	Check for blockage, tampering or rupture.			

* Emergency Coordinator Contacted: Yes/No
* Response Timing: Urgent/Routine

* Signature/Title _____

* Name/Title _____

(W) Denotes Weekly
(M) Denotes Monthly

APPENDIX B

SAMPLING AND ANALYSIS PROGRAM

1. CWM shall take composite samples from the PCB storage tanks at the Emelle facility as follows: A composite sample from each of the large tanks with side sampling ports shall consist of a composite of a discrete sample taken at each port. A composite sample from each of the other tanks shall consist of a composite of a discrete sample from the top, middle, and bottom of each tank. For interconnected, paired 25,000 gallon tanks, the composite shall consist of combining a discrete sample taken with a Coliwesa Sampler from each tank in the pair.

2. Each composite sample shall be analyzed for 2,3,7,8 TCDD according to EPA approved analytical method and as represented in Exhibit D of the current EPA IFB (Invitation for Bids) 2,3,7,8 TCDD Analytical Method for Soil and Sediment as modified for High Resolution GC/High resolution Mass Spectrometry and for PCB laden oil analysis. The detection limit for each sample will be determined depending upon the matrix of each sample and included in the analytical report to EPA and the State for each sample, along with the specific clean-up, extraction and preparation protocol and techniques employed.

EPA and State may split samples required by Appendix B; provided however that the split sample for each tank and any residues of such samples are returned to the Emelle facility and deposited in the tank from which they were taken prior to removal of PCBs from the tank for

disposal. The disposal schedule in subparagraph IV A. shall be modified accordingly.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Review and Comment on Draft Complaint and Consent Agreement between Region V and Chemical Waste Management, Re: TSCA and RCRA Violations at Vickery, Ohio

FROM: Tony Baney
Compliance & Implementation Branch (WH-527)

TO: Keith Onsdorff
Office of Enforcement & Compliance Monitoring (LE-134S)

In general I agree with the scope and depth of these two draft documents. Many of the original problems at Vickery are being addressed in the state decree. I would like to suggest several modifications or additions to the documents under review which should further aid in bringing the facility into compliance.

COMPLAINT

I. Page 5, Item 26; a new Item should be added which addresses the problem of failure to report releases of hazardous substances from the facility. This is a violation of Sections 103(a) and 111(9) of CERCLA.

II. Page 7, "Penalty"; in addition to the violations cited, the above mentioned CERCLA violations should also be cited.

AGREEMENT

III. Page 3, paragraph "B"; add changes for violation of above mentioned CERCLA sections.

IV. Page 15, paragraph "0"; insert CERCLA after the acronym TSCA.

V. Page 14, prior to paragraph "M"; add the following order: The respondent will comply with Section 103(a) of CERCLA by immediately notifying the Federal government of any release from the facility by telephoning the National Response Center at 1-800-424-8802. This notice must include:

1) Name and telephone number of reporter;
2) Name and address of facility;
3) Time of release and type of incident causing release (i.e., fire, mixing of waste in surface impoundment, etc.);
4) Name and quantity of materials) involved;
5) Extent of injuries, if any; and
6) The possible hazards to human health and the environment.

In addition, the Respondent will comply with section 111(g) of CERCLA by placing a written, NOTICE OF RELEASE, in the _____, a daily newspaper which serves the residents in the geographical area around the facility. The Respondent will make arrangement with the _____ to place the notice in the next edition unless that edition has gone to press. In these instances, the following edition will carry the notice. News stories covering the release will not be considered to be sufficient to comply with this order. This notice shall be published in the first section of the newspaper.

The "Notice of Release" must include:

1) Name and address of the facility
2) Name and address of facility
3) Time of release and type of incident causing release (i.e., fire, mixing of wastes in surface impoundments etc.)
4) Name and quantity of materials involved;
5) Geographic area outside facility most likely involved (for airborne releases);
6) The possible hazards to human health and the environment.

VI. Section 103(b) provides for a penalty of up to 10,000 or 1 year in jail or both. If no imprisonment is contemplated the a $10,000 penalty should be added to the "Stipulated Penalties" section.

VII. The Agency should consider a §3013 Order aimed at monitoring contamination from old (not used after 11/18/80) units.

VIII. The Complaintant must not be restricted by these documents from seeking further remedial action from the Respondent. It is likely that a proper ground-water monitoring program will detect leakage from the facility and the Agency's ability to order corrective action (e.g. under Section 3008[d]) or additional closure activities must not be restricted.

VIII. The draft Decree lacks a Force Majeure clause. If Region V can get CWM to agree to the release language contained in the draft, that will be a major victory.

BERGSON, BORKLAND, MARGOLIS & ADLER
11 DUPONT CIRCLE, NORTHWEST
WASHINGTON, D. C. 20036
(202) 462-5930
CABLE: BEMAAD

JEFFREY G. MILLER

HERBERT A. BERGSON
1950-1977
HERBERT BORKLAND
1950-1969

Rec'd 12/3/84

November 30, 1984

Michael Walker, Esq.
Assistant Regional Counsel
U.S. Environmental Protection
Agency
320 South Dearborn Street
Chicago, Illinois 60604

Re: Chemical Waste Management,
Inc., Vickery, Ohio Facility

Dear Mr. Walker:

At our meeting on November 14, 1984, Chemical Waste Management, Inc. ("CWM") agreed to respond by December 3, 1984 to the draft Consent Order which EPA proposed on November 14. Enclosed in response is CWM's redraft indicating additions, substitutions and deletions. Many of these are editorial or self-explanatory. Major points, however, are discussed below.

Wherefore Clauses:

A. CWM believes that parallel civil and criminal enforcement proceedings against the same alleged violations are, at best, highly inappropriate as a policy matter, and, at worst, of dubious legality. Consequently it takes the position that a settlement regarding these alleged violations constitutes a complete settlement and the Consent Decree should so indicate. CWM recognizes EPA takes a contrary position. CWM would agree to enter a Consent Deree that is silent on the matter, leaving other parties to their legal arguments should the matter subsequently be in issue.

B and C. CWM believes that U.S. EPA has absolutely no enforcement authority under RCRA over the violations alleged in view of the previous enforcement action taken by the agency with primary enforcement authority, Ohio EPA.

Copies: Reed
Brossman
Brewer
Onsdorff

This conclusion is clear on the face of RCRA §3006(d) and has been adhered to by EPA's own Administrative Law Judge in In re BKK (Reg. IX 1984). Nevertheless, to settle the matters currently at issue CWM is willing to undertake substantially the measures which EPA desires. Because these measures are above and beyond any present legal requirements, however, CWM regards the expense of such measures as a penalty. CWM, however, will not waive its rights to assert the defense that EPA does not have RCRA enforcement authority and will not agree that EPA has such authority. As long as EPA is primarily interested in having the measures it desires undertaken, these difference can be solved with creative drafting.

Orders

A and B. This paragraph was based on the Emmelle settlement agreement and related to TSCA inspections of an approved PCB bulk storage facility. The concept is simply inapplicable at the Vickery facility. Any monitoring associated with CWM's closure of areas at the Vickery facility alleged to be contaminated with PCBs is best dealt with in the context of the application for approval of a TSCA chemical waste landfill currently before EPA.

C. At our meeting on November 14 it was represented by EPA that this paragraph had been agreed to by CWM in the Emmelle settlement. That is not the case.

D. At our meeting on November 14 it was represented by EPA that this paragraph was agreed to by CWM in the Emmelle settlement. That is not the case. CWM is willing to incorporate in a Vickery settlement whatever audit agreement is reasonable for the Vickery facility. We believe the provision in the State Consent Decree is reasonable. If there is a settlement in the Emmelle situation, we would be willing to use the audit provision from that settlement as a framework, with adjustments appropriate to Vickery.

E. At our November 14 meeting EPA represented that this paragraph had been agreed to in the Emmelle settlement. While the paragraph may be appropriate for an operating PCB storage and disposal facility, it is simply inapplicable to the Vickery facility, which doesnt handle PCBs and is in the process of decommissioning and closing areas alleged to be contaminated with PCBs. CWM's suggested substitute provides EPA with the information it seeks, in a context more appropriate to the facility.

F and G. CWM is accorded substantial rights to business confidentiality by statute and by EPA's own regulations and can discern no legitimate government interest in waiving these rights. Nevertheless, to settle these disputes it is willing to waive such rights with respect to documents already submitted to EPA, except for those documents from which customer lists can be discerned. It will not agree at this time to waive such rights for documents submited in the future. To do so for documents of presently unknown contents would impossible.

H. At our meeting on November 14, EPA represented that the purpose behind this paragraph was to assure proper supervision of the weekend and holiday shifts. CWM's suggested substitute does so in a manner more consonent with conducting business in a reasonable manner.

K. This paragraph may have to be rewritten as a result of the technical meeting on November 29. CWM believes it has already complied with 40 CFR §§265.90-94. It may be willing, however, to agree to further, reasonable monitoring to settle this matter. Because the adequacy of groundwater monitoring and the interpretation of EPA's groundwater monitoring regulations are highly subjective and a subjective determination by EPA that any program ultimately submitted could lead to substantial penalties, CWM must have prior agreement on the basics of the program to be subsmitted. At our meeting it was represented that the reference to In re CWM, Inc. was agreed to by CWM in the Emmelle settlement. That is not the case. CWM has appealed that decision and will not agree to the reference.

As previously discussed, many aspects of the course of dealing between EPA and CWM in this matter are disturbing. After virtually sitting on its hands for six months and ultimately retreating from an absurd Department of Justice settlement propsoal, it is incomprehensible that EPA could establish a three week "drop dead" date for negotiating a consent order at this point. Although CWM sincerely believes that the matter can and should be settled quickly, the course of proceedings on the Emmelle settlement make it clear that EPA's "drop dead" date of December 10

cannot be met. A substantial part of EPA's proposal for a Vickery settlement was agreed based upon a proposed Emmelle settlement between EPA and CWM. CWM, in fact, had not agreed to this language in the Emmelle settlement. Thus a larger part of any OLD settlement is still to be resolved by other negotiations. Moreover, EPA's course of conduct in the Emmelle negotiations leaves CWM at a loss to know where it stands with EPA in negotiating a Vickery settlement. The Emmelle negotiations took place at EPA'S enforcement offices at EPA Headquarters. They were two week, round the clock negotiations. They resulted in an agreement. EPA subsequently repudiated that agreement. On what basis is CWM now negotiating with EPA on Vickery? Before proceeding further, CWM requests a letter from EPA's Assistant Administrator for Enforcement and Compliance Monitoring and from EPA's Regional Administrator in Chicago appointing EPA negotiators and indicating they have full authority to settle this matter.

I appreciate the efforts you and other Region V people have made to bring these matters to a satisfactory and productive resolution. I assure you that CWM has no greater desire than to find and reach a quick and satisfactory solution. I am confident that we will be able to reach such a resolution.

Thank you for your continuing efforts in this regard.

Very truly yours,

Jeffrey G. Miller

JGM/vw

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

IN RE:	)	
	)	
CHEMICAL WASTE MANAGEMENT, INC.	)	DOCKET NOS. TSCA-V-C-000
OAK BROOK ILLINOIS,	)	RCRA-V-C-000
	)	
	)	CONSENT AGREEMENT AND ORDER
Respondent.	)	

CONSENT AGREEMENT

WHEREAS:

A. The above-captioned civil administrative proceedings were initiated pursuant to Section 16(a) of the Toxic Substances Control Act (TSCA), 15 U.S.C. §1265(a), and Section 3008 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §6928;

B. A Complaint and notice of opportunity for Hearing was filed by Complainant William H. Sanders, III, Director, Environmental Services Division, on December 7, 1984, charging that Respondent violated Section 15 of TSCA, 15 U.S.C. §2614, and implementing regulations at 40 C.F.R. Part 761, et seq. In addition, a Complaint and Notice of Opportunity for Hearing was filed by Complainant, Basil G. Constantelos, Director, Waste Management Division, on December 7, 1984, charging that Respondent violated Section 3005 of RCRA, 42 U.S.C. §6925 and implementing regulations at 40 C.F.R. 261, 262, 265, and 270, et seq. The Complaints allege that certain violations occurred at

may have with respect to the Facility. Prior to access to the Facility, U.S. EPA inspectors shall complete CWM's safety training briefing, including signing an acknowledgment of the same, or shall sign a waiver of liability agreement.

B. Cwm shall conduct an annual environmental compliance audit of its operating facilities in Ohio. In addition, CWM shall appoint an independent auditor acceptable to U.S. EPA and Ohio EPA, which auditor shall annually audit the effectiveness of the compliance, audit and employee reporting mechanisms implemented by CWM at their operating facilities in Ohio. This audit shall be reported to CWM and shall recommend specific improvements in CWM's environmental compliance, environmental compliance audit, and employee and management environmental compliance reporting systems.

C. On or before July 1 of each calendar year EPA shall submit to U.S. EPA a copy of its annual PCB report for the previous calendar year, prepared pursuant to 40 U.S.C. §761.180. CWM shall submit to U.S. EPA copies of the monthly reports prepared to document compliance with the remedial requirements of the State Consent Decree, pursuant to paragraph 45 of the State Consent Decree and shall include in such reports the amounts of materials contaminated with PCBs for the preceding month chemically fixed and temporarily stockpiled, disposed of in the closure cell referred to in paragraph D 2 and 3 of the

Wherefore Clauses, or removed from the Facility. Such reports shall indicate the concentration of PCBs in such materials, based on analyses undertaken by CWM, and shall identify the destination of any such materials removed from the Facility.

D. CWM waives all claims that all operating records of the Facility previously submitted by CWM to U.S. EPA are subject to Confidential Business Information claims, except for customer lists or documents for which customer lists may be compiled.

E. CWM waives all claims that records pertaining to the design and operating methodology of pollution control equipment at the Facility previously submitted to U.S. EPA and/or Ohio EPA for issuance of a permit, license or the like are subject to Confidential Business Information claims, except . . .

F. To assure that the Facility is properly managed and supervised during emergency events, CWM shall implement the procedures on Attachment A. The reports prepared and submitted pursuant to paragraphs B 2 and 5 shall address whether such measures are sufficient to provide adequate management and supervision at the Facility during emergency events and, if they are not, shall recommend additional measures to meet that objective.

G. Within ninety (90) days of entry of this CAFO, Respondent shall provide to U.S. EPA a plan for monitoring NOx from surface impoundments not associated with normal, proper operations.

to the Treasurer of the United States of America, to the Regional Hearing Clerk (5C-16), U.S. Envornmental Protection Agency, Region V, 230 South Dearborn Street, Chicago, Illinois 60604.

N. Failure to remit the civil penalty will result in a referral of this matter to the United States Attorney for the initiation of a collection action.

O. Respondent shall pay to U.S. EPA stipulated penalties in the amount of One Thousand Dollars ($1,000) per day for failure to meet any requirement contained in this CAFO, except for the requirements of Paragraphs H and J. If the Respondent is rendered unable, wholly or in part, by force majeure to perform the actions specified in this CAFO, Respondent shall give Complainant prompt written notice of the force majeure with reasonable particulars concerning it and the obligation of the Respondent shall be suspended during, but no longer than, the continuance of the force majeure. The term "force majeure" shall mean an act of God, act of the public enemy, war, blockade, public riot, lightning, fire, storm, flood, explosion, and any other cause which is not reasonable within the control of Respondent.

_____
Chemical Waste Management, Inc.
Oak Brook, Illinois

Dated: _____

William H. Sander, III
Director
Environmental Services Division
U.S. Environmental Protection Agency
Region V
230 Dearborn Street
Chicago, Illinois 60604

Dated: _____

Basil G. Constantelos
Director
Waste Management Division
U.S. Environmental Protection Agency
Region V
230 Dearborn Street
Chicago, Illinois 60604

Dated: _____

It is so ORDERED as agreed to by the parties as stated in the Consent Agreement.

Valdas V. Adamkus
Regional Administrator
U.S. Environmental Protection Agency
Region V
230 Dearborn Street
Chicago, Illinois 60604

Dated: _____

September 21, 1984

MEMORANDUM

SUBJECT: Status of Civil Enforcement re: CWM's Vickery, Ohio, Site

FROM: Dick Emory

TO: Fred Stiehl and Deb Woitte

Today I discussed with Mike Walker the status of, and the Region's plans for, this case, which was referred to DOJ on 12/8/83. Here is what I plan to put in the docket, assuming that I have your approval and any changes or insertions, hopefully by COB Thursday, September 27. To expedite discussion, I have also sent a carbon copy of this update to Mary Gade.

"9/21/84: In early September, the drop-dead date passed for acceptance by CWM of the consent decree sent by DOJ in early July. Consequently, on 9/19 Region V received from DOJ a draft complaint alleging TSCA and RCRA counts.

Also on 9/19, the RC decided that the Region will review the current RCRA status of the site, and (if there are RCRA violations not adequately addressd by the State consent decree) will draft an AO seeking about $100,000 in RCRA civil penalties.

With regard to the TSCA violations, the RC also decided that the Region will draft an AO seeking $4,520,000 in civil penalties for a multitude of PCB violations. The negotiations strategy will be to seek construction of a PCB landfill and proper disposal therein in return for a $1M penalty abatement, leaving $3,520,000 to be paid. Inasmuch as a TSCA civil penalty must first be assessed administratively (and not by a District Court), the Region wishes to stay (and if necessary, withdraw) the TSCA portion of the civil referral to DOJ. According to Mike Walker, the RC's understanding is that the criminal investigation is proceeding very slowly, that several months ago DOJ agreed to make an exception to its policy against parallel proceedings because of the circumstances and timing of the Vickery negotiations, and that DOJ's only remaining concern is that such an AO may be viewed as heavy-handed.

9/ /84:

[space for OECM-Waste comment - and hopefully, concurrence - on above. I am unclear whether the RCRA portion will be handled by AO or by DOJ.)

Now that OECM-SLD and Waste agree with the Region's strategy, we must obtain high-level DOJ approval of this strategy."

cc: Carroll Hunt; Mike Walker; Mary Gade

We would be happy to meet with you later this week to discuss the decree. I suggest 10:00 a.m., Friday, July 27, at the Department. Please let me know if this would be convenient.

Sincerely,

Assistant Attorney General
Land and Natural Resources Division

By: Jerome C. Muys, Jr. for
Carol Lynn Green, Assistant Chief
Environmental Enforcement Section

Enclosure

cc: Richard Mays
David Ullrich
Michael Walker
Mark Greenwood

7/24/84
11:00AM DRAFT

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. CHEMICAL WASTE MANAGEMENT, INC. and WASTE MANAGEMENT, INC., Defendants.	)	CIVIL ACTION NO. JUDGE

CONSENT DECREE

The parties herein, the United States of America on behalf of the Administrator of the United States Environmental Protection Agency ("USEPA"), as plaintiff, and Chemical Waste Management, Inc. ("CWM") and Waste Management, Inc. ("WMI"), as defendants, having consented to entry of this Consent Decree,

NOW THEREFORE, before the taking of any testimony, upon the pleadings and without the admission or adjudication of any issues of fact or law herein, and upon consent of these parties hereto, it is ORDERED, ADJUDGED AND DECREED as follows:

I. JURISDICTION

This Court has jurisdiction over the parties consenting hereto and over the subject matter of this action pursuant to 28 U.S.C. Section 1345; Section 17 of the Toxic Substances Control Act, 15 U.S.C. Section 2616, and Section 3008 of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6928. The complaint filed herein states claims upon which relief can be granted.

II. PARTIES BOUND

A. This Consent Decree shall apply to and be binding upon all parties to this Consent Decree, their directors, officers, employees, contractors, agents, successors and assigns and upon all persons or entities acting under or for them. Each signatory to this Consent Decree certifies that he or she is fully authorized by the party or parties whom he represents to enter into the terms and conditions of this Consent Decree, to execute the Consent Decree on behalf of the party represented and to legally bind such party to it. Defendants shall provide a copy of this Consent Decree to each contractor and subcontractor retained to perform any work contemplated by this Consent Decree and shall condition any contract for such work on compliance with this Consent Decree. Notwithstanding any retention of contractors or agents to perform any work hereunder, CWM and WMI shall remain responsible for compliance with all terms, conditions and requirements of this Consent Decree. In the event CWM or WMI proposes to sell or transfer its real property or operations subject to this Consent Decree, it shall advise such purchaser or transferee of the existence of this Decree, and shall notify all parties to this Decree of such proposed sale or transfer.

B. WMI shall be a guarantor of CWM for purposes of this Consent Decree. In the event that CWM fails to perform any action required under this Consent Decree or to fulfill any obligation or duty hereunder, WMI shall perform such action or fulfill such duty or obligation. WMI shall be liable under this Consent Decree if it fails to perform such actions or to fulfill such duties. Nothing in

this paragraph is intended to limit in any way any relief available against CWM or WMI under law or this Consent Decree to redress any violations of this Consent Decree.

III. DEFINITIONS

For purposes of this Consent Decree and all attachments hereto, the terms set forth below in this Part are defined as follows:

A. "Vickery site" or "site" means the waste treatment, storage and disposal facility operated by Chemical Waste Management, Inc. at 3956 State Route 412 near Vickery, in Sandusky County, Ohio. A survey map of the Vickery site is incorporated herein as Attachment I and made a part of this Decree.

B. "Active surface impoundment" means the features identified as Ponds 4, 5, 7, 11, 12 and the wet well on Attachment I.

C. "Inactive surface impoundments" means the features identified as Ponds 1, 2, 3, 6, 9, 10 on Attachment I.

D. "PCBs" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance.

E. "Hazardous waste" means a hazardous waste as defined at Ohio Administrative Code (OAC)_____ (40 C.F.R. §261.3).

F. "Hazardous constituent" means all constituents identified at OAC ____ (40 C.F.R. Part 261).

G. "Sludge" means any semi-solid waste in surface impoundments and other facilities at the Vickery site.

H. "Class I Well" means a well used by a generator of hazardous waste or owners or operators of hazardous waste management

facilities to inject hazardous waste beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water, as defined in 40 C.F.R. §144.6.

I. "Waste materials" means any solid waste as defined at OAC _____ (42 U.S.C. §6903(27).

J. "Free liquids" means liquids which readily separate from the solid portion of any waste material under ambient temperature and pressure.

K. "Groundwater" means water below the land surface in a zone of saturation.

L. "USEPA" means the United States Environmental Protection Agency.

IV. OBJECTIVES

The objectives of the parties through entry of this Consent Decree include, without limitation, (1) assuring proper disposal of all PCBs and PCB-contaminated materials found at the Vickery site in concentrations exceeding background levels; (2) assuring proper closure and post-closure care, in conformity with the requirements of O.A.C. Chapter _____ [40 C.F.R. Part 265], of all surface impoundments currently or formerly used for processing or storage of various materials, including liquid hazardous wastes, at the Vickery site; (3) assuring that any waste oil reclaiming or recycling operations at the Vickery site will not result in the processing or distribution in commerce of PCBs or in the improper treatment, transportation, storage or disposal of hazardous wastes; (4) establishing a monitoring program to detect migration of PCBs and/or hazardous wastes and

hazardous constituents in surface water or ground water from the Vickery site; and (5) assuring the integrity and proper operation of injection wells used for underground injection of hazardous wastes and other materials at the Vickery site in conformity with the requirements of 40 C.F.R. Parts 144 and 146.

V. SURFACE IMPOUNDMENTS

A. Inactive Surface Impoundments

Within thirty (30) days of entry of this Consent Decree, CWM shall submit to USEPA for review and approval plans for closure and postclosure care of all inactive surface impoundments at the Vickery site. Such plans shall provide for closure of the inactive surface impoundments in accordance with all applicable closure and post-closure requirements of OAC Chapter _____ (40 C.F.R. Part 265). CWM shall close all inactive surface impoundments within three (3) months after USEPA approval of a closure plan.

B. Active Surface Impoundments

CWM shall close all active surface impoundments at the Vickery site and shall provide for proper disposal of all waste materials, including hazardous waste and PCB-contaminated materials, found in such impoundments, in accordance with all applicable federal, state and local laws and regulations and all requirements of this Consent Decree.

1. Sludge Fixation, Treatment and Handling

(a) Within five (5) days after entry of this Consent Decree, CWM shall recommend to USEPA a method or methods of fixation or other method of treating or handling the sludges in the active surface

impoundments. After consideration of the study submitted by CWM pursuant to Paragraph XI.A.1 and other information available to USEPA, USEPA shall approve a method or methods of sludge fixation, treatment, or handling to be used by CWM in conducting the pilot study described in Paragraph V.B.1.(b) below.

(b) Within sixty (60) days of the approval required pursuant to Paragraph V.B.1.(a) above, CWM shall complete a pilot study to evaluate the effectiveness of the approved fixation or treatment method(s) on sludges and clay in the wet well. Any waste materials or clay removed from the wet well shall be stored only in the temporary storage area constructed by CWM pursuant to Paragraph V.B.3 below.

2. Submission of Plans

(a) Ponds 4, 5, 7 and the Wet Well

Within sixty (60) days of CWM's completion of the pilot study described in Paragraph V.B.1.(b) above, CWM shall submit to USEPA for approval, plans for closure and post-closure care of Ponds 4, 5, 7 and the wet well, and an application for approval of a chemical waste landfill to be constructed in the portion of the Vickery site presently occupied by Ponds 4, 5 and 7. Said chemical waste landfill shall conform to all requirements of 40 C.F.R. § 761.75 and all applicable requirements of the Ohio Administrative Code relating to closure of surface impoundments. At a minimum, such plans and application shall provide (1) detailed procedures and schedules for removal, fixation or solidification, and storage and disposal of all waste materials and all PCB-contaminated materials from Ponds 4, 5, 7 and the wet well and at least six inches of clay from the bottom and sides of Ponds 4, 5, 7 and the wet well; and (2) design

impoundments in accordance with Paragraph V.B.3 below. In addition, such plans shall include provisions for control of dust and fugitive emissions from truck traffic, equipment operation, chemical fixation, earth-moving, sludge storage and other activities which may be associated with the closure process. The plans submitted by CWM shall also include alternative provisions and schedules for closure of Ponds 4, 5, 7 and the wet well, including removal and disposal off-site of all waste materials from such surface impoundments, in the event that the fixed or solidified waste materials do not have sufficient load bearing strength, stability or other engineering properties required to support a cap.

3. Temporary Storage Area

Within thirty (30) days after entry of this Consent Decree, CWM shall submit to USEPA a revised Part A permit application for a temporary storage area to be constructed east of Pond 4 in the location identified on Attachment I. In addition, within thirty (30) days after entry of this Consent Decree, CWM shall submit plans for the design, operation, and closure of such area. At a minimum, the floor of such temporary storage area shall consist of at least one (1) foot of compacted clay having a permeability equal to or less than 1 x 10(-7) centimeters per second, a liquid limit greater than 30 and a plasticity index greater than 15. CWM shall construct berms at the perimeters of the storage area sufficient to contain leachate and prevent run-off. CWM shall construct a roof or other cover adequate to prevent precipitation from contacting stored materials.

Within ____ days after approval of the revised Part A permit application and the plans and specifications for the temporary storage area, CWM shall complete construction of such temporary storage area. CWM shall use such temporary storage area only for interim storage of fixed or solidified sludges, excavated clay, rip rap, other solid materials removed from surface impoundments pursuant to Paragraph V.B.5 below, sludges and other solids removed from Miscellaneous Facilities pursuant to Part VI below and from oil processing facilities pursuant to Part VII, and all other solid materials that become contaminated with PCBs or hazardous waste as a result of implementing any requirement of this Consent Decree. CWM shall not place any liquids or materials containing free liquids in the temporary storage area.

4. Liquids

(a) Ponds 4, 5, 7 and the Wet Well

Within five (5) days after entry of this Consent Decree CWM shall cease all further additions of waste materials to Ponds 4, 5, and 7 and the wet well, and CWM shall commence removal and disposal of all liquids from such surface impoundments in accordance with all requirements of this subpart. CWM shall complete removal and disposal of all liquids from Ponds 4, 5 and 7 and the wet well as expeditiously as practicable and in no event longer than _____ months after USEPA's approval of the closure and post-closure care plans submitted by CWM pursuant to Paragraph V.B.2.(a) of this Consent Decree.

concentrations of such liquids. If any PCBs are detected in such analyses, CWM shall dispose of such oily liquids in an incinerator which conforms to the requirements of 40 C.F.R. §761.70. If any dioxin is detected in such analyses, CWM shall submit to USEPA for approval a plan providing for storage and disposal of such oily liquids.

(5) Sludges, Soils, Waste Materials

(a) Ponds 4, 5, 7 and the Wet Well

As expeditiously as practicable after completing the activities required pursuant to Paragraph V.B.4(a) above, and in any event within _____( ) months after completing such removal activities, CWM shall remove, solidify or chemically fix, and properly dispose of all sludge, waste materials, rip rap, other solids, and at least half a foot of clay from the bottom and sides of surface impoundments 4, 5, 7 and the wet well. CWM shall dispose of all such materials containing less than 500 ppm PCBs in the chemical waste landfill constructed pursuant to Paragraph V.B.6. below, provided that USEPA has approved the application for a chemical waste landfill submitted by CWM pursuant to Paragraph V.B.2(a) and the plans for a temporary waste storage area submitted by CWM pursuant to Paragraph V.B.3 above. CWM shall dispose of all materials containing over 500 ppm of PCBs at an off-site facility approved by USEPA.

(b) Ponds 11 and 12

As expeditiously as practicable after completing the activities required pursuant to Paragraph V.B.4(b) above, and in any event within three (3) months after completing such removal activities, CWM shall remove and properly dispose of all PCB-contaminated

materials from Ponds 11 and 12. CWM shall dispose of all PCB-contaminated materials from Ponds 11 and 12 in a chemical waste landfill that satisfies the requirements of 40 C.F.R. §761.75. In no event shall CWM dispose of such materials in the chemical waste landfill constructed pursuant to Paragraph V.B.6 below.

As expeditiously as practicable after completing the activities required pursuant to Paragraph V.B.4(b) above, and in any event within nine (9) months after completing such activities, CWM shall solidify or chemically fix all sludges and waste materials in Ponds 11 and 12, or CWM shall remove and dispose of all such materials in an off-site disposal facility approved by USEPA. Thereafter, CWM shall complete closure of such surface impoundments, as expeditiously as practicable in accordance with closure plans approved by USEPA.

6. Chemical Waste Landfill

(a) Within twenty-four (24) months after any final action by USEPA approving CWM's application to construct a chemical waste landfill at the Vickery site, CWM shall: (i) complete construction of such chemical waste landfill in accordance with all requirements set forth in 40 C.F.R. §761.75, 40 C.F.R. Part 265 and this Consent Decree; (ii) complete the disposal of all waste materials required or authorized to be placed in such chemical waste landfill pursuant to this Consent Decree; and (iii) complete final closure of such chemical waste landfill by implementing all cover, grading and other requirements established as conditions of USEPA's approval of such landfill

and/or set forth in approved closure plans for the wet well and Ponds 4, 5 and 7.

(b) The chemical waste landfill constructed pursuant to this Subpart shall be located within the boundaries of Ponds 4 (both the closed and open portions), 5 and 7. The bottom of such chemical waste landfill shall include an underdrain system, a clay liner, a compatible synthetic liner, and a leachate collection system. The cap of the chemical waste landfill shall consist of at least two feet of clay compacted to achieve a permeability no greater than 1 x 10 (-7) centimeters per second, a compatible synthetic liner, and at least one foot of native soil. CWM shall grade and seed the cap and allow run-off to flow into Myers Ditch.

(c) CWM shall operate the chemical waste landfill constructed pursuant to this Subpart in accordance with 40 C.F.R. §761.75, 40 C.F.R. Part 265 and all approved terms and conditions of the plans and applications submitted to USEPA pursuant to Paragraph V.B.2(a). CWM shall use the on-site chemical waste landfill only for disposal of the following materials: (i) waste materials, chemically fixed or solidified sludges, clays and other materials which CWM removes from the wet well and Ponds 4, 5 and 7 and which contain less than 500 ppm PCBs; (ii) chemically fixed or solidified sludges and other solid waste materials containing less than 500 ppm PCBs removed from the Miscellaneous Facilities pursuant to Part VI of this Consent Decree; (iii) the temporary storage area liner specified in Paragraph V.B.3; and (iv) other solid materials which may have become contaminated with PCBs in concentrations below 500 ppm, during implementation of

expeditiously as practicable after completing the activites specified in Paragraph V.B.7 above.

VI. CLOSURE OF MISCELLANEOUS FACILITIES

Within _____ days of entry of this Consent Decree, CWM shall remove or decontaminate the buried oil/water separation tank, the concrete oil pit, the oil water trench, and that portion of a buried pipe line between sampling points designated as ORT-2 and ORT-10 and adjacent contamination soil and berms, if any, all identified on the map attached to this Consent Decree as Attachment I (together the "Miscellaneous Facilities"). CWM shall dispose of all liquids removed from the Miscellaneous Facilities in the manner specified in Paragraph V.B.4(c) above. CWM shall solidify or chemically fix all sludges and other waste materials removed from the Miscellaneous Facilities. CWM shall store such solidified or chemically fixed sludges and other materials in the temporary storage facility established pursuant to Paragraph V.B.3 above and shall dispose of all such fixed or solidified materials containing less than 500 ppm of PCBs in the chemical waste landfill constructed pursuant to Paragraph V.B.6 above or in another chemical waste landfill that conforms to 40 C.F.R. §761.75 and to applicable requirements of the Resource Conservation and Recovery Act and all regulations promulgated pursuant thereto.

VII. WASTE OIL PROCESSING

A. CWM shall neither accept, store, treat, reclaim, recycle, process or handle any additional used, waste or other oil

materials at the Vickery site nor sell or otherwise distribute in commerce any oil products from said site until CWM completes decontamination of the Vickery oil processing facilities in accordance with the requirements of Paragraph VII.B. below and until CWM submits to USEPA and receives approval of a waste oil facility operation plan which assures compliance with the requirements of Paragraphs VII.C.- V.E. below.

B. Within ten (10) days after entry of this Consent Decree, CWM shall submit to USEPA for approval a closure plan which shall provide for decontamination of the oil processing facilities at the Vickery site. CWM shall remove all PCBs and hazardous wastes from said oil processing facilities within _____ days after approval of a closure plan by USEPA. CWM shall store all materials containing PCBs removed from said oil processing facilities in accordance with 40 C.F.R. §761.65 and shall dispose of all such materials in an incinerator which conforms to the requirements of 40 C.F.R. §761.70.

C. CWM shall not accept or store at the Vickery site any oil which contains any detectible concentrations of PCBs using dual column gas chromatograph, electron capture techniques and analytical procedures specified in Environmental Protection Agency Publication No. EPA-600/4-81-045, or any hazardous waste as defined in [40 C.F.R. Part 261]. Before accepting any waste oil stream at the Vickery site, CWM shall obtain from the waste oil generator a written description of the oil, the origin or source of the oil, the process whereby it is generated and a representative sample of the oil. CWM

shall analyze such representative sample using a bottom sludge and water test in accordance with the procedures set forth in Attachment II to this Consent Decree, a PCB test using the analytical techniques and procedures referred to above, a chlorinated solvent gas chromatograph test, a BTU determination, a total ash determination, a specific gravity determination, and a general gas chromatograph screen. In addition, before accepting each individual shipment of waste oils at the Vickery site, CWM shall collect and analyze a representative sample of waste oil, using the aforementioned bottom sludge and water test, a chlorinated solvent gas chromatograph test and a PCB test using the analytical techniques and procedures referred to above. No material shall be taken from the surface impoundments at the Vickery site and placed into the oil recovery system. Further, no material shall be taken from the enclosed, tank-based waste treatment and storage system referred to in Paragraph V.B.4(b) above and placed into the oil recovery facility.

D. Before selling or otherwise distributing in commerce any oil material from its oil processing operations at the Vickery site, CWM shall analyze such processed or recycled oil material to determine heat value, solid and sediment content, PCB content, chlorinated solvent content and total ash content using analytical procedures approved by USEPA. Any waste oil facility operation plan which CWM submits to USEPA pursuant to Paragraph VII.A. above shall require that CWM sell oil materials only for combustion in high efficiency boilers that conform to the specifications set forth in 40 C.F.R. §761.60. Such plan shall prohibit CWM from selling waste oil for road oiling or dust control purposes. CWM shall incorporate

in all contracts or agreements relating to the sale of oil materials from the Vickery site conditions which assure compliance with the requirements of this paragraph.

E. Any waste oil facility operation plan which CWM submits to USEPA pursuant to paragraph VII.A. shall establish detailed operating procedures for the oil processing facilities at the Vickery site. These procedures shall include requirements to keep copies of all generators' statements obtained pursuant to Paragraph VII.C. above; waste oil receipts, with customer, date and volume of each shipment of material received; records of all transfers of materials within such facilities; records of all sales of oil materials, with customer, date, amount and volume of sale; and records of all analyses performed or obtained pursuant to Part VII of this Consent Decree. CWM shall retain all records pertaining to its waste oil facility operations for a period of five years from generation of the record and shall allow USEPA representatives to inspect and copy such records at any reasonable time.

VIII. CERTIFICATION OF CLOSURE

For each facility required to be closed or decontaminated pursuant to this Consent Decree, including each inactive surface impoundment, each active surface impoundment, the temporary storage area constructed pursuant to Paragraph V.B.3 above, the Miscellaneous Facilities and the oil processing facilities at the Vickery site, CWM shall submit a certification of closure to USEPA within thirty (30) days after completing closure of the facility. Each such certification shall include an affirmation by CWM and by an independent

registered professional engineer that the facility has been closed in accordance with closure plans approved by USEPA.

IX. MONITORING AND EVALUATION OF GROUND-WATER AND SURFACE WATER CONDITIONS

A. On-Site Ground-Water Evaluation

Within thirty (30) days after entry of this Consent Decree, CWM shall submit to USEPA:

1. a summary of all ground-water monitoring data obtained by CWM under O.A.C. Rules 3745_____ through 3745 _____ during the interim status period;
2. a written identification of all saturated zones beneath the Vickery site, including the rate and direction of ground-water flow in each such zone, and all hydrogeologic data on which such identifications are based; and
3. a ground-water monitoring plan which at a minimum shall provide for:
   (a) installation of a ground-water monitoring system conforming to the requirements of 40 C.F.R. §264.97 along the point of compliance identified on Attachment I to this Consent Decree;
   (b) collection of ground-water samples from each monitor well at such point of compliance at least once each calendar quarter, and analysis of all such samples

for the following parameters: PCBs; pH; specific conductance; total organic carbon content; total organic halogen content; calcium; magnesium; sodium; sulfate; carbonate; bicarbonate; chloride; cyanide; chloroform; 1,1,1-trichloroethane; 1,1,2-trichloroethane; benzene; trichloroethylene; tetrachloroethylene; toluene; ethylbenzene; chlorobenzene; all contaminants listed in Table 1 of O.A.C. Rule 3745 - ; and all other constituents listed in Appendix VII of O.A.C. Rule 3745 for each hazardous waste received by CWM at the Vickery site.

USEPA shall review the ground-water monitoring plan submitted by CWM pursuant to Paragraph IX.A.3 above and shall either approve the plan in writing or submit written objections to such plan to CWM. Within thirty (30) days after receiving any written objections from USEPA, CWM shall submit to USEPA for approval modifications to the ground-water monitoring plan necessary to satisfy such objections. Within _____ days after USEPA's approval of the ground-water monitoring plan or any plan modifications required pursuant to this paragraph, CWM shall complete installation of ground-water monitoring wells at locations and depths approved by USEPA. Thereafter, CWM shall promptly commence the sampling and analytical program required pursuant to Paragraph IX.A.3 above.

B. Drinking Water Well Sampling

For the duration of this Consent Decree, CWM shall fund a program for the Sandusky County Board of Health to sample and analyze off-site drinking water wells located near the Vickery site. Collection of samples and payment for laboratory analysis of such samples shall be performed by the Sandusky County Board of Health, which shall be reimbursed for the costs of such analysis within 30 days after the Board's submission of an invoice for these costs to CWM. The wells to be sampled, the sampling and analytical procedures, the parameters to be analyzed, and the laboratory to perform the analyses are to be mutually agreed upon from time to time by USEPA, Ohio EPA, CWM and the Sandusky County Board of Health. No more than ten wells will be sampled and analyzed per quarter. This sampling and analysis shall be conducted quarterly for two years after entry of this Decree, semi-annually for the next two years, and annually thereafter for the duration of this Decree. Analytical procedures used shall be USEPA approved standard methods.

C. Surface Water Monitoring and Reporting

Within ____ days of entry of this Consent Decree, CWM shall submit a plan for surface water monitoring at the Vickery site. Such plan shall identify, at a minimum, sampling points, sampling procedures and techniques, analytical methods, and quality assurance/quality control protocols. At a minimum, the following parameters shall be analyzed for: PCBs, pH, chemical oxygen demand, oil and grease, phenols, chlorides, cadmium, chromium, copper, lead, zinc, and mercury.

D. Additional Sampling

USEPA may require additional analysis for any and all 40 C.F.R. Part 261 Appendix VIII Constituents from any samples of waste, groundwater, surface water, collected run-off, soil or leachate located or collected at the Vickery site.

X. INJECTION WELLS

A. Injection Well Improvements

CWM shall not inject waste into any injection disposal well at the Vickery site until:

1. The well has been rebuilt to incorporate an annular seal system sufficient to maintain pressure on the annulus fluid independently from pressure on the waste in the injection tubing;
2. A sight glass and a pressure gauge have been installed to monitor the annulus fluid volume; and
3. Mechanical integrity tests have been conducted to determine that the well does not leak, including:
    (a) a pressure test of the long string casing, performed with an annular seal system set within thirty (30) feet from the bottom of the long string casing of the well; this test shall be conducted at a surface pressure of one thousand (1,000) pounds per square inch gauge (p.s.i.g.) with no more than a three (3) percent loss of pressure during a one (1) hour period; and

(b) a radioactive tracer log test to determine points of fluid exit, if any, and possible upward migration of fluid outside the casing.

B. Injection Well Monitoring, Reporting and Operation

1. CWM shall observe the following requirements during injection, stimulation or other operation of each injection well at the Vickery site:

(a) CWM shall maintain during injection 50 p.s.i.g. positive differential pressure on the annulus fluid over injection pressure at the well annular seal system;

(b) CWM shall not exceed during injection a surface pressure in excess of seven hundred and ninety (790) p.s.i.g. on wastes in the injection tubing; provided, however that CWM shall in no event exceed a fracture gradient of 0.75 when operating the well;

(c) In no case shall injection pressures initiate fractures in the confining zone or cause movement of fluids into any underground source of drinking water as defined in 40 C.F.R. §144.3;

(d) CWM shall not to use explosives to cause fractures in any formation; and

(e) CWM shall assure automatic shut down of pumps to injection wells in the event of any

significant drop or rise in either injection pressure or pipeline pressure.

(f) CWM shall only inject wastes which are compatible with the well casing, tubing and cement and with the injection formation.

2. Within five (5) days after entry of this Consent Decree, CWM shall submit to USEPA copies of Waste Product Records for all materials disposed of by injection at the Vickery site, and thereafter CWM shall promptly submit to USEPA Waste Product Records pertaining to each new waste stream accepted for injection at the Vickery site.

3. Within five (5) days after entry of this Consent Decree, CWM shall submit to USEPA for approval an injection waste analysis plan which provides, at a minimum, a periodic waste sampling and analysis program which shall demonstrate the compatability of injected wastes with well casing, tubing and cement and with the injection formation. USEPA shall review such injection waste sampling program and shall either approve such plan in writing or submit written objections to such plan to CWM. Within thirty (30) days after receiving any written objections from USEPA, CWM shall submit to USEPA for approval a modified injection waste sampling plan which satisfies such objections. Within five (5) days after approval of the injection waste sampling plan or modified plan approved by USEPA, CWM shall commence implementation of the approved plan. Thereafter, CWM shall comply with all requirements of the approved injection waste analysis plan.

4. During the operation of any injection well at the Vickery site, CWM shall check and record the injection pressure, the annulus pressure, and the flow rate and volume of fluid injected in each such well at least once every two (2) hours. A continuous graphic and written record of all injection pressures, annulus pressures, and flow rate and volume of fluid injected in each well shall be kept at the Vickery site and made available for inspection and copying by USEPA until three years after the plugging and abandonment of the well. Graphic records of injection pressure and injection rates shall be made by means of continuous monitoring and strip chart recorder.

5. CWM shall submit to USEPA a monthly report listing the daily minimum, maximum, and average injection pressures, annulus pressures, and the flow rate and volume of fluid injected in each well for each day during which waste was injected into the well during that month. For each minimum and maximum injection rate reported, CWM shall list in the report the injection pressure and annulus pressure occurring during the time the well was operating at this minimum or maximum injection rate. Such report shall also include a listing of the date, duration and cause of any non-operating period for each well during the month. The report for each month shall be due by the fifteenth day of the next month.

C. Integrity Testing

1. To ensure that all injection wells at the Vickery site are safely and properly operating, CWM shall perform the following mechanical integrity tests on each of its injection wells on an

annual basis, commencing from the last date on which such tests were performed:

(a) a static annular pressure test of the long string casing, performed with the injection seal system set within thirty (30) feet from the bottom of the long string casing of the well, to be conducted at a surface pressure of no less than one thousand (1,000) p.s.i.g. with no more than a three percent (3) loss of pressure during a one (1) hour period with the well in static and equilibrium conditions; and

(b) a radioactive tracer log test to determine the points of fluid exit and possible upward migration of fluid outside the casing.

2. During each major workover (i.e., whenever the injection tubing is removed from the well), CWM shall perform the tests required in paragraph X.C.I. above, a forty (40) arm caliper log test of the long string casing and a temperature or noise log as specified in 40 C.F.R. §146.8(c)(1). The annual testing period referred to in Paragraph X.C.1. above shall recommence after such testing has been completed to demonstrate the integrity of the reworked well (e.g., if a workover ended on July 1, 1984, the next tests would be required by July 1, 1985).

3. CWM shall provide at least twenty four (24) hours advance notice to USEPA of major workovers. CWM shall provide such notice ten (10) days in advance for annular pressure tests and radioactive tracer log tests. CWM shall allow personnel from USEPA to observe all tests described in this Part. CWM shall make all reasonable efforts to change the times of annular pressure tests, caliper tests, and radioactive tracer log tests to facilitate attendance by USEPA observers; provided, however, that CWM may perform caliper tests before the completion of a major workover on an injection well without prolonging the period such well would otherwise be out of operation.

4. CWM shall report the results of each test required pursuant to this Part to USEPA in writing within ten (10) days after completion of the testing period; provided, however, that test results or related reports received subsequently by CWM shall be reported within ten (10) days after receipt.

5. In observing any tests described in this Part, USEPA shall contemporaneously inform CWM if it believes that a test has not been accurately or adequately performed. If USEPA determines that the test has not been so performed, CWM shall conduct the test again. Within 30 days after performing the tests, USEPA will approve or disapprove the results and field evaluation as accurate and acceptable.

6. If any monitoring or testing described in this Part indicates that a leak may be occurring within or from any injection well, CWM shall immediately cease injecting wastes into such well, shall inform USEPA of the monitoring results and shall perform

sufficient tests and/or analyses to determine the cause of the testing or monitoring results. If a leak has occurred, CWM shall not resume operation injection of wastes until CWM has reworked the well and USEPA has agreed in writing that CWM has demonstrated the integrity of the worked over well, which agreement will not be unreasonably withheld. If the operation of any injection well violates a permit condition or applicable regulation in some other manner, CWM shall notify USEPA immediately and shall immediately cease or correct such violation. In addition, if continued operation of any well endangers public health, CWM shall immediately cease operation of such well until it has corrected such endangerment to the satisfaction of USEPA. If USEPA determines that the operation of any injection well violates applicable regulations, it may direct CWM to cease operation of the well until the violation is corrected. Notwithstanding any requirement of this Part, CWM shall obtain all necessary permits required by the Safe Drinking Water Act and/or any approved State program.

XI. MISCELLANEOUS PROVISIONS

A. Reporting and Record-keeping

1. Prior to entry of this Consent Decree (or as soon thereafter as they are available), CWM shall provide to USEPA (a) the final report and supporting data from the study conducted by Battelle Memorial Institute on chemical fixation of sludges from the surface impoundments at the Vickery site, and (b) copies of all technical information about the Vickery site, including but not limited to, all information pertaining to the closure of any hazardous waste

facility at the Vickery site, all laboratory reports, tests results, analytical data, and analyses of samples previously taken at the Vickery site, to USEPA.

2. CWM shall submit to USEPA a monthly progress report describing all actions which have been taken to implement this Consent Decree. The report for each month shall be submitted by the 15th of the following month. Upon completion of the chemical waste landfill required by Paragraph V.B.6, the monthly progress report shall include information on the structural integrity of the cap.

3. All reports, plans, applications, requests or information submitted to Plaintiff by CWM pursuant to this Consent Decree shall be submitted to:

Director, Waste Management Division
U.S. Environmental Protection
Agency
230 South Dearborn Street
Chicago, Illinois 60604

or to such persons and addresses as may hereafter be otherwise specified, in writing, by Plaintiff to CWM. All reports, requests, or information submitted to CWM by Plaintiff pursuant to this Consent Decree shall be submitted to:

Frederick Roberts
Senior Vice President
Chemical Waste Management, Inc.
3003 Butterfield Road
Oak Brook, Illinois 60521

or to such persons and addresses as may be otherwise specified, in writing, by CWM to Plaintiff.

B. Access

CWM shall allow personnel from USEPA and its authorized representatives access to the Vickery site without a warrant for all purposes pursuant to statute.

C. Split Samples

Any person taking a sample for analysis in order to implement or determine compliance with the requirements of this Consent Decree shall notify other parties hereto of the taking of each such sample and, upon request, shall provide such other parties with splits of any such sample.

D. Administrative Review of Plans and Applications

Nothing in this Consent Decree shall be construed to limit or in any way abridge USEPA's review of any permit application or any plan submitted by CWM pursuant to this Consent Decree or to supersede any procedural requirements applicable to such review. Furthermore, nothing in this Consent Decree shall be construed to require approval of any provision set forth in plans or applications submitted by CWM pursuant to this Consent Decree.

XII. COMPLIANCE WITH APPLICABLE LAW

All activities undertaken by CWM and WMI pursuant to this Consent Decree shall be undertaken in accordance with the requirements of all applicable federal state and local laws, regulations and permits, including but not limited to the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et seq.*, the Toxic Substances Control Act, 15 U.S.C. § 2601 *et seq.*, the Safe Drinking Water Act, 42 U.S.C. § 300f *et seq.*, the Occupational Safety and Health Act, 29 U.S.C. § 6951 *et seq.*, and regulations promulgated under each of those statutes, as well as all applicable Department of Transportation regulations.

XIII. STIPULATED PENALTIES

For each violation of any requirement set forth in Part V of this Consent Decree, CWM shall pay a stipulated civil penalty of twenty thousand dollars ($20,000.00) per day. In addition, for each violation of any requirement set forth in Part VI of this Consent Decree, CWM shall pay a stipulated civil penalty of ten thousand dollars ($10,000.00) per day. For each violation of any other requirement of this Consent Decree, CWM shall pay a stipulated civil panalty of five thousand dollars ($5,000.00) per day.

Within ten (10) days after the occurrence of each violation of this Consent Decree, CWM shall pay all applicable stipulated penalties referred to in the preceding paragraph, whether or not a demand is made therefor, by delivering to the office of the United States Attorney for the Northern District of Ohio, a certified check payable to the "Treasurer, United States of America."

By this stipulation, CWM waives all defenses to payment of the stipulated penalties provided in this Part of the Consent Decree, except that CWM reserves the right to assert a "force majeure" defense in the circumstances specified in Part XIV of this Consent Decree.

The stipulated civil penalties provided in this Part of the Consent Decree shall be in addition to, and shall not preclude the use of, any other remedies or sanctions which may be available to Plaintiff by reason of CWM's noncompliance with this Consent Decree or any applicable law.

XIV. FORCE MAJEURE

If CWM fails to comply with any performance date of this Consent Decree and such delay is caused by persons or events beyond the control of CWM, such delay shall not be considered a violation of this Consent Decree. When circumstances are occurring or have occurred which may delay the completion of any requirement of this Consent Decree, CWM shall notify USEPA in writing of the reason(s) for and duration of such delay, the measures to be taken by CWM to prevent or minimize the delay and the timetable by which those measures will be implemented. Such notice shall be sent not later than ten (10) days following the claimed occurrence. Failure to so notify USEPA shall constitute a waiver of any claim of force majeure.

If CWM and USEPA agree that a delay is or was beyond the control of CWM and upon the duration of such unavoidable delay, the parties shall, with approval of the Court, modify the Consent Decree to the extent necessary to enlarge the schedule for completion of the specific requirement affected by such a delay. If the parties cannot agree that the reason for the delay is or was beyond the control of CWM, or upon the duration of the unavoidable delay, the provisions of paragraph XV shall apply.

XV. DISPUTE RESOLUTION

Any dispute which arises with respect to the meaning, application, interpretation, amendment or modification of the Consent Decree and any attachments and appendices thereto, their terms, any plan or report required thereunder, or with respect to CWM's

compliance herewith or any delay hereunder shall in the first instance be the subject of informal negotiations. If the parties cannot resolve the dispute within thirty (30) days, however, it shall be presented to the Court for appropriate resolution upon written notice by any party. The period for negotiations may be extended by mutual agreement among the parties. Unless the United States is seeking any stipulated penalty or an amendment, modification or enforcement of this Decree, it shall be the responsibility of CWM to file the documents necessary to notify the Court of the dispute, and thereafter the Court shall order the parties to file such pleadings as the Court deems necessary and proper. In the former cases, the United States shall have the responsibility of filing the necessary papers. In all events, however, CWM shall bear the burden of proof.

CWM shall file any petition with the Court within thirty (30) days, and the United States shall petition the Court within ninety (90) days after the expiration of the time period described above.

XVI. COVENANT NOT TO SUE

The United States hereby covenants not to initiate or maintain any civil proceeding against CWM or WMI pursuant to Section 17 of TSCA, 15 U.S.C. § 2616, or Section 3008 of RCRA, 42 U.S.C. §6928, to obtain further injunctive relief to redress any of the violations of law asserted in the complaint filed in this action, as long as defendants comply with all provisions of this Consent Decree. This covenant not to sue shall not affect or apply to any liability of Defendants arising from or relating to any storage, treatment,

transportation or disposal of any materials, including materials removed from the Vickery site, at any location other than the Vickery site.

Nothing in this Consent Decree shall be construed to limit the ability of the United States to initiate or maintain any proceeding or take any action against any person to abate, prevent, or order the abatement of any condition which may hereafter present an imminent and substantial endangerment or an unreasonable risk to health, welfare or the environment, or to expend and thereafter recover any moneys in responding to any release or threat of release of any hazardous substance.

This Consent Decree shall not operate to release, waive, limit or impair in any way any claims, rights, remedies or defenses of the United States, CWM or WMI against any person or entity not a party hereto.

XVII. PENALTIES

Chemical Waste Management shall pay a civil penalty to the United States of America in the amount of $5,000,000 within 30 days of entry of this Consent Decree. Payment shall be by certified or cashier's check, payable to the order of the Treasurer of the United States, and shall be delivered to the Regional Counsel, USEPA Region V, 230 South Dearborn St., Chicago, Illinois 60604.

XVIII. MODIFICATION

No modification shall be made to this Consent Decree without written notification to and written approval of all parties hereto and approved by the Court. The notification required by this

Part shall set forth the nature of and reasons for the requested modification.

XIX. RETENTION OF JURISDICTION

The Court shall retain jurisdiction of this matter for the purpose of interpreting, implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all matters of dispute among the parties.

XX. TERMINATION

This Consent Decree shall terminate upon the completion of all requirements of the Decree to the satisfaction of the United States and the payment of the sums required in Paragraph XVII.

CHEMICAL WASTE MANAGEMENT, INC.

By: _____
ANGUS MACBETH
Bergson, Borkland,
Margolis & Adler

_____
JOSEPH F. KNOTT, PRESIDENT
Chemical Waste Management, Inc.

WASTE MANAGEMENT, INC.

By: _____
, President
Waste Management, Inc.

UNITED STATES OF AMERICA

By: _____
F. HENRY HABICHT, II
Assistant Attorney General
Land and Natural Resources
Division

_____
STEVEN J. WILLEY, ATTORNEY
JEROME C. MUYS, JR., ATTORNEY
Environmental Enforcement
Section
Land and Natural Resources
Division
U.S. Department of Justice
10th & Pennsylvania Ave., N.W.
Washington, D. C. 20530

_____

Assistant U.S. Attorney
Northern District of Ohio
1404 East Ninth Street
Cleveland, Ohio 44114

COURTNEY M. PRICE
Assistant Administrator
Office of Enforcement and
Compliance Monitoring
U.S. Environmental Protection
Agency
401 M Street, S.W.
Washington, D. C. 20460

MICHAEL J. WALKER
Associate Regional Counsel
U.S. Environmental Protection
Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

APPROVED AND ENTERED
as an Order of the Court
this ____ day of _____, 1984.

United States District Court
Judge

7/11/84
10:00AM DRAFT

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. CHEMICAL WASTE MANAGEMENT, INC. and WASTE MANAGEMENT, INC., Defendants.	CIVIL ACTION NO. JUDGE

CONSENT DECREE

The parties herein, the United States of America on behalf of the Administrator of the United States Environmental Protection Agency ("USEPA"), as plaintiff, and Chemical Waste Management, Inc. ("CWM") and Waste Management, Inc. ("WMI"), as defendants, having consented to entry of this Consent Decree,

NOW THEREFORE, before the taking of any testimony, upon the pleadings and without the admission or adjudication of any issues of fact or law herein, and upon consent of these parties hereto, it is ORDERED, ADJUDGED AND DECREED as follows:

I. JURISDICTION

This Court has jurisdiction over the parties consenting hereto and over the subject matter of this action pursuant to 28 U.S.C. Section 1345; Section 17 of the Toxic Substances Control Act, 15 U.S.C. Section 2616, and Section 3008 of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6928. The complaint filed herein states claims upon which relief can be granted.

II. PARTIES BOUND

A. This Consent Decree shall apply to and be binding upon all parties to this Consent Decree, their directors, officers, employees, contractors, agents, successors and assigns and upon all persons or entities acting under or for them. Each signatory to this Consent Decree certifies that he or she is fully authorized by the party or parties whom he represents to enter into the terms and conditions of this Consent Decree, to execute the Consent Decree on behalf of the party represented and to legally bind such party to it. Defendants shall provide a copy of this Consent Decree to each contractor and subcontractor retained to perform any work contemplated by this Consent Decree and shall condition any contract for such work on compliance with this Consent Decree. Notwithstanding any retention of contractors or agents to perform any work hereunder, CWM and WMI shall remain responsible for compliance with all terms, conditions and requirements of this Consent Decree.

B. WMI shall be a guarantor of CWM for purposes of this Consent Decree. In the event that CWM fails to perform any action required under this Consent Decree or to fulfill any obligation or duty hereunder, WMI shall perform such action or fulfill such duty or obligation. WMI shall be liable under this Consent Decree if it fails to perform such actions or to fulfill such duties. Nothing in this paragraph is intended to limit in any way any relief available against CWM or WMI under law or this Consent Decree to redress any violations of this Consent Decree.

III. DEFINITIONS

For purposes of this Consent Decree and all attachments hereto, the terms set forth below in this Part are defined as follows:

A. "Vickery site" or "site" means the waste treatment, storage and disposal facility operated by Chemical Waste Management, Inc. at 3956 State Route 412 near Vickery, in Sandusky County, Ohio. A survey map of the Vickery site is incorporated herein as Attachment I.

B. "Active surface impoundment" means the features identified as Ponds 4, 5, 7, 11, 12 and the wet well on Attachment I, which is incorporated herein by reference and made part of this Consent Decree.

C. "Inactive surface impoundments" means the features identified as Ponds 1, 2, 3, 6, 9, 10 on Attachment I.

D. "PCBs" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance.

E. "Hazardous waste" means a hazardous waste as defined at OAC_____ (40 C.F.R. §261.3).

F. "Hazardous constituent" means all constituents identified at OAC ____ (40 C.F.R. Part 261).

G. "Sludge" means any semi-solid waste in surface impoundments and other facilities at the Vickery site.

H. "Class I Well" means a well used by a generator of hazardous waste or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water, as defined in 40 C.F.R. §144.6.

I. "Waste materials" means any solid waste as defined at OAC _____ (42 U.S.C. §6903(27).

J. "Free liquids" means liquids which readily separate from the solid portion of any waste material under ambient temperature and pressure.

K. "Groundwater" means water below the land surface in a zone of saturation.

L. "USEPA" means the United States Environmental Protection Agency.

IV. OBJECTIVES

The objectives of the parties through entry of this Consent Decree include, without limitation, (1) assuring proper disposal of all PCBs and PCB-contaminated materials found at the Vickery site in concentrations exceeding background levels; (2) assuring proper closure and post-closure care, in conformity with the requirements of O.A.C. Chapter _____ [40 C.F.R. Part 265], of all surface impoundments currently or formerly used for processing or storage of various materials, including liquid hazardous wastes, at the Vickery site; (3) assuring that any waste oil reclaiming or recycling operations at the Vickery site will not result in the processing or distribution in commerce of PCBs or in the improper treatment, transportation, storage or disposal of hazardous wastes; (4) establishing a monitoring program to detect migration of PCBs and/or hazardous wastes and hazardous constituents in surface water or ground water from the Vickery site; and (5) assuring the integrity and proper operation of injection wells used for underground injection of hazardous wastes and other materials at the Vickery site in conformity with the requirements of 40 C.F.R. Parts 144 and 146.

V. SURFACE IMPOUNDMENTS

A. Inactive Surface Impoundments

Within thirty (30) days of entry of this Consent Decree, CWM shall submit to USEPA for approval plans for closure and post-closure care of all inactive surface impoundments at the Vickery site. Such plans shall provide for closure of the inactive surface impoundments in accordance with all applicable closure and post-closure requirements of OAC Chapter _____ (40 C.F.R. Part 265). CWM shall close all inactive surface impoundments within three (3) months after USEPA approval of a closure plan.

B. Active Surface Impoundments

CWM shall close all active surface impoundments at the Vickery site and shall provide for proper disposal of all waste materials, including hazardous waste and PCB-contaminated materials, found in such impoundments, in accordance with all applicable federal, state and local laws and regulations and all requirements of this Consent Decree.

1. Sludge Fixation Study

(a) Within five (5) days after entry of this Consent Decree, CWM shall submit to USEPA the final report and supporting data from the study conducted by Battelle Memorial Institute on chemical fixation of sludges from the surface impoundments at the Vickery site and shall recommend a method or methods of fixation of the sludges in the active surface impoundments. After consideration of the Battelle study and other information available to USEPA, USEPA shall approve a method or methods of sludge fixation, or other method of treating or handling the sludges if sludge fixation is determined to be inappropriate,

to be used by CWM in conducting the pilot study described in Paragraph V.B.1.(b) below.

(b) Within sixty (60) days of the approval required pursuant to Paragraph V.B.1.(a) above, CWM shall complete a pilot study to evaluate the effectiveness of the approved fixation or treatment method(s) on sludges and clay in the wet well. Any waste materials or clay removed from the wet well shall be stored only in the temporary storage area constructed by CWM pursuant to Paragraph V.B.3 below.

2. Submission of Plans

(a) Within sixty (60) days of CWM's completion of the pilot study described in Paragraph V.B.1.(b) above, CWM shall submit to USEPA for approval, plans for closure and post-closure care of Ponds 4, 5, 7 and the wet well, and an application for approval of a chemical waste landfill to be constructed in the portion of the Vickery site presently occupied by Ponds 4, 5 and 7. Said chemical waste landfill shall conform to all requirements of 40 C.F.R. § 761.75 and all applicable requirements of the Ohio Administrative Code relating to closure of surface impoundments. At a minimum, such plans and application shall provide detailed procedures and schedules for removal, fixation or solidification, storage, and disposal of all waste materials, PCB-contaminated materials and at least six inches of clay from the bottom and sides of the surface impoundments identified on Attachment I as Ponds 4, 5, 7 and the wet well, as well as design specifications and schedules for implementation of all remedial measures set forth in Paragraphs V.B.3 through V.B.5 below. In addition, such plans shall include alternative provisions for closure of Ponds 4, 5, 7 and the wet well, including removal and

disposal of all waste materials from such surface impoundments in the event that the treated waste materials do not have sufficient load bearing strength, stability or other engineering properties required to support a cap. Such plans and application shall provide for off-site disposal in a USEPA approved facility of all sludges and solids containing over 500 ppm of PCBs and all oily liquids.

(b) No later than May 10, 1985, CWM shall submit to USEPA for review and approval plans for closure and post-closure care of Ponds 11 and 12. The plans submitted by CWM shall, at a minimum, provide detailed procedures, design specifications and schedules for: removal and proper disposal of all PCB-contaminated materials from Ponds 11 and 12 in a chemical waste landfill that conforms to the requirements of 40 C.F.R. Section 761.75; solidification or fixation of sludges and waste materials remaining in such surface impoundments; and closure of such surface impoundments in conformity with all applicable requirements of O.A.C. §§3745-66-10 through 3745-66-20 and §3745-67-28.

(c) USEPA shall review all closure and post-closure care plans submitted by CWM pursuant to Paragraph V.B.2(a) and (b) above and shall either approve such plans in writing or submit written objections to such plans to CWM. Within thirty (30) days after receiving any written objections from USEPA concerning a closure or post-closure care plan, CWM shall submit to USEPA for approval modifications to such plan as necessary to satisfy such objections.

(d) The plans submitted by CWM pursuant to Paragraphs (a) and (b) above shall provide for temporary storage of all waste

materials and PCB-contaminated materials removed from surface impoundments in accordance with Paragraph V.B.3 below. In addition, such plans shall include provisions for control of dust and fugitive emissions from truck traffic, equipment operation, chemical fixation, earth-moving, sludge storage and other activities which may be associated with the closure process.

3. Temporary Storage Area

Within thirty (30) days after entry of this Consent Decree, CWM shall submit to USEPA a revised Part A permit application for a temporary storage area to be constructed to the east of Pond 4 in the location identified on Attachment I. In addition, within thirty (30) days after entry of this Consent Decree, CWM shall submit plans for the design, operation, and closure of such area. At a minimum, the floor of such temporary storage area shall consist of at least one (1) foot of compacted clay having a permeability equal to or less than 1 x 10(-7) centimeters per second, a liquid limit greater than 30 and a plasticity index greater than 15. CWM shall construct berms at the perimeters of the storage area sufficient to contain leachate and prevent run-off. CWM shall construct a roof or other cover adequate to prevent precipitation from coming into contact with stored materials.

Within ____ days after approval of the revised Part A permit application and the plans and specifications for the temporary storage area, CWM shall complete construction of such temporary storage area. CWM shall use such temporary storage area only for interim storage of fixed or solidified sludges, excavated clay, rip rap, other solid materials removed from surface impoundments pursuant

to Paragraph V.B.4.(b) below, sludges and other solids removed from Miscellaneous Facilities pursuant to Part VI below and from oil processing facilities pursuant to Part VII, and all other solid materials that become contaminated with PCBs or hazardous waste as a result of implementing any requirement of this Consent Decree. CWM shall not place any free liquids or materials containing free liquids in the temporary storage area.

4. Removal Actions

(a) Liquids

(1) Within five (5) days after entry of this Consent Decree CWM shall cease all further additions of waste materials to Ponds 4, 5, and 7 and the wet well, and CWM shall commence removal and disposal of all liquids in such surface impoundments in accordance with all requirements of this subpart. CWM shall complete removal and disposal of all liquids from Ponds 4, 5 and 7 and the wet well as expeditiously as practicable and in no event longer than _____ months after USEPA's final action regarding the closure and post-closure care plans submitted by CWM pursuant to Paragraph V.B.2.(a) of this Consent Decree.

(2) CWM shall cease all further addition or introduction of waste materials into Ponds 11 and 12 on or before September 22, 1984 unless by such date CWM submits to USEPA for approval applications for all permits and permit modifications necessary for installation of a tank-based, enclosed waste treatment and storage system at the Vickery site. In the event that CWM submits timely applications

for such an enclosed, tank-based waste treatment and storage system, CWM shall cease all further addition or introduction of waste materials into Ponds 11 and 12 within sixteen (16) months after final administrative action concerning such applications. After ceasing further addition of waste materials into Ponds 11 and 12 pursuant to this subpart, CWM shall promptly commence removal and disposal of all liquids in such surface impoundments in accordance with all requirements set forth below in this subpart. CWM shall complete such removal and disposal of liquids from Ponds 11 and 12 as expeditiously as practicable and in no event longer than _____ months after the final addition of waste materials into such surface impoundments.

(3) CWM shall dispose of all aqueous liquids from the surface impoundments in injection wells at the Vickery site. CWM shall dispose of oily liquids from the surface impoundments only at an off-site facility approved by USEPA and shall comply with all applicable regulations set forth in OAC Chapters _____ (40 C.F.R. Parts 262-265). CWM shall sample and analyze all oily liquids from the surface impoundments to determine total PCB and total dioxin concentrations of such liquids. If any PCBs are detected in such analyses, CWM shall dispose of such oily liquids in an incinerator which conforms to the requirements of 40 C.F.R. §761.70. If any dioxin is detected in such analyses, CWM shall submit to USEPA for approval a plan providing for storage and disposal of such oily liquids.

(b) <u>Sludges, Soils, Waste Materials</u>

As expeditiously as practicable after completing the removal activities required pursuant to Paragraph V.B.4(a)(1) above, and in

any event within _____( ) months after completing such removal activities, CWM shall remove, solidify or chemically fix, and properly dispose of all sludge, waste materials, rip rap, other solids, and at least half a foot of clay from the bottom and sides of surface impoundments 4, 5, 7 and the wet well. CWM shall dispose of all such materials containing less than 500 ppm PCBs in the chemical waste landfill constructed pursuant to Paragraph V.B.5 below, provided that USEPA has approved the application for a chemical waste landfill submitted by CWM pursuant to Paragraph V.B.1(a) and the plans for a temporary waste storage area submitted by CWM pursuant to Paragraph V.B.3 above. In the event that USEPA disapproves such application or plans, CWM shall:

(i) remove and dispose of all sludge, waste materials, rip rap, other solids, and at least one-half foot of clay from Ponds 4, 5 and 7 and the wet well as expeditiously as practicable after completion of the removal activities required pursuant to Paragraph V.B.4(a)(1) above in a USEPA approved off-site chemical waste landfill which conforms to the requirements set forth in 40 C.F.R. § 761.75 as well as all applicable requirements of the Resource Conservation and Recovery Act and all regulations promulgated thereunder, and

(ii) close Ponds 4, 5 and 7 and the wet well, in accordance with all applicable requirements of O.A.C. Chapter 3745-5 , as expeditiously as practicable after completing the removal activites specified in Paragraph V.B.4(b)(ii) above.

In any event, CWM shall dispose of all materials containing over 500 ppm of PCBs at an off-site facility approved by USEPA.

As expeditiously as practicable after completing the removal activities required pursuant to Paragraph V.B.4(a)(2) above, and in any event within three (3) months after completing such removal activities, CWM shall remove and properly dispose of all PCB-contaminated materials from Ponds 11 and 12. CWM shall dispose of all PCB-contaminated materials from Ponds 11 and 12 in a chemical waste landfill that satisfies the requirements of 40 C.F.R. §761.75. In no event shall CWM dispose of such materials in the chemical waste landfill constructed pursuant to Paragraph V.B.5 below.

As expeditiously as practicable after completing the removal activities required pursuant to Paragraph V.B.4(a)(2) above, and in any event within nine (9) months after completing such removal activities, CWM shall solidify or chemically fix all sludges and waste materials in Ponds 11 and 12, or CWM shall remove and dispose of all such materials in an off-site disposal facility approved by USEPA. Thereafter, CWM shall complete closure of such surface impoundments, as expeditiously as practicable in accordance with closure plans approved by USEPA.

5. <u>Chemical Waste Landfill</u>

(a) Within twenty-four (24) months after any final action by USEPA approving CWM's application to construct a chemical waste landfill at the Vickery site, CWM shall: (i) complete construction of such chemical waste landfill in accordance with all requirements set forth in 40 C.F.R. §761.75, 40 C.F.R. Part 265 and this Consent Decree; (ii) complete the disposal of all waste materials required or

authorized to be placed in such chemical waste landfill pursuant to this Consent Decree; and (iii) complete final closure of such chemical waste landfill by implementing all cover, grading and other requirements established as conditions of USEPA's approval of such landfill and/or set forth in approved closure plans for the wet well and Ponds 4, 5 and 7.

(b) The chemical waste landfill constructed pursuant to this Subpart shall be located within the boundaries of Ponds 4 (both the closed and open portions), 5 and 7. The bottom of such chemical waste landfill shall include an underdrain system, a clay liner, a compatible synthetic liner, and a leachate collection system. The cap of the chemical waste landfill shall consist of at least two feet of clay compacted to achieve a permeability no greater than 1 x 10 (-7) centimeters per second, a compatible synthetic liner, and at least one foot of native soil. CWM shall grade and seed the cap and allow runoff to flow into Myers Ditch.

(c) CWM shall operate the chemical waste landfill constructed pursuant to this Subpart in accordance with 40 C.F.R. §761.75, 40 C.F.R. Part 265 and all approved terms and conditions of the plans and applications submitted to USEPA pursuant to Paragraph V.B.2(a). CWM shall use the on-site chemical waste landfill only for disposal of the following materials: (i) waste materials, chemically fixed or solidified sludges, clays and other materials which CWM removes from the wet well and Ponds 4, 5 and 7 and which contain less than 500 ppm PCBs; (ii) chemically fixed or solidified sludges and other solid waste materials containing less than 500 ppm PCBs removed from the Miscellaneous Facilities pursuant to Part VI of this Consent Decree;

(iii) the temporary storage area liner specified in Paragraph V.B.3; and (iv) other solid materials which may have become contaminated with PCBs in concentrations below 500 ppm, during implementation of this Consent Decree. CWM shall segregate all sludges and other waste material containing dioxin in an identified portion of the on-site chemical waste landfill.

(d) CWM shall inject leachate collected in the leachate collection system into the injection wells and shall perform post-closure monitoring and maintenance of the chemical waste landfill in accordance with the approved plans and chemical waste landfill application. CWM shall cause leachate from the underdrain system to drain into a holding tank and then injected into an injection well. CWM shall collect and analyze the liquid in the holding tank for PCBs, conductivity, and the other parameters identified in the plans and specifications.

VI. CLOSURE OF MISCELLANEOUS FACILITIES

Within _____ days of entry of this Consent Decree, CWM shall remove or decontaminate the buried oil/water separation tank, the concrete oil pit, the oil water trench, and that portion of a buried pipe line between sampling points designated as ORT-2 and ORT-10 and adjacent contamination soil and berms, if any, all identified on the map attached to this Consent Decree as Attachment I (together the "Miscellaneous Facilities"). CWM shall dispose of all liquids removed from the Miscellaneous Facilities in the manner specified in Paragraph V.B.4(a)(3) above. CWM shall solidify or chemically fix all sludges and other waste materials removed from the Miscellaneous Facilities. CWM shall store such solidified or chemically fixed sludges and other materials in the temporary storage

facility established pursuant to Paragraph V.B.3 above and shall dispose of all such fixed or solidified materials containing less than 500 ppm of PCBs in the chemical waste landfill constructed pursuant to Paragraph V.B.5 above or in another chemical waste landfill that conforms to 40 C.F.R. §761.75 and to applicable requirements of the Resource Conservation and Recovery Act and all regulations promulgated pursuant thereto.

VII. WASTE OIL PROCESSING

A. CWM shall neither accept, store, treat, reclaim, recycle, process or handle any additional used, waste or other oil materials at the Vickery site nor sell or otherwise distribute in commerce any oil products from said site until CWM completes decontamination of the Vickery oil processing facilities in accordance with the requirements of Paragraph VII.B. below and until CWM submits to USEPA and receives approval of a waste oil facility operation plan which assures compliance with the requirements of Paragraphs VII.C.- V.E. below.

B. Within ten (10) days after entry of this Consent Decree, CWM shall submit to USEPA for approval a closure plan which shall provide for decontamination of the oil processing facilities at the Vickery site. CWM shall remove all PCBs and hazardous wastes from said oil processing facilities within _____ days after approval of a closure plan by USEPA. CWM shall store all materials containing PCBs removed from said oil processing facilities in accordance with 40 C.F.R. §761.65 and shall dispose of all such materials in an incinerator which conforms to the requirements of 40 C.F.R. §761.70.

C. CWM shall not accept or store at the Vickery site any oil which contains any detectible concentrations of PCBs using dual column gas chromatograph, electron capture techniques and analytical procedures specified in Environmental Protection Agency Publication No. EPA-600/4-81-045, or any hazardous waste as defined in [40 C.F.R. Part 261]. Before accepting any waste oil stream at the Vickery site, CWM shall obtain from the waste oil generator a written description of the oil, the origin or source of the oil, the process whereby it is generated and a representative sample of the oil. CWM shall analyze such representative sample using a bottom sludge and water test in accordance with the procedures set forth in Attachment II to this Consent Decree, a PCB test using the analytical techniques and procedures referred to above, a chlorinated solvent gas chromatograph test, a BTU determination, a total ash determination, a specific gravity determination, and a general gas chromatograph screen. In addition, before accepting each individual shipment of waste oils at the Vickery site, CWM shall collect and analyze a representative sample of waste oil, using the aforementioned bottom sludge and water test, a chlorinated solvent gas chromatograph test and a PCB test using the analytical techniques and procedures referred to above. No material shall be taken from the surface impoundments at the Vickery site and placed into the oil recovery system. Further, no material shall be taken from the enclosed, tank-based waste treatment and storage system referred to in Paragraph V.B.4(a)(2) above and placed into the oil recovery facility.

D. Before selling or otherwise distributing in commerce any oil material from its oil processing operations at the Vickery

site, CWM shall analyze such processed or recycled oil material to determine heat value, solid and sediment content, PCB content, chlorinated solvent content and total ash content using analytical procedures approved by USEPA. Any waste oil facility operation plan which CWM submits to USEPA pursuant to Paragraph VII.A. above shall require that CWM sell oil materials only for combustion in high efficiency boilers that conform to the specifications set forth in 40 C.F.R. §761.60. Such plan shall prohibit CWM from selling waste oil for road oiling or dust control purposes. CWM shall incorporate in all contracts or agreements relating to the sale of oil materials from the Vickery site conditions which assure compliance with the requirements of this paragraph.

E. Any waste oil facility operation plan which CWM submits to USEPA pursuant to paragraph VII.A. shall establish detailed operating procedures for the oil processing facilities at the Vickery site. These procedures shall include requirements to keep copies of all generators' statements obtained pursuant to Paragraph VII.C. above; waste oil receipts, with customer, date and volume of each shipment of material received; records of all transfers of materials within such facilities; records of all sales of oil materials, with customer, date, amount and volume of sale; and records of all analyses performed or obtained pursuant to Part VII of this Consent Decree. CWM shall retain all records pertaining to its waste oil facility operations for a period of five years from generation of the record and shall allow USEPA representatives to inspect and copy such records at any reasonable time.

VIII. CERTIFICATION OF CLOSURE

For each facility required to be closed or decontaminated pursuant to this Consent Decree, including each inactive surface impoundment, each active surface impoundment, the temporary storage area constructed pursuant to Paragraph V.B.3 above, the Miscellaneous Facilities and the oil processing facilities at the Vickery site, CWM shall submit a certification of closure to USEPA within thirty (30) days after completing closure of the facility. Each such certification shall include an affirmation by CWM and by an independent registered professional engineer that the facility has been closed in accordance with closure plans approved by USEPA.

IX. MONITORING AND EVALUATION OF GROUND-WATER AND SURFACE WATER CONDITIONS

A. On-Site Ground-Water Evaluation

Within thirty (30) days after entry of this Consent Decree, CWM shall submit to USEPA:

1. a summary of all ground-water monitoring data obtained by CWM under O.A.C. Rules 3745_____ through 3745 _____ during the interim status period;
2. a written identification of all saturated zones beneath the Vickery site, including the rate and direction of ground-water flow in each such zone, and all hydrogeologic data on which such identifications are based; and

3. a ground-water monitoring plan which at a minimum shall provide for:

(a) installation of a ground-water monitoring system conforming to the requirements of 40 C.F.R. §264.97 along the point of compliance identified on Attachment I to this Consent Decree;

(b) collection of ground-water samples from each monitor well at such point of compliance at least once each calendar quarter, and analysis of all such samples for the following parameters: PCBs; pH; specific conductance; total organic carbon content; total organic halogen content; calcium; magnesium; sodium; sulfate; carbonate; bicarbonate; chloride; cyanide; chloroform; 1,1,1-trichloroethane; 1,1,2-trichloroethane; benzene; trichloroethylene; tetrachloroethylene; toluene; ethylbenzene; chlorobenzene; all contaminants listed in Table 1 of O.A.C. Rule 3745 - ; and all other constituents listed in Appendix VII of O.A.C. Rule 3745 for each hazardous waste received by CWM at the Vickery site.

USEPA shall review the ground-water monitoring plan submitted by CWM pursuant to Paragraph IX.A.3 above and shall either approve the plan in writing or submit written objections to such plan to CWM. Within thirty (30) days after receiving any written objections from USEPA, CWM shall submit to USEPA for approval modifications to the ground-water monitoring plan necessary to satisfy such objections. Within _____ days after USEPA's approval of the ground-water monitoring plan or any plan modifications required pursuant to this paragraph, CWM shall complete installation of ground-water monitoring wells at locations and depths approved by USEPA. Thereafter, CWM shall promptly commence the sampling and analytical program required pursuant to Paragraph IX.A.3 above.

B. Drinking Water Well Sampling

For the duration of this Consent Decree, CWM shall fund a program for the Sandusky County Board of Health to sample and analyze off-site drinking water wells located near the Vickery site. Collection of samples and payment for laboratory analysis of such samples shall be performed by the Sandusky County Board of Health, which shall be reimbursed for the costs of such analysis within 30 days after the Board's submission of an invoice for these costs to CWM. The wells to be sampled, the sampling and analytical procedures, the parameters to be analyzed, and the laboratory to perform the analyses are to be mutually agreed upon from time to time by USEPA, Ohio EPA, CWM and the Sandusky County Board of Health. No more than ten wells will be sampled and analyzed per quarter. This sampling and analysis shall be conducted quarterly for two years after entry

of this Decree, semi-annually for the next two years, and annually thereafter for the duration of this Decree. Analytical procedures used shall be USEPA approved standard methods.

C. Surface Water Monitoring and Reporting

Within ____ days of entry of this Consent Decree, CWM shall submit a plan for surface water monitoring at the Vickery site. Such plan shall identify, at a minimum, sampling points, sampling procedures and techniques, analytical methods, and quality assurance/quality control protocols. At a minimum, the following parameters shall be analyzed for: PCBs, pH, chemical oxygen demand, oil and grease, phenols, chlorides, cadmium, chromium, copper, lead, zinc, and mercury.

D. Additional Sampling

USEPA may require additional analysis for any and all 40 C.F.R. Part 261 Appendix VIII Constituents from any samples of waste, groundwater, surface water, collected run-off, soil or leachate located or collected at the Vickery site.

X. INJECTION WELLS

A. Injection Well Improvements

CWM shall not inject waste into any injection disposal well at the Vickery site until:

1. The well has been rebuilt to incorporate an annular seal system sufficient to maintain pressure on the annulus fluid independently from pressure on the waste in the injection tubing;

2. A sight glass and a pressure gauge have been installed to monitor the annulus fluid volume; and

3. Mechanical integrity tests have been conducted to determine that the well does not leak, including:

   (a) a pressure test of the long string casing, performed with an annular seal system set within thirty (30) feet from the bottom of the long string casing of the well; this test shall be conducted at a surface pressure of one thousand (1,000) pounds per square inch gauge (p.s.i.g.) with no more than a three (3) percent loss of pressure during a one (1) hour period; and

   (b) a radioactive tracer log test to determine points of fluid exit, if any, and possible upward migration of fluid outside the casing.

B. Injection Well Monitoring, Reporting and Operation

1. CWM shall observe the following requirements during injection, stimulation or other operation of each injection well at the Vickery site:

   (a) CWM shall maintain during injection 50 p.s.i.g. positive differential pressure on the annulus fluid over injection pressure at the well annular seal system;

   (b) CWM shall not exceed during injection a surface pressure in excess of seven hundred and ninety (790) p.s.i.g. on wastes in the

injection tubing; provided, however that CWM shall in no event exceed a fracture gradient of 0.75 when operating the well;

(c) In no case shall injection pressures initiate fractures in the confining zone or cause movement of fluids into any underground source of drinking water as defined in 40 C.F.R. §144.3;

(d) CWM shall not to use explosives to cause fractures in any formation; and

(e) CWM shall assure automatic shut down of pumps to injection wells in the event of any significant drop or rise in either injection pressure or pipeline pressure.

(f) CWM shall only inject wastes which are compatible with the well casing, tubing and cement and with the injection formation.

2. Within five (5) days after entry of this Consent Decree, CWM shall submit to USEPA copies of Waste Product Records for all materials disposed of by injection at the Vickery site, and thereafter CWM shall promptly submit to USEPA Waste Product Records pertaining to each new waste stream accepted for injection at the Vickery site.

3. Within five (5) days after entry of this Consent Decree, CWM shall submit to USEPA for approval an injection waste analysis plan which provides, at a minimum, a periodic waste sampling

and analysis program which shall demonstrate the compatability of injected wastes with well casing, tubing and cement and with the injection formation. USEPA shall review such injection waste sampling program and shall either approve such plan in writing or submit written objections to such plan to CWM. Within thirty (30) days after receiving any written objections from USEPA, CWM shall submit to USEPA for approval a modified injection waste sampling plan which satisfies such objections. Within five (5) days after approval of the injection waste sampling plan or modified plan approved by USEPA, CWM shall commence implementation of the approved plan. Thereafter, CWM shall comply with all requirements of the approved injection waste analysis plan.

4. During the operation of any injection well at the Vickery site, CWM shall check and record the injection pressure, the annulus pressure, and the flow rate and volume of fluid injected in each such well at least once every two (2) hours. A continuous graphic and written record of all injection pressures, annulus pressures, and flow rate and volume of fluid injected in each well shall be kept at the Vickery site and made available for inspection and copying by USEPA until three years after the plugging and abandonment of the well. Graphic records of injection pressure and injection rates shall be made by means of continuous monitoring and strip chart recorder.

5. CWM shall submit to USEPA a monthly report listing the daily minimum, maximum, and average injection pressures, annulus pressures, and the flow rate and volume of fluid injected in each well

for each day during which waste was injected into the well during that month. For each minimum and maximum injection rate reported, CWM shall list in the report the injection pressure and annulus pressure occurring during the time the well was operating at this minimum or maximum injection rate. Such report shall also include a listing of the date, duration and cause of any non-operating period for each well during the month. The report for each month shall be due by the fifteenth day of the next month.

C. Integrity Testing

1. To ensure that all injection wells at the Vickery site are safely and properly operating, CWM shall perform the following mechanical integrity tests on each of its injection wells on an annual basis, commencing from the last date on which such tests were performed:

(a) a static annular pressure test of the long string casing, performed with the injection seal system set within thirty (30) feet from the bottom of the long string casing of the well, to be conducted at a surface pressure of no less than one thousand (1,000) p.s.i.g. with no more than a three percent (3) loss of pressure during a one (1) hour period with the well in static and equilibrium conditions; and

(b) a radioactive tracer log test to determine the points of fluid exit and possible upward migration of fluid outside the casing.

2. During each major workover (i.e., whenever the injection tubing is removed from the well), CWM shall perform the tests required in paragraph X.C.I. above, a forty (40) arm caliper log test of the long string casing and a temperature or noise log as specified in 40 C.F.R. §146.8(c)(1). The annual testing period referred to in Paragraph X.C.1. above shall recommence after such testing has been completed to demonstrate the integrity of the reworked well (e.g., if a workover ended on July 1, 1984, the next tests would be required by July 1, 1985).

3. CWM shall provide at least twenty four (24) hours advance notice to USEPA of major workovers. CWM shall provide such notice ten (10) days in advance for annular pressure tests and radioactive tracer log tests. CWM shall allow personnel from USEPA to observe all tests described in this Part. CWM shall make all reasonable efforts to change the times of annular pressure tests, caliper tests, and radioactive tracer log tests to facilitate attendance by USEPA observers; provided, however, that CWM may perform caliper tests before the completion of a major workover on an injection well without prolonging the period such well would otherwise be out of operation.

4. CWM shall report the results of each test required

pursuant to this Part to USEPA in writing within ten (10) days after completion of the testing period; provided, however, that test results or related reports received subsequently by CWM shall be reported within ten (10) days after receipt.

5. In observing any tests described in this Part, USEPA shall contemporaneously inform CWM if it believes that a test has not been accurately or adequately performed. If USEPA determines that the test has not been so performed, CWM shall conduct the test again. Within 30 days after performing the tests, USEPA will approve or disapprove the results and field evaluation as accurate and acceptable.

6. If any monitoring or testing described in this Part indicates that a leak may be occurring within or from any injection well, CWM shall immediately cease injecting wastes into such well, shall inform USEPA of the monitoring results and shall perform sufficient tests and/or analyses to determine the cause of the testing or monitoring results. If a leak has occurred, CWM shall not resume operation injection of wastes until CWM has reworked the well and USEPA has agreed in writing that CWM has demonstrated the integrity of the worked over well, which agreement will not be unreasonably withheld. If the operation of any injection well violates a permit condition or applicable regulation in some other manner, CWM shall notify USEPA immediately and shall immediately cease or correct such violation. In addition, if continued operation of any well endangers public health, CWM shall immediately cease operation of such well until it has corrected such endangerment to the satisfaction of USEPA. If USEPA determines that the operation of any injection well violates

applicable regulations, it may direct CWM to cease operation of the well until the violation is corrected. Notwithstanding any requirement of this Part, CWM shall obtain all necessary permits required by the Safe Drinking Water Act and/or any approved State program.

XI. MISCELLANEOUS PROVISIONS

A. Reporting and Record-keeping

1. Prior to entry of this Consent Decree (or as soon thereafter as they are available), CWM shall provide copies of all technical information about the Vickery site, including but not limited to, all information pertaining to the closure of any hazardous waste facility at the Vickery site, all laboratory reports, tests results, analytical data, and analyses of samples previously taken at the Vickery site, to USEPA.

2. CWM shall submit to USEPA a monthly progress report describing all actions which have been taken to implement this Consent Decree. The report for each month shall be submitted by the 15th of the following month.

3. All reports, plans, applications, requests or information submitted to Plaintiff by CWM pursuant to this Consent Decree shall be submitted to:

DIRECTOR,
~~Daniel Banaszek, Chief~~
~~Technical Unit~~
Waste Management Division
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604

or to such persons and addresses as may hereafter be otherwise specified, in writing, by Plaintiff to CWM. All reports, requests, or

information submitted to CWM by Plaintiff pursuant to this Consent Decree shall be submitted to:

Frederick Roberts
Senior Vice President
Chemical Waste Management, Inc.
3003 Butterfield Road
Oak Brook, Illinois 60521

or to such persons and addresses as may be otherwise specified, in writing, by CWM to Plaintiff.

B. Access

CWM shall allow personnel from USEPA and its authorized representatives access to the Vickery site without a warrant for purposes of monitoring compliance with this Consent Decree.

C. Split Samples

Any person taking a sample for analysis in order to implement or determine compliance with the requirements of this Consent Decree shall notify other parties hereto of the taking of each such sample and, upon request, shall provide such other parties with splits of any such sample.

D. Administrative Review of Plans and Applications

Nothing in this Consent Decree shall be construed to limit or in any way abridge USEPA's review of any permit application or any plan submitted by CWM pursuant to this Consent Decree or to supersede any procedural requirements applicable to such review. Furthermore, nothing in this Consent Decree shall be construed to require approval of any provision set forth in plans or applications submitted by CWM pursuant to this Consent Decree.

XII. COMPLIANCE WITH APPLICABLE LAW

All activities undertaken by CWM and WMI pursuant to this Consent Decree shall be undertaken in accordance with the requirements of all applicable federal state and local laws, regulations and permits, including but not limited to the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., the Toxic Substances Control Act, 15 U.S.C. § 2601 et seq., the Safe Drinking Water Act, 42 U.S.C. § 300f et seq., the Occupational Safety and Health Act, 29 U.S.C. § 6951 et seq., and regulations promulgated under each of those statutes, as well as all applicable Department of Transportation regulations.

XIII. STIPULATED PENALTIES

For each violation of any requirement set forth in Part V of this Consent Decree, CWM shall pay a stipulated civil penalty of twenty thousand dollars ($20,000.00) per day. In addition, for each violation of any requirement set forth in Part VI of this Consent Decree, CWM shall pay a stipulated civil penalty of ten thousand dollars ($10,000.00) per day. For each violation of any other requirement of this Consent Decree, CWM shall pay a stipulated civil panalty of five thousand dollars ($5,000.00) per day.

Within ten (10) days after the occurrence of each violation of this Consent Decree, CWM shall pay all applicable stipulated penalties referred to in the preceding paragraph, whether or not a demand is made therefor, by delivering to the office of the United States Attorney for the Northern District of Ohio, a certified check payable to the "Treasurer, United States of America."

By this stipulation, CWM waives all defenses to payment of the stipulated penalties provided in this Part of the Consent Decree, except that CWM reserves the right to assert a "force majeure" defense in the circumstances specified in Part XIV of this Consent Decree.

The stipulated civil penalties provided in this Part of the Consent Decree shall be in addition to, and shall not preclude the use of, any other remedies or sanctions which may be available to Plaintiff by reason of CWM's noncompliance with this Consent Decree or any applicable law.

XIV. FORCE MAJEURE

If CWM fails to comply with any performance date or other requirement of this Consent Decree and such delay is caused by persons or events beyond the control of CWM, such delay shall not be considered a violation of this Consent Decree. When circumstances are occurring or have occurred which may delay the completion of any requirement of this Consent Decree, CWM shall notify USEPA in writing of the reason(s) for and duration of such delay, the measures to be taken by CWM to prevent or minimize the delay and the timetable by which those measures will be implemented. Such notice shall be sent not later than ten (10) days following the claimed occurrence. Failure to so notify USEPA shall constitute a waiver of any claim of force majeure.

If CWM and USEPA agree that a delay is or was beyond the control of CWM and upon the duration of such unavoidable delay, the parties shall, with approval of the Court, modify the Consent Decree

to the extent necessary to enlarge the schedule for completion of the specific requirement affected by such a delay. If the parties cannot agree that the reason for the delay is or was beyond the control of CWM, or upon the duration of the unavoidable delay, the provisions of paragraph XV shall apply.

XV. DISPUTE RESOLUTION

Any dispute which arises with respect to the meaning, application, interpretation, amendment or modification of the Consent Decree and any attachments and appendices thereto, their terms, any plan or report required thereunder, or with respect to CWM's compliance herewith or any delay hereunder shall in the first instance be the subject of informal negotiations. If the parties cannot resolve the dispute within thirty (30) days, however, it shall be presented to the Court for appropriate resolution upon written notice by any party. The period for negotiations may be extended by mutual agreement among the parties. Unless the United States is seeking any stipulated penalty or an amendment, modification or enforcement of this Decree, it shall be the responsibility of CWM to file the documents necessary to notify the Court of the dispute, and thereafter the Court shall order the parties to file such pleadings as the Court deems necessary and proper. In the former cases, the United States shall have the responsibility of filing the necessary papers. In all events, however, CWM shall bear the burden of proof.

CWM shall file any petition with the Court within thirty (30) days, and the United States shall petition the Court within ninety (90) days after the expiration of the time period described above.

XVI. COVENANT NOT TO SUE

The United States hereby covenants not to initiate or maintain any civil proceeding against CWM or WMI pursuant to Section 17 of TSCA, 15 U.S.C. § 2616, or Section 3008 of RCRA, 42 U.S.C. §6928, to obtain further injunctive relief to redress any of the violations of law asserted in the complaint filed in this action, as long as defendants comply with all provisions of this Consent Decree. This covenant not to sue shall not affect or apply to any liability of Defendants arising from or relating to any storage, treatment, transportation or disposal of any materials, including materials removed from the Vickery site, at any location other than the Vickery site.

Nothing in this Consent Decree shall be construed to limit the ability of the United States to initiate or maintain any proceeding or take any action against any person to abate, prevent, or order the abatement of any condition which may hereafter present an imminent and substantial endangerment or an unreasonable risk to health, welfare or the environment, or to expend and thereafter recover any moneys in responding to any release or threat of release of any hazardous substance.

This Consent Decree shall not operate to release, waive, limit or impair in any way any claims, rights, remedies or defenses of the United States, CWM or WMI against any person or entity not a party hereto.

XVII. PENALTIES

Chemical Waste Management shall pay a civil penalty to the United States of America in the amount of $5,000,000 within

days of entry of this Consent Decree. Payment shall be by certified or cashier's check, payable to the order of the Treasurer of the United States, and shall be delivered to the Regional Counsel, USEPA Region V, 230 South Dearborn St., Chicago, Illinois 60604.

XVIII. MODIFICATION

No modification shall be made to this Consent Decree without written notification to and written approval of all parties hereto and approved by the Court. The notification required by this Part shall set forth the nature of and reasons for the requested modification.

IXX. RETENTION OF JURISDICTION

The Court shall retain jurisdiction of this matter for the purpose of interpreting, implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all matters of dispute among the parties.

CHEMICAL WASTE MANAGEMENT, INC.

By: _____
ANGUS MACBETH
Bergson, Borkland,
Margolis & Adler

_____
JOSEPH F. KNOTT, PRESIDENT
Chemical Waste Management, Inc.

UNITED STATES OF AMERICA

By: _____
F. HENRY HABICHT, II
Assistant Attorney
General
Land and Natural
Resources Division

_____
STEVEN J. WILLEY, ATTORNEY
Environmental Enforcement
Section
Land and Natural Resources
Division
U.S. Department of Justice
10th & Pennsylvania Ave., N.W.
Washington, D. C. 20530
(202) 633-5413

JEROME C. MUYS, JR., ATTORNEY
Environmental Enforcement
Section
Land and Natural Resources
Division
U.S. Department of Justice
10th & Pennsylvania Ave., N.W.
Washington, D. C. 20530
(202) 633-5260

WASTE MANAGEMENT, INC.

Assistant U.S. Attorney
Northern District of Ohio
1404 East Ninth Street
Cleveland, Ohio 44114

By: _____, President
Waste Management, Inc.

COURTNEY M. PRICE
Assistant Adminstrator
Office of Enforcment and
Compliance Monitoring
U.S. Environmental Protection
Agency
401 M Street, S.W.
Washington, D. C. 20460

MICHAEL J. WALKER
Associate Regional Counsel
U.S. Environmental Protection
Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

APPROVED AND ENTERED
as an Order of the Court
this ____ day of _____, 1984.

United States District Court
Judge

U.S. Department of Justice

90-5-1-1-2073

Washington, D.C. 20530

June 29, 1984

Richard Mays
Senior Enforcement Counsel
United States Environmental
Protection Agency
401 M Street, S.W.
Washington, D.C.

Re: United States v. Chemical Waste Management - Draft Consent Decree

Dear Richard:

Enclosed for your review is a copy of the most recent draft of a consent decree which we believe can serve as a basis for settlement of unresolved federal claims relating to the company's Vickery, Ohio facility. This draft is a product of extensive coordination among Steve Willey, Jerry Muys, Michael Walker, Deborah Woitte, the Office of General Counsel, RCRA and UIC program pesonnel, both at headquarters and in Region V, and the Office of Regional Counsel. I understand that this document satisfies all concerns that have been raised by EPA regarding the Vickery facility, except for the question of civil penalties, which we expect to be resolved by Hank and Courtney very soon.

If you have any comments or questions on the proposed Consent Decree, please give me a call on Monday (July 2). I would like to send a government settlement proposal to Angus Macbeth by the end of the day Monday and then promptly undertake negotiations to bring this matter to a satisfactory conclusion.

Very truly yours,

F. Henry Habicht, II
Assistant Attorney General
Land and Natural Resources
Division

By: Carol

Carol Lynn Green
Assistant Section Chief

Copies to:
Constantelos
Stringham
Banaszek
Brewer
Helton
McPhee

Enclosure

cc: F. Henry Habicht, II
Stephen Ramsey
David Ulrich
Michael Walker

To: R.SCHAEFER (EPA9519)
From: EES/DJ (/845205) Posted: Mon 25-June-84 17:48 EDT Sys 63 (3508)
Subject: Chem-Wast Management Draft Consent Decree ATTN: Dave UlrichCONSENT

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

UNITED STATES OF AMERICA,	)	
Plaintiff,	)	
v.	)	CIVIL ACTION NO.
CHEMICAL WASTE MANAGEMENT, INC.	)	
and	)	JUDGE
WASTE MANAGEMENT, INC.,	)	
Defendants.	)	

CONSENT DECREE

The parties herein, the United States of America on behalf of the Administrator of the United States Environmental Protection Agency ("USEPA"), as plaintiff, and Chemical Waste Management, Inc. ("CWM") and Waste Management, Inc. ("WMI"), as defendants, having consented to entry of this Consent Decree,

NOW THEREFORE, before the taking of any testimony, upon the pleadings and without the admission or adjudication of any issues of fact or law herein, and upon consent of these parties hereto, it is ORDERED, ADJUDGED AND DECREED as follows:

I. JURISDICTION

This Court has jurisdiction over the parties consenting hereto and over the subject matter of this action pursuant to 28 U.S.C. Section 1345; Section 17 of the Toxic Substances Control Act, 15 U.S.C. Section 2616, and Section 3008 of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6928. The complaint filed herein states claims upon which relief can be granted.

II. PARTIES BOUND

A. This Consent Decree shall apply to and be binding upon all parties to this Consent Decree, their directors, officers, employees, contractors, agents, successors and assigns and upon all persons or entities acting under or for them. Each signatory to this Consent Decree certifies that he or she is fully authorized by the party or parties whom he represents to enter into the terms and conditions of this Consent Decree, to execute the Consent Decree on behalf of the party represented and to legally bind such party to it. Defendants shall provide a copy of this Consent Decree to each contractor and subcontractor retained to perform any work contemplated by this Consent Decree and shall condition any contract for such work on compliance with this Consent Decree. Notwithstanding any retention of contractors or agents to perform any work hereunder, CWM and WMI shall remain responsible for compliance with all terms, conditions and requirements of this Consent Decree.

B. WMI shall be a guarantor of CWM for purposes of this Consent Decree. In the event that CWM fails to perform any action required under this Consent Decree or to fulfill any obligation or duty hereunder, WMI shall perform such action or fulfill such duty or obligation. WMI shall be liable under this Consent Decree if it fails to perform such actions or to fulfill such duties. Nothing in this paragraph is intended to limit in any way any relief available against CWM or WMI under law or this Consent Decree to redress any violations of this Consent Decree.

III. DEFINITIONS

Certain terms used in this Consent Decree and the attachments to it are defined as follows:

A. "Vickery site" or "site" means the waste treatment, storage and disposal facility operated by Chem Waste Management at 3956 State Route 412 in Vickery, Sandusky County, Ohio. A survey map of the Vickery site is incorporated herein as Attachment I.

B. "Active surface impoundment" means the features identified as Ponds 4, 5, 7, 11, 12 and the wet well on Attachment I, which is incorporated herein by reference and made part of this Consent Decree.

C. "Inactive surface impoundments" means the features identified as Ponds 1, 2, 3, 6, 9, 10 on Attachment I.

D. "PCBs" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance.

E. "Hazardous waste" means a hazardous waste as defined at OAC_____ (40 C.F.R. §261.3).

F. "Hazardous constituent" means all constituents identified at OAC ____ (40 C.F.R. Part 261).

G. "Sludge" means any semi-solid waste in surface impoundments and other facilities at the Vickery site.

H. "Class I Well" means a well used by a generator of hazardous waste or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water.

I. "Waste materials" means any solid waste as defined at OAC _____ (42 U.S.C. §6903(27).

J. "Free liquids" means liquids which readily separate from the solid portion of any waste material under ambient temperature and pressure.

K. "Groundwater" means water below the land surface in a zone of saturation.

L. "USEPA" means the United States Environmental Protection Agency.

IV. OBJECTIVES

The objectives of the parties through entry of this Consent Decree include, without limitation, (1) assuring proper disposal of all PCBs and PCB-contaminated materials found at the Vickery site in concentrations exceeding background levels; (2) assuring proper closure of all surface impoundments currently or formerly used for processing or storage of various materials, including liquid hazardous wastes, at the Vickery site in conformity with the requirements of OAC chapter [40 C.F.R. Part 265]; (3) assuring that any waste oil reclaiming or recycling operations at the Vickery site will not result in the processing or distribution in commerce of PCBs or in the improper treatment, transportation, storage or disposal of hazardous wastes; (4) establishing a monitoring program to detect migration of PCBs and/or hazardous wastes and hazardous waste constituents in surface water or ground water from the Vickery site; and (5) assuring the integrity and proper operation of injection wells used for underground injection of hazardous wastes and other materials at the Vickery site in conformity with the requirements of 40 C.F.R. Parts 144 and 146.

V. SURFACE IMPOUNDMENTS

A. Inactive Surface Impoundments

Within 30 days of entry of this Consent Decree, CWM shall submit to USEPA for approval plans for closure and post-closure care of all inactive surface impoundments at the Vickery site. Such plans shall provide for closure of the inactive surface impoundments in accordance with all applicable closure and post-closure requirements of OAC Chapter _____ (40 C.F.R. Part 265). CWM shall close the inactive surface impoundments within _____ months after USEPA approval of a closure plan.

B. Active Surface Impoundments

CWM shall close all active surface impoundments at the Vickery site and shall provide for proper disposal of all waste materials, including hazardous waste and PCB-contaminated materials, found in such impoundments, in accordance with all applicable federal, state and local laws and regulations and all requirements of this Consent Decree.

1. Sludge Fixation Study

(a) Within five (5) days after entry of this Consent Decree, CWM shall submit to USEPA the final report and supporting data of the study conducted by Battelle Memorial Institute on chemical fixation of sludges in the surface impoundments at the Vickery site and shall recommend a method or methods of fixation of the sludges in the active surface impoundments.

After consideration of the Battelle study and other information available to USEPA, USEPA shall approve a method or methods of sludge fixation, or other method of treating or handling the sludges if sludge fixation is determined to be inappropriate, to be used by CWM in conducting the pilot study described in Paragraph V.B.1.(b) below.

(b) Within 60 days of the approval required pursuant to Paragraph A.1.(a) above, CWM shall complete a pilot study to evaluate the effectiveness of the fixation or treatment method(s) on sludges and clay in the wet well. Any waste materials or clay removed from the wet well shall be stored only in the temporary storage area constructed by CWM pursuant to Paragraph V.B.3 below.

2. Submission of Plans

(a) Within _____ days of CWM's completion of the pilot study described in Paragraph V.B.1.(b) above, CWM shall submit for USEPA review and approval, plans for closure and post closure care of Ponds 4, 5, 7, and the wet well, and an application for approval of a chemical waste landfill to be constructed in the portion of the Vickery site presently occupied by Ponds 4, 5 and 7. Said chemical waste landfill shall conform to all requirements of 40 C.F.R. §761.75 and all applicable requirements of the Ohio Administrative Code ("O.A.C.") relating to closure of surface impoundments. At a minimum, such plans and application shall provide detailed procedures and schedules

for removal, fixation or solidification, storage, and disposal of all waste materials, PCB-contaminated and at least six inches of clay from the bottom and sides of the surface impoundments identified on Attachment I as Ponds 4, 5, 7 and the wet well, as well as design specifications and schedules for implementation of all remedial measures set forth in subparts C, D, and E below. In addition, such plans shall include alternative provisions for closure of Ponds 4, 5, 7 and the wet well, including removal and disposal of all waste materials from such surface impoundments in the event that the treated waste materials do not have sufficient load bearing strength, stability or other engineering properties required to support a cap. Such plans and application shall provide for off-site disposal in a USEPA approved facility of all sludges and solids containing over 500 ppm of PCBs and all oily liquids.

(b) No later than May 10, 1985, CWM shall submit to USEPA for review and approval plans for closure and post-closure care of Ponds 11 and 12. The plans submitted by CWM shall, at a minimum, provide detailed procedures, design specifications and schedules for: removal and proper disposal of all PCB-contaminated materials from Ponds 11 and 12 in a chemical waste landfill that conforms to the requirements of 40 C.F.R. Section 761.75; solidification or fixation of remaining waste materials; and closure of such surface impoundments in conformity with all applicable requirements of O.A.C. §§3745-66-10 through 3745-66-20 and §3745-67-28.

(c) The plans submitted by CWM pursuant to Paragraphs (a) and (b) above shall provide for temporary storage of all waste materials and PCB-contaminated materials in accordance with Paragraph _____ below. In addition, such plans shall include provisions for control of dust and fugitive emissions from truck traffic, equipment operation, chemical fixation, earthmoving, sludge storage and other activities which may be associated with the closure process.

3. Temporary Storage Area

Within 30 days after entry of this Consent Decree, CWM shall submit to USEPA a revised Part A permit application for a temporary storage area to be constructed to the east of Pond 4 in the location identified on Attachment I. In addition, within 30 days after entry of this Consent Decree, CWM shall submit plans for the design, operation, and closure of such area. At a minimum, the floor of such temporary storage area shall consist of at least one (1) foot of compacted clay having a permeability equal to or less than 1 x 10(-7) centimeters per second, a liquid limit greater than 30 and a plasticity index greater than 15. CWM shall construct berms at the perimeters of the storage area sufficient to contain leachate and prevent run-off. CWM shall construct a roof or other cover adequate to prevent precipitation from coming into contact with stored materials.

Within ____ days after approval of the revised Part A permit application and the plans and specifications for the temporary storage area, CWM shall complete construction of such temporary storage area. CWM shall use such temporary storage area only for interim storage of fixed or solidified sludges, excavated clay, rip rap, other solid materials removed from surface impoundments pursuant to Paragraph V.B.4.(b) below, sludges and other solids removed from Miscellaneous Facilities pursuant to Part VI below and from oil processing facilities pursuant to Part VII, and all other solid materials that become contaminated with PCBs or hazardous waste as a result of implementing any requirement of this Consent Decree. CWM shall not place any free liquids or materials containing free liquids in the temporary storage area.

4. Removal Actions

(a) Liquids

(1) Within five (5) days of final action by USEPA regarding the closure and post-closure care plans submitted by CWM pursuant to Paragraph V.B.2(a) above, CWM shall cease all further additions of waste materials to Ponds 4, 5, and 7 and the wet well, and CWM shall commence removal and disposal of all liquids in such surface impoundments in accordance with all requirements of this subpart. CWM shall complete removal and disposal of all liquids from Ponds 4, 5 and 7 and the wet well as expeditiously as practicable and in no event

longer than _____ months after USEPA's final action regarding the closure and post-closure care plans submitted by CWM pursuant to Paragraph V.B.2.(a) of this Consent Decree.

(2) CWM shall cease all further addition or introduction of waste materials into Ponds 11 and 12 on or before September 22, 1984 unless by such date CWM submits to USEPA for approval applications for all permits and permit modifications necessary for installation of a tank-based, enclosed waste treatment and storage system at the Vickery site. In the event that CWM submits timely applications for such an enclosed, tank-based waste treatment and storage system, CWM shall cease all further addition or introduction of waste materials into Ponds 11 and 12 within sixteen (16) months after final administrative action concerning such applications. After ceasing further addition of waste materials into Ponds 11 and 12 pursuant to this subpart, CWM shall promptly commence removal and disposal of all liquids in such surface impoundments in accordance with all requirements set forth below in this subpart. CWM shall complete such removal and disposal of liquids from Ponds 11 and 12 as expeditiously as practicable and in no event longer than _____ months after the final addition of waste materials into such surface impoundments.

(3) CWM shall dispose of all aqueous liquids from the surface impoundments in injection wells at the Vickery site. CWM shall dispose of oily liquids from the surface

impoundments only at an off-site facility approved by USEPA and shall comply with all applicable regulations set forth in OAC Chapters _____ (40 C.F.R. Parts 262-265). CWM shall sample and analyze all oily liquids from the surface impoundments to determine total PCB and total dioxin concentrations of such liquids. If any PCBs are detected in such analyses, CWM shall dispose of such oily liquids in an incinerator which conforms to the requirements of 40 C.F.R. §761.70. If any dioxin is detected in such analyses, CWM shall submit to USEPA for approval a plan providing for storage and disposal of such oily liquids.

(b) Sludges, Soils, Waste Materials

As expeditiously as practicable after completing the removal activities required pursuant to Paragraph V.B.4(a)(1) above, and in any event within _____( ) months after completing such removal activities, CWM shall remove, solidify or chemically fix, and properly dispose of all sludge, waste materials, rip rap, other solids, and at least half a foot of clay from the bottom and sides of surface impoundments 4, 5, 7 and the wet well. CWM shall dispose of all such materials containing less than 500 ppm PCBs in the chemical waste landfill constructed pursuant to Subpart E, Provided that USEPA has approved the plans and specifications submitted by CWM pursuant to Paragraph V.B.1(a), above; otherwise CWM shall promptly, dispose of all such materials off-site in a chemical waste

landfill which conforms to the requirements set forth in 40 C.F.R. Section 761.75 and all applicable requirements of the Resource Conservation and Recovery Act and all regulations promulgated thereunder. CWM shall dispose of all materials containing over 500 ppm PCBs of an off-site facility approved by USEPA.

As expeditiously as practicable after completing the removal activities required pursuant to Paragraph V.B.4(a)(2) above, and in any event within _____ ( ) months after completing such removal activities, CWM shall remove and properly dispose of all PCB-contaminated materials from Ponds 11 and 12. CWM shall dispose of all PCB-contaminated materials from Ponds 11 and 12 in a chemical waste landfill that satisfies the requirements of 40 C.F.R. §761.75. In no event shall CWM dispose of such materials in the chemical waste landfill constructed pursuant to Subpart E below.

As expeditiously as practicable after completing the removal activities required pursuant to Paragraph V.B.4(a)(2) above, and in any event within _____ ( ) months after completing such removal activities, CWM shall solidify or chemically fix all sludges and waste materials in Ponds 11 and 12 and shall complete closure of such surface impoundments, in accordance with closure plans approved by USEPA.

5. Chemical Waste Landfill

(a) Within twenty-four (24) months after any final action by USEPA approving CWM's application to construct a chemical waste landfill at the Vickery site, CWM shall: (i) complete construction of such chemical waste landfill in accordance with all requirements set forth in 40 C.F.R. §761.75, 40 C.F.R. Part 265 and this Consent Decree; (ii) complete the disposal of all waste materials required or authorized to be placed in such chemical waste landfill pursuant to this Consent Decree; and (iii) complete final closure of such chemical waste landfill by implementing all cover, grading and other requirements established as conditions of USEPA's approval of such landfill and/or set forth in approved closure plans for the wet well and Ponds 4, 5 and 7.

(b) The chemical waste landfill constructed pursuant to this Subpart shall be located within the boundaries of Ponds 4 (both the closed and open portions), 5 and 7. The bottom of such chemical waste landfill shall include an underdrain system, a clay liner, a compatible synthetic liner, and a leachate collection system. The cap of the chemical waste landfill shall consist of at least two feet of clay compacted to achieve a permeability no greater than 1 x 10 (-7) centimeters per second, a compatible synthetic liner, and at least one foot of native soil. CWM shall grade and seed the cap and allow runoff to flow into Myers Ditch.

(c) CWM shall operate the chemical waste landfill constructed pursuant to this Subpart in accordance with 40 C.F.R. §761.75, 40 C.F.R. Part 265 and all approved terms and conditions of the plans and applications submitted to USEPA pursuant to Paragraph V.B.2(a). CWM shall use the on-site chemical waste landfill only for disposal of the following materials: (i) waste materials, chemically fixed or solidified sludges, clays and other materials which CWM removed from the wet well and Ponds 4, 5 and 7 and which contain less than 500 ppm PCBs; (ii) chemically fixed or solidified sludges and other solid waste materials containing less than 500 ppm PCBs removed from the Miscellaneous Facilities pursuant to Part VI of this Consent Decree; and (iii) other solid materials which may have become contaminated with PCBs in concentrations below 500 ppm, during implementation of this Consent Decree. CWM shall segregate all sludges and other waste material containing dioxin in an identified portion of the on-site chemical waste landfill.

(d) CWM shall inject leachate collected in the leachate collection system into the injection wells and shall perform postclosure monitoring and maintenance of the chemical waste landfill in accordance with the approved plans and chemical waste landfill application. CWM shall cause leachate from the underdrain system to drain into a holding tank and then injected into an injection well. CWM shall collect and analyze the water in the holding tank for PCBs, conductivity, and the other parameters identified in the plans and specifications.

VI. CLOSURE OF MISCELLANEOUS FACILITIES

Within _____ days of entry of this Consent Decree, CWM shall remove or decontaminate the buried oil/water separation tank, the concrete oil pit, the oil water trench, and that portion of a buried pipe line between sampling points designated as ORT-2 and ORT-10 and adjacent contamination soil and berms, if any, all identified on the map attached to this Consent Decree as Attachment I (together the "Miscellaneous Facilities"). CWM shall dispose of all liquids removed from the Miscellaneous Facilities in the manner specified in Paragraph V.B.4(a)(3) above. CWM shall solidify or chemically fix all sludges and other waste materials removed from the Miscellaneous Facilities. CWM shall store such solidified or chemically fixed sludges and other materials in the temporary storage facility established pursuant to Paragraph V.B.3 above and shall dispose of all such fixed or solidified materials in the chemical waste landfill constructed pursuant to Paragraph V.B.5 above or in another chemical waste landfill that conforms to 40 C.F.R. §761.75 and to applicable requirements of the Resource Conservation and Recovery Act and all regulations promulgated pursuant thereto.

VII. WASTE OIL PLAN

A. CWM shall neither accept, store, treat, reclaim, recycle, process or handle any additional used, waste or other oil materials at the Vickery site nor sell or otherwise distribute in commerce any oil products from said site until CWM completes decontamination of the Vickery oil processing

facilities in accordance with the requirements of this part and until CWM submits to USEPA and receives approval of a waste oil facility operation plan which assures compliance with the requirement of paragraphs B to E below.

B. Within ten (10) days after entry of this Consent Decree, CWM shall commence decontamination of oil processing facilities at the Vickery site. CWM shall remove all PCBs currently at said oil processing facilities within _____ days. CWM shall store all materials containing PCBs removed from said oil processing facilities in accordance with 40 C.F.R. §761.65 and shall dispose of all such materials in an incinerator which conforms to the requirements of 40 C.F.R. §761.70.

C. CWM shall not accept or store at its Vickery oil processing facilities any oil which contains any hazardous waste as defined in 40 C.F.R. Part 261 or any detectible concentrations of PCBs using dual column gas chromatograph, electron capture techniques and analytical procedures specified in Environmental Protection Agency Publication No. EPA-600/4-81-045. Before accepting any waste oils stream at the Vickery site, CWM shall obtain from the waste oil generator a description of the oil, the origin or source of the oil, the process whereby it is generated and a representative sample of the oil. CWM shall analyze such representative sample using a bottom sludge and water test a PCB test using the analytical techniques and

procedures referred to above, a chlorinated solvent gas chromatograph test, a BTU determination, a total ash determination, a specific gravity determination, and a general gas chromatograph screen. In addition, before accepting each individual shipment of waste oils at the Vickery site, CWM shall collect and analyze a representative sample of waste oil, using a bottom sludge and water test, as set forth in Attachment III, a chlorinated solvent gas chromatograph test and a PCB test using the analytical techniques and procedures referred to above. No material shall be taken from the surface impoundments at the Vickery site and placed into the oil recovery system.

D. Before selling or otherwise distributing in commerce any oil material from its oil processing operations at the Vickery site, CWM shall analyze such oil material to determine heat value, solid and sediment content, PCB content, chlorinated solvent content and total ash content using analytical procedures approved by USEPA. Any waste oil facility operation plan which CWM submits to USEPA pursuant to paragraph VI A. shall require that CWM only sell oil materials for industrial uses for combustion in high efficiency boilers that conform to the specifications set forth in 40 C.F.R. §761.60. Such plan shall prohibit CWM from selling waste oil for road oiling for dust control purposes. CWM shall incorporate in all contracts or agreements relating to the sale of oil materials from the Vickery site conditions which assure compliance with the requirements of this paragraph.

E. Any waste oil facility operation plan which CWM submits to USEPA pursuant to paragraph VI A. shall establish detailed operating procedures for the oil processing facilities at the Vickery site. These procedures shall include requirements to keep records of all transfers of materials within such facility; records of all sales of oil materials, with customer, date, amount and volume of sale; and records of analyses performed pursuant to Part VI of this Consent Decree. CWM shall retain all records pertaining to its waste oil facility operations for a period of five years from generation of the record and shall allow USEPA representatives to inspect and copy such records at any reasonable time.

VII. MONITORING

A. Groundwater Testing

Within _____ days after entry of this Consent Decree, CWM shall submit to USEPA for approval a work plan for conduct of a full hydrogeologic study which will provide all information required pursuant to 40 C.F.R. 270.14(c).

B. Drinking Water Well Sampling

For the duration of this Consent Decree, CWM shall fund a program for the Sandusky County Board of Health to sample and analyze off-site drinking water wells located near the Vickery site. Collection of samples and payment for laboratory analysis of such samples shall be performed by the Sandusky County Board of Health, which shall be reimbursed for

the costs of such analysis within 30 days after the Board's submission of an invoice for these costs to CWM. The wells to be sampled, the sampling and analytical procedures, the parameters to be analyzed, and the laboratory to perform the analyses are to be mutually agreed upon from time to time by USEPA, Ohio EPA, CWM and the Sandusky County Board of Health. No more than ten wells will be sampled and analyzed per quarter. This sampling and analysis shall be conducted quarterly for two years after entry of this Decree, semi-annually for the next two years, and annually thereafter for the duration of this Decree. Analytical procedures used shall be USEPA approved standard methods.

C. Surface Water Monitoring and Reporting

Within ____ days of entry of this Consent Decree, CWM shall submit a plan for surface water monitoring at the Vickery site. Such plan shall identify, at a minimum, sampling points, sampling procedures and techniques, analytical methods, and quality assurance/quality control protocols. At a minimum, the following parameters shall be analyzed for: PCBs, pH, chemical oxygen demand, oil and grease, phenols, chlorides, cadmium, chromium, copper, lead, zinc, and mercury.

D. Additional Sampling

USEPA may require additional analysis for any and all 40 C.F.R. Part 261 Appendix VIII Constituents from any samples of waste, groundwater, surface water, collected run-off, soil or leachate located or collected at the Vickery site.

VIII. INJECTION WELL IMPROVEMENTS

CWM shall not inject waste into any injection disposal well at the Vickery site until:

(a) The well has been rebuilt to incorporate an annular seal system sufficient to maintain pressure on the annulus fluid independently from pressure on the waste in the injection tubing;

(b) A sight glass and a pressure gauge have been installed to monitor the annulus fluid volume;

(c) Mechanical integrity tests have been conducted to determine that the well does not leak, including:

i. a pressure test of the long string casing, performed with an annular seal system set within thirty (30) feet from the bottom of the long string casing of the well; this test shall be conducted at a surface pressure of one thousand (1,000) pounds per square inch gauge (p.s.i.g.) with no more than a three (3) percent loss of pressure during a one(1) hour period; and

ii. a radioactive tracer log test to determine points of fluid exit, if any, and possible upward migration of fluid outside the casing.

(d) CWM shall submit to USEPA for review and approval a waste analysis plan which provides, at a minimum, a sampling and analysis program which shall demonstrate the compatability of injected wastes with well casing, tubing and cement and with the injection formation.

IX. INJECTION WELL MONITORING, REPORTING AND OPERATION

A. CWM shall observe the following requirements during injection, stimulation or other operation of each injection well at the Vickery site:

(1) CWM shall maintain during injection 50 p.s.i.g. positive differential pressure on the annulus fluid over injection pressure at the well annular seal system;

(2) CWM shall not exceed during injection a surface pressure in excess of seven hundred and ninety (790) p.s.i.g. on wastes in the injection tubing; provided, however that CWM shall in no event exceed a fracture gradient of 0.75 when operating the well;

(3) In no case shall injection pressures initiate fractures in the confining zone or cause

movement of fluids into any underground source of drinking water as defined in 40 C.F.R. §144.3;

(4) CWM shall not to use explosives to cause fractures in any formation; and

(5) CWM shall assure automatic shut down of pumps to injection wells in the event of any significant drop or rise in either injection pressure or pipeline pressure.

B. During the operation of any injection well at the Vickery site, CWM shall check and record the injection pressure, the annulus pressure, and the flow rate and volume of fluid injected in each such well at least once every two (2) hours. A continuous graphic and written record of all injection pressures, annulus pressures, and flow rate and volume of fluid injected in each well shall be kept at the Vickery site and made available for inspection and copying by USEPA until three years after the plugging and abandonment of the well. Graphic records of injection pressure and injection rates shall be made by means of continuous monitoring and strip chart recorder.

C. CWM shall submit to USEPA a monthly report listing the daily minimum, maximum, and average injection pressures, annulus pressures, and the flow rate and volume of fluid injected each well for each day during which waste was injected into

the well during that month. For each minimum and maximum injection rate reported, CWM shall list in the report the injection pressure and annulus pressure occurring during the time the well was operating at this minimum or maximum injection rate. Also included shall be a listing of the date, duration and cause of any non-operating period for each well during the month. The report for each month shall be due by the fifteenth day of the next month.

X. INJECTION WELL TESTING

A. To ensure that all injection wells at the Vickery site are safely and properly operating, CWM shall perform the following mechanical integrity tests on each of its injection wells on an annual basis, commencing commence from the last date on which such tests were performed.)

1. a static annular pressure test of the long string casing, performed with the injection seal system set within thirty (30) feet from the bottom of the long string casing of the well, to be conducted at a surface pressure of no less than one thousand (1,000) p.s.i.g. with no more than a three percent (3) loss of pressure during a one (1) hour period with the well in static and equilibrium conditions; and

2. a radioactive tracer log test to determine the points of fluid exit and possible upward migration of fluid outside the casing.

B. During each major workover (i.e., whenever the injection tubing is removed from the well), CWM shall perform the tests required in paragraph X.A., above, a forty (40) arm caliper log test of the long string casing and a temperature or noise log specified in 40 C.F.R. §146.8(c)(1). The annual testing period referred to in Paragraph X.A. above shall recommence after such testing has been completed to demonstrate the integrity of the reworked well (e.g., if a workover ended on July 1, 1984, the next tests would be required by July 1, 1985).

C. CWM shall provide at least twenty four (24) hours advance notice to USEPA of major workovers. CWM shall provide such notice ten (10) days in advance for annular pressure tests and radioactive tracer log tests. CWM shall allow personnel from USEPA to observe all tests described in this Part. CWM shall make all reasonable efforts to change the times of annular pressure tests, caliper tests, and radioactive tracer log tests to facilitate attendance by USEPA observers; provided, however, that CWM may perform caliper tests before the completion of a major workover on an injection well without prolonging the period such well would otherwise be out of operation.

D. CWM shall report the results of each test required pursuant to this Part to USEPA in writing within ten days after completion of the testing period; provided, however, that test results or related reports received subsequently by CWM shall be reported within 10 days after receipt.

E. In observing the tests described in this Part X, USEPA, shall contemporaneously inform CWM if it believes that a test has not been accurately or adequately performed. If USEPA determines that the test has not been so performed, CWM shall conduct the test again. Within 30 days after performing the tests, USEPA will approve or disapprove the results and field evaluation as accurate and acceptable.

F. If any monitoring or testing described in Paragraphs VIII, IX or X indicates that a leak may be occurring within or from the well, CWM shall immediately cease injecting wastes into the well, shall inform USEPA, of the monitoring results and shall perform sufficient tests and/or analyses to determine the cause of the testing or monitoring results. If a leak has occurred, CWM shall not resume operation injection of wastes until CWM has reworked the well and USEPA has agreed in writing that the tests specified in paragaph have demonstrated the integrity of the worked over well, which approval will not be unreasonably withheld. If the operation of an injection well violates a permit condition or applicable regulation in some

other manner, CWM shall notify USEPA immediately and shall immediately cease or correct such violation. In addition, if continued operation of the well endangers public health, CWM shall immediately cease operation of the well until it has corrected such endangerment to the satisfaction of USEPA. If USEPA determines that the operation of an injection well violates applicable regulations, it may direct CWM to cease operation of the well until the violation is corrected. Notwithstanding any requirement of Part _____, CWM shall obtain all necessary permits required by the Safe Drinking Water Act and/or any approved State program.

XI. REPORTING AND RECORD KEEPING; RETENTION AND AVAILABILITY OF INFORMATION

A. Prior to entry of the Consent Decree (or as soon thereafter as they are available), CWM shall provide copies of all technical information about the Vickery site, including but not limited to, all information pertaining to the closure of any hazardous waste facility at the Vickery site, all laboratory reports, tests results, analytical data, and analyses of samples previously taken at the Vickery site.

B. CWM shall submit to USEPA a monthly progress report describing all actions which have been taken to implement this Consent Decree. The report for each month shall be submitted by the 15th of the following month.

All reports, requests or information submitted to Plaintiff by CWM pursuant to this Consent Decree shall be submitted to:

Daniel Banaszek, Chief
Technical Unit
Waste Management Division
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604

or to such persons and addresses as may hereafter be otherwise specified, in writing, by Plaintiff to CWM. All reports, requests, or information submitted to CWM by Plaintiff pursuant to this Consent Decree shall be submitted to:

Frederick Roberts
Senior Vice President
Chemical Waste Management, Inc.
3003 Butterfield Road
Oak Brook, Illinois 60521

or to such persons and addresses as may be otherwise specified, in writing, by CWM to Plaintiff.

CWM shall allow personnel from USEPA and its authorized representatives access to the Vickery site without a warrant for purposes of monitoring compliance with this Consent Decree.

Any person taking a sample for analysis in order to implement or determine compliance with the requirements of this Consent Decree shall notify other parties hereto of the taking of each such sample and, upon request, shall provide such other parties with splits of any such sample.

XII. COMPLIANCE WITH APPLICABLE LAW

All activities undertaken by CWM and WMI pursuant to this Consent Decree shall be undertaken in accordance with the requirements of all applicable federal state and local laws, regulations and permits, including but not limited to the Resource Conservation and Recovery Act, 42 U.S.C. §6901 *et seq.*, the Toxic Substances Control Act, 15 U.S.C. §2601 *et seq.*, the Safe Drinking Water Act, the Occupational Safety and Health Act, 29 U.S.C. §6951 et seq., and regulations promulgated under each of those statutes, as well as all applicable Department of Transportation regulations.

XIII. MODIFICATION

No modification shall be made in this Consent Decree without written notification to and written approval of the United States and the Court, if CWM is seeking a modification, or without such notification and approval of CWM, and the Court if the United States is seeking a modification. The notification required by this Section shall set forth the nature of and reasons for the requested modification.

XIV. STIPULATED PENALTIES

For each violation of any requirements set forth in Part V of this Consent Decree, CWM shall pay a stipulated civil penalty of twenty thousand dollars ($20,000.00). In addition, for each violation of any requirements set forth in Part VI of this Consent Decree, CWM shall pay a stipulated

civil penalty of ten thousand dollars ($10,000.00) per day. For each violation of any other requirements of this Consent Decree, CWM shall pay a stipulated civil penalty of five thousand dollars ($5,000.00) per day.

Within ten days after the occurrence of each violation of this Consent Decree, CWM shall pay all applicable stipulated penalties referred to in the preceding paragraph, whether or not a demand is made therefore, by delivering to the office of the United States Attorney for the Northern District of Ohio, a certified check payable to the "Treasurer, United States of America".

By this stipulation, CWM waives all defenses to payment of the stipulated penalties provided in this Part of the Consent Decree, except the CWM reserves the right to assert a "force majeure" defense in the circumstances specified in Part XVI of this Consent Decree.

The stipulated civil penalties provided in this Part of the Consent Decree shall be in addition to, and shall not preclude the use of, any other remedies or sanctions which may be available to plaintiff by reason of CWM's noncompliance with this Consent Decree or any applicable law.

XV. COVENANT NOT TO SUE

The United States hereby convenants not to initiate or maintain any civil proceeding against CWM or WMI pursuant to Section 17 of TSCA, 15 U.S.C. § 2616, or Section 3008 of RCRA, 42 U.S.C.

§6928, to obtain further injunctive relief to redress any of the violations of law asserted in the complaint filed in this action, as long as defendants comply with all provisions of this Consent Decree. This covenant not to sue shall not affect or apply to any liability of defendants arising from or relating to any storage, treatment, transportation or disposal of any materials, including materials removed from the Vickery site, at any location other than the Vickery site.

Nothing in this Consent Decree shall be construed to limit the ability of the United States to initiate or maintain any proceeding or take any action against any person to abate, prevent, or order the abatement of any condition which may hereafter present an imminent and substantial endangerment or an unreasonable risk to health, welfare or the environment, or to expend and thereafter recover any moneys in responding to any release or threat of any hazardous substance.

This Consent Decree shall not operate to release, waive, limit or impair in any way any claims, rights, remedies or defenses of the United States, CWM or WMI against any person or entity not a party hereto.

XVI. FORCE MAJEURE

If CWM fails to comply with any performance date or other requirement of this Consent Decree and such delay is caused by persons or events beyond the control of CWM, such

delay shall not be considered a violation of this Consent Decree. When circumstances are occurring or have occurred which may delay the completion of any requirement of this Consent Decree, CWM shall notify USEPA in writing of the reason(s) for and duration of such delay and the measures to be taken by CWM to prevent or minimize the delay and the timetable by which those measures will be implemented. Such notice shall be sent not later than _____ days following the claimed occurrence. Failure to so notify USEPA shall constitute a waiver of any claim of force majeure.

IF CWM and USEPA agree that a delay is or was beyond the control of CWM and upon the duration of such delay, the parties shall, with approval of the Court, modify the Consent Decree to the extent necessary to enlarge the schedule for completion of the specific requirement affected by such a delay. If the parties cannot agree that the reason for the delay is or was beyond the control of CWM, or upon the duration of the delay, the provisions of paragraph XVII shall apply.

XVII. DISPUTE RESOLUTION

Any dispute which arises with respect to the meaning, application, interpretation, amendment or modification of the Consent Decree and any attachments and appendices thereto, their terms, any plan or report required thereunder, or with respect to CWM's compliance herewith or any delay hereunder shall in the first instance be the subject of informal negotiations.

If the parties cannot resolve the dispute within thirty (30) days, however, it shall be presented to the Court for appropriate resolution upon written notice by any party. The period for negotiations may be extended by mutual agreement among the parties. Unless the United States is seeking any stipulated penalty or an amendment, modification or enforcement of this Decree, it shall be the responsibility of CWM to file the documents necessary to notify the Court of the dispute, and thereafter the Court shall order the parties to file such pleadings as the Court deems necessary and proper. In the former cases, the United States shall have the responsibility of filing the necessary papers. In all events, however, CWM shall bear the burden of proof.

CWM shall file any petition with the Court within thirty (30) days, and the United States shall petition the Court within ninety (90) days after the expiration of the time period described below.

XVIII. RETENTION OF JURISDICTION

The Court shall retain jurisdiction of this matter for the purpose of interpreting, implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all matters of dispute among the parties.

CHEMICAL WASTE MANAGEMENT, INC.

By: _____
Jeffrey G. Miller
Bergson, Borkland,
Margolis & Adler

_____
Joseph F. Knott, President
Chemical Waste Management, Inc.

Waste Management, Inc.

_____
Jeffrey G. Miller
Bergson, Borkland,
Margolis and Adler

UNITED STATES OF AMERICA

By: _____
F. Henry Habicht, II
Assistant Attorney
General
Land and Natural
Resources Division

_____
Steven J. Willey, Attorney
Environmental Enforcement
Section
Land and Natural Resources
Division

_____
Assistant U.S. Attorney
Northern District of Ohio

_____
Courtney M. Price
Assistant Adminstrator for
Enforcment
U.S. Environmental Protection
Agency

_____
, President
Waste Management, Inc.

_____
Michael J. Walker
Associate Regional Counsel
U.S. Environmental Protection
Agency
Region V

APPROVED AND ENTERED
as an Order of the Court
this ____ day of _____, 1984.

_____
United States District Court
Judge

II. PARTIES BOUND

A. This Consent Decree shall apply to and be binding upon all parties to this Consent Decree, their directors, officers, employees, contractors, agents, successors and assigns and upon all persons or entities acting under or for them. Each signatory to this Consent Decree certifies that he or she is fully authorized by the party or parties whom he represents to enter into the terms and conditions of this Consent Decree, to execute the Consent Decree on behalf of the party represented and to legally bind such party to it. Defendants shall provide a copy of this Consent Decree to each contractor and subcontractor retained to perform any work contemplated by this Consent Decree and shall condition any contract for such work on compliance with this Consent Decree. Notwithstanding any retention of contractors or agents to perform any work hereunder, CWM and WMI shall remain responsible for compliance with all terms, conditions and requirements of this Consent Decree.

B. WMI shall be a guarantor of CWM for purposes of this Consent Decree. In the event that CWM fails to perform any action required under this Consent Decree or to fulfill any obligation or duty hereunder, WMI shall perform such action or fulfill such duty or obligation. WMI shall be liable under this Consent Decree if it fails to perform such actions or to fulfill such duties. Nothing in this paragraph is intended to limit in any way any relief available against CWM or WMI under law or this Consent Decree to redress any violations of this Consent Decree.

III. DEFINITIONS

Certain terms used in this Consent Decree and the attachments to it are defined as follows:

B. Within ten (10) days after entry of this Consent Decree, CWM shall commence decontamination of oil processing facilities at the Vickery site. CWM shall remove all PCBs currently at said oil processing facilities within _____ days. CWM shall store all materials containing PCBs removed from said oil processing facilities in accordance with 40 C.F.R. §761.65 and shall dispose of all such materials in an incinerator which conforms to the requirements of 40 C.F.R. §761.70.

C. CWM shall not accept or store at its Vickery oil processing facilities any oil which contains any hazardous waste as defined in 40 C.F.R. Part 261 or any detectible concentrations of PCBs using dual column gas chromatograph, electron capture techniques and analytical procedures specified in Environmental Protection Agency Publication No. EPA-600/4-81-045. Before accepting any waste oils stream at the Vickery site, CWM shall obtain from the waste oil generator a description of the oil, the origin or source of the oil, the process whereby it is generated and a representative sample of the oil. CWM shall analyze such representative sample using a bottom sludge and water test a PCB test using the analytical techniques and procedures referred to above, a chlorinated solvent gas chromatograph test, a BTU determination, a total ash determination, a specific gravity determination, and a general gas chromatograph screen. In addition, before accepting each individual shipment of waste oils at the Vickery site, CWM shall collect and analyze a representative sample of waste oil, using a bottom sludge and water test, as set forth in Attachment III, a chlorinated solvent gas chromatograph test and a PCB test using the analytical techniques and procedures referred

procedures and techniques, analytical methods, and quality assurance/ quality control protocols. At a minimum, the following parameters shall be analyzed for: PCBs, pH, chemical oxygen demand, oil and grease, phenols, chlorides, cadmium, chromium, copper, lead, zinc, and mercury.

D. Additional Sampling

USEPA may require additional analysis for any and all 40 C.F.R. Part 261 Appendix VIII Constituents from any samples of waste, groundwater, surface water, collected run-off, soil or leachate located or collected at the Vickery site.

VIII. INJECTION WELL IMPROVEMENTS

CWM shall not inject waste into any injection disposal well at the Vickery site until:

a) The well has been rebuilt to incorporate an annular seal system sufficient to maintain pressure on the annulus fluid independently from pressure on the waste in the injection tubing;

b) A sight glass and a pressure gauge have been installed to monitor the annulus fluid volume;

c) Mechanical integrity tests have been conducted to determine that the well does not leak, including:

i. a pressure test of the long string casing, performed with an annular seal system set within thirty (30) feet from the bottom of the long string casing of the well; this test shall be conducted at a surface pressure of one thousand (1,000) pounds per square inch gauge (p.s.i.g.) with

X. INJECTION WELL TESTING

A. To ensure that all injection wells at the Vickery site are safely and properly operating, CWM shall perform the following mechanical integrity tests on each of its injection wells on an annual basis, commencing commence from the last date on which such tests were performed.)

1. a static annular pressure test of the long string casing, performed with the injection seal system set within thirty (30) feet from the bottom of the long string casing of the well, to be conducted at a surface pressure of no less than one thousand (1,000) p.s.i.g. with no more than a three percent (3) loss of pressure during a one (1) hour period with the well in static and equilibrium conditions; and
2. a radioactive tracer log test to determine the points of fluid exit and possible upward migration of fluid outside the casing.

B. During each major workover (i.e., whenever the injection tubing is removed from the well), CWM shall perform the tests required in paragraph X.A., above, a forty (40) arm caliper log test of the long string casing and a temperature or noise log specified in 40 C.F.R. §146.8(c)(1). The annual testing period referred to in Paragraph X.A. above shall recommence after such testing has been

completed to demonstrate the integrity of the reworked well (e.g., if a workover ended on July 1, 1984, the next tests would be required by July 1, 1985).

C. CWM shall provide at least twenty four (24) hours advance notice to USEPA of major workovers. CWM shall provide such notice ten (10) days in advance for annular pressure tests and radioactive tracer log tests. CWM shall allow personnel from USEPA to observe all tests described in this Part. CWM shall make all reasonable efforts to change the times of annular pressure tests, caliper tests, and radioactive tracer log tests to facilitate attendance by USEPA observers; provided, however, that CWM may perform caliper tests before the completion of a major workover on an injection well without prolonging the period such well would otherwise be out of operation.

D. CWM shall report the results of each test required pursuant to this Part to USEPA in writing within ten days after completion of the testing period; provided, however, that test results or related reports received subsequently by CWM shall be reported within 10 days after receipt.

E. In observing the tests described in this Part X, USEPA shall contemporaneously inform CWM if it believes that a test has not been accurately or adequately performed. If USEPA determines that the test has not been so performed, CWM shall conduct the test again. Within 30 days after performing the tests, USEPA will approve or disapprove the results and field evaluation as accurate and acceptable.

F. If any monitoring or testing described in Paragraphs VIII, IX, or X indicates that a leak may be occurring within or

from the well, CWM shall immediately cease injecting wastes into the well, shall inform USEPA, of the monitoring results and shall perform sufficient tests and/or analyses to determine the cause of the testing or monitoring results. If a leak has occurred, CWM shall not resume operation injection of wastes until CWM has reworked the well and USEPA has agreed in writing that the tests specified in paragaph have demonstrated the integrity of the worked over well, which approval will not be unreasonably withheld. If the operation of an injection well violates a permit condition or applicable regulation in some other manner, CWM shall notify USEPA immediately and shall immediately cease or correct such violation. In addition, if continued operation of the well endangers public health, CWM shall immediately cease operation of the well until it has corrected such endangerment to the satisfaction of USEPA. If USEPA determines that the operation of an injection well violates applicable regulations, it may direct CWM to cease operation of the well until the violation is corrected. Notwithstanding any requirement of Part _____, CWM shall obtain all necessary permits required by the Safe Drinking Water Act and/or any approved State program.

XI. REPORTING AND RECORD KEEPING; RETENTION AND AVAILABILITY OF INFORMATION

A. Prior to entry of the Consent Decree (or as soon thereafter as they are available), CWM shall provide copies of all technical information about the Vickery site, including but not limited to, all information pertaining to the closure of any hazardous waste facility at the Vickery site, all laboratory reports, tests results, analytical data, and analyses of samples previously taken at the Vickery site.

B. CWM shall submit to USEPA a monthly progress report describing all actions which have been taken to implement this Consent Decree. The report for each month shall be submitted by the 15th of the following month.

All reports, requests or information submitted to Plaintiff by CWM pursuant to this Consent Decree shall be submitted to:

Daniel Banaszek, Chief
Technical Unit
Waste Management Division
U.S. Environmental Protection
Agency
230 South Dearborn Street
Chicago, Illinois 60604

or to such persons and addresses as may hereafter be otherwise specified, in writing, by Plaintiff to CWM. All reports, requests, or information submitted to CWM by Plaintiff pursuant to this Consent Decree shall be submitted to:

Frederick Roberts
Senior Vice President
Chemical Waste Management, Inc.
3003 Butterfield Road
Oak Brook, Illinois 60521

or to such persons and addresses as may be otherwise specified, in writing, by CWM to Plaintiff.

CWM shall allow personnel from USEPA and its authorized representatives access to the Vickery site without a warrant for purposes of monitoring compliance with this Consent Decree.

Any person taking a sample for analysis in order to implement or determine compliance with the requirements of this Consent Decree shall notify other parties hereto of the taking of each such sample and, upon request, shall provide such other parties with splits of any such sample.

XII. COMPLIANCE WITH APPLICABLE LAW

All activities undertaken by CWM and WMI pursuant to this Consent Decree shall be undertaken in accordance with the requirements of all applicable federal state and local laws, regulations and permits, including but not limited to the Resource Conservation and Recovery Act, 42 U.S.C. §6901 *et seq.*, the Toxic Substances Control Act, 15 U.S.C. §2601 *et seq.*, the Safe Drinking Water Act, the Occupational Safety and Health Act, 29 U.S.C. §6951 *et seq.*, and regulations promulgated under each of those statutes, as well as all applicable Department of Transportation regulations.

XIII. MODIFICATION

No modification shall be made in this Consent Decree without written notification to and written approval of the United States and the Court, if CWM is seeking a modification, or without such notification and approval of CWM, and the Court if the United States is seeking a modification. The notification required by this Section shall set forth the nature of and reasons for the requested modification.

XIV. STIPULATED PENALTIES

For each violation of any requirements set forth in Part V of this Consent Decree, CWM shall pay a stipulated civil penalty of twenty thousand dollars ($20,000.00) per day per violation. In addition, for each violation of any requirements set forth in Part VI of this Consent Decree, CWM shall pay a stipulated civil penalty of ten thousand dollars ($10,000.00) per day. For each violation of any other requirements of this Consent Decree, CWM shall pay a stipulated civil penalty of five thousand dollars ($5,000.00) per day.

Within ten days after the occurrence of each violation of this Consent Decree, CWM shall pay all applicable stipulated penalties referred to in the preceding paragraph, whether or not a demand is made therefore, by delivering to the office of the United States Attorney for the Northern District of Ohio, a certified check payable to the "Treasurer, United States of America".

By this stipulation, CWM waives all defenses to payment of the stipulated penalties provided in this Part of the Consent Decree, except the CWM reserves the right to assert a "force majeure" defense in the circumstances specified in Part XVI of this Consent Decree.

The stipulated civil penalties provided in this Part of the Consent Decree shall be in addition to, and shall not preclude the use of, any other remedies or sanctions which may be available to plaintiff by reason of CWM's noncompliance with this Consent Decree or any applicable law.

XV. COVENANT NOT TO SUE

The United States hereby convenants not to initiate or maintain any civil proceeding against CWM or WMI pursuant to Section 17 of TSCA, 15 U.S.C. § 2616, or Section 3008 of RCRA, 42 U.S.C. §6928, to obtain further injunctive relief to redress any of the violations of law asserted in the complaint filed in this action, as long as defendants comply with all provisions of this Consent Decree. This covenant not to sue shall not affect or apply to any liability of defendants arising from or relating to any storage, treatment, transportation or disposal of any materials, including materials removed from the Vickery site, at any location other than the Vickery site.

Nothing in this Consent Decree shall be construed to limit the ability of the United States to initiate or maintain any proceeding or take any action against any person to abate, prevent, or order the abatement of any condition which may hereafter present an imminent and substantial endangerment or an unreasonable risk to health, welfare or the environment, or to expend and thereafter recover any moneys in responding to any release or threat of any hazardous substance.

This Consent Decree shall not operate to release, waive, limit or impair in any way any claims, rights, remedies or defenses of the United States, CWM or WMI against any person or entity not a party hereto.

XVI. FORCE MAJEURE

If CWM fails to comply with any performance date or other requirement of this Consent Decree and such delay is caused by persons or events beyond the control of CWM, such delay shall not be considered a violation of this Consent Decree. When circumstances are occurring or have occurred which may delay the completion of any requirement of this Consent Decree, CWM shall notify USEPA in writing of the reason(s) for and duration of such delay and the measures to be taken by CWM to prevent or minimize the delay and the timetable by which those measures will be implemented. Such notice shall be sent not later than _____ days following the claimed occurrence. Failure to so notify USEPA shall constitute a waiver of any claim of force majeure.

IF CWM and USEPA agree that a delay is or was beyond the control of CWM and upon the duration of such delay, the parties shall,

with approval of the Court, modify the Consent Decree to the extent necessary to enlarge the schedule for completion of the specific requirement affected by such a delay. If the parties cannot agree that the reason for the delay is or was beyond the control of CWM, or upon the duration of the delay, the provisions of paragraph XVII shall apply.

XVII. DISPUTE RESOLUTION

Any dispute which arises with respect to the meaning, application, interpretation, amendment or modification of the Consent Decree and any attachments and appendices thereto, their terms, any plan or report required thereunder, or with respect to CWM's compliance herewith or any delay hereunder shall in the first instance be the subject of informal negotiations. If the parties cannot resolve the dispute within thirty (30) days, however, it shall be presented to the Court for appropriate resolution upon written notice by any party. The period for negotiations may be extended by mutual agreement among the parties. Unless the United States is seeking any stipulated penalty or an amendment, modification or enforcement of this Decree, it shall be the responsibility of CWM to file the documents necessary to notify the Court of the dispute, and thereafter the Court shall order the parties to file such pleadings as the Court deems necessary and proper. In the former cases, the United States shall have the responsibility of filing the necessary papers. In all events, however, CWM shall bear the burden of proof.

CWM shall file any petition with the Court within thirty (30) days, and the United States shall petition the Court within ninety (90) days after the expiration of the time period described below.

XVIII. RETENTION OF JURISDICTION

The Court shall retain jurisdiction of this matter for the purpose of interpreting, implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all matters of dispute among the parties.

CHEMICAL WASTE MANAGEMENT, INC.

By: _____
Jeffrey G. Miller
Bergson, Borkland,
Margolis & Adler

_____
Joseph F. Knott, President
Chemical Waste Management, Inc.

Waste Management, Inc.

_____
Jeffrey G. Miller
Bergson, Borkland,
Margolis and Adler

UNITED STATES OF AMERICA

By: _____
F. Henry Habicht, II
Assistant Attorney
General
Land and Natural
Resources Division

_____
Steven J. Willey, Attorney
Environmental Enforcement
Section
Land and Natural Resources
Division

_____
Assistant U.S. Attorney
Northern District of Ohio

(1) Dispute Resolution
(2) PRE/POST 78 TSCA ISSUES
(3) Cleaning LEVELS
(4) Storage during Lfill construction

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT CF OHIO

UNITED STATES OF AMERICA and STATE OF OHIO, Plaintiffs, v. CHEMICAL WASTE MANAGEMENT, INC., Defendant.	)	Civ. No. 84 -

CONSENT DECREE

The Complaint in the above-captioned case having been filed herein, and the Plaintiffs, the United States of America for the Administrator of the United States Environmental Protection Agency (hereafter "U.S. EPA"), and the State of Ohio for the Director of the Ohio Environmental Protection Agency (hereafter "Ohio EPA"), and the Defendant, Chemical Waste Management, Inc. (hereafter "CWM"), having consented to entry of this Decree,

NOW, THEREFORE, before the taking of any testimony, upon the pleadings, without trial of any issue of fact or law and without admission by CWM of the facts or violations alleged in the Complaint, and upon consent of the parties hereto, IT IS HEREBY ORDERED, ADJUDGED, AND DECREED as follows:

I.

This Court has jurisdiction over the subject matter herein pursuant to 28 U.S.C. 1345 and Section 17 of the Toxic Substances Control Act, (hereinafter "TSCA") 15 U.S.C. 2616, 42 U.S.C. §§ 692B, 6972, 7413, 7604 and 9609, of the Resource Conservation and Recovery Act, and by the Court's pendant jurisdiction over the claims of Plaintiff Ohio EPA from a common nucleus of operative fact under Chapters 3704, 3734, 3767 and 6111 of the Ohio Revised Code and Ohio Common Law. This Court has jurisdiction over parties hereto. Venue is proper in this Court.

II.

The provisions of this Consent Decree shall apply to and be binding upon the parties to this action, their officers, agents, servants, employees, assigns and successors in interest. Defendants shall provide a copy of this Decree to each contractor that performs work contemplated hereunder, and shall condition any contract for such work upon compliance with this Decree. Chemical Waste Management, Inc., will continue to be solely responsible for compliance with this Decree.

III.

To abate air pollution and odor emissions at its facility in Vickery, Ohio (hereafter the "Vickery Facility"), CWM shall close all existing surface impoundments at the Vickery Facility identified as Ponds 4, 5, 7, 11 and 12 and replace them with an enclosed storage, treatment and disposal system from which emissions are vented through air pollution control devices,

all in accordance with the schedules and specifications contained in the plan attached to this Consent Decree and made a part hereof (hereafter the "Decontamination Plan").

IV.

CWM shall close the existing surface impoundments and pit north of the oil reclamation area (the so called "wet well") at the Vickery Facility as described in this Paragraph and in accordance with the schedules and specifications contained in the Plan. CWM shall pump aqueous material from the wet well or the surface impoundment being closed into the remaining surface impoundments and ultimately into the injection wells at the Vickery Facility for disposes in compliance with the terms and conditions of NPDES Permit No. _____. Except as provided below, CWM shall remove all of the sludge and at least half a foot of clay from the bottom and sides of the wet well or the surface impoundment being closed, shall treat the sludge by chemical fixation, and shall dispose of the sludge in a chemical waste landfill to be constructed within the boundaries of Ponds 4, 5 and 7.

The chemical waste landfill (the "TSCA Landfill") shall be constructed and operated in compliance with 40 C.F.R. 761.75, and shall be used for disposal of clay and fixed sludge from the wet well and Ponds 4, 5 and the north half of Pond 7; rip rap or PCB contaminated surface coatings from rip rap in Ponds 4, 5, 7 and 11; and other materials specified in Paragraph V of this Consent Decree; and, if sufficient airspace remains in the TSCA Landfill after such disposal, clay and fixed sludge

Facilities shall be pumped to the remaining surface impoundments and ultimately into injection wells at the Vickery Facility. Other material from the Closed Facilities contaminated with PCBs in regulated concentrations shall be decontaminated or shall be disposed of in the TSCA Landfill.

VI.

CWM shall establish and maintain a monitoring system to determine if PCBs are escaping from the TSCA Landfill or other parts of the Vickery Facility, such system to be established and operated as specified in the Remedial Plan. Should such system detect the escape of PCBs in concentrations in groundwater or surface water in excess of 0.1 parts per million (ppm), CWM shall, within 90 days, determine the extent of such escape, if any, and submit to the Plaintiffs a plan to prevent such escape and shall implement remedial measures agreed to by the Plaintiffs and CWM in accordance with a schedule agreed to by them.

VII.

CWM shall not reclaim at or sell waste oil from the Vickery Facility without the development and implementation of a monitoring program to assure that no waste oil is accepted and no recycled oil is sold with concentrations of PCBs greater than those allowed in regulations promulgated by U.S. EPA or Ohio EPA.

VIII.

Various of the requirements of Articles III, IV, V and VI, as more particularly specified in the Plan, require the issuance

of permits, licenses or approvals (hereafter together the "permits") by U.S. EPA, Ohio EPA or the Ohio Hazardous Waste Facilities Approval Board (hereafter "HWFAB"). CWM shall apply for the permits identified in the Decontamination Plan by the dates specified therein. The parties are aware of no other permits necessary for the actions required herein. For permits within the authority of the Plaintiffs to issue, the Plaintiffs shall promptly thereafter propose, and for permits within the authority of HWFAB to issue, the Plaintiffs shall promptly thereafter urge HWFAB to propose the issuance of permits with terms and conditions consistent with the Decontamination Plan. Subject to the presentation of new adverse evidence, the Plaintiffs shall promptly thereafter issue substantially as proposed such permits as they have authority to issue, consistently with their proposed actions and their established procedures and shall urge the prompt issuance thereafter of such other permits by HWFAB.

IX.

Operating the injection will disposal system shall be in strict accordance with the terms and conditions at the NPDES permit, and . . . .

X.

The Findings and Orders of the Director of Ohio EPA dated June 30 and July 19, 19B3, in the matter of Chemical Waste Management, Inc. are withdrawn and replaced by this Consent Decree. The parties shall so notify the Ohio Environmental

Board of Review and withdraw from the Board the proceeding before it regarding such Findings and Orders, Chemical Waste Management, Inc. v. Maynard, E.B.R. 721049.

XI.

Court agrees to pay a civil penalty forfeiture in the amount of four million dollars ($4,000,000), the amount of two million dollars ($2,000,000) to the U.S. Treasury and two million dollars ($2,000,000) to the State of Ohio Environmental Protection Agency. Reimbursement for costs incurred by the United States government and Ohio Environmental Protection Agency in this matter is included in the civil forfeiture.

XII.

CWM shall allow Plaintiffs or their designated contractors or agents access to the Vickery Facility to monitor compliance with this Consent Decree. Any party taking a sample for analysis in the implementation of or to determine compliance with the requirements of this Consent Decree shall provide the other parties, upon request, with splits of that sample.

XIII.

Nothing in this Consent Decree shall relieve CWM of its obligations to comply with applicable federal, state or local statutes, regulations or ordinances or shall constitute a waiver or release of any right, remedy, defense or claim of CWM with regard to any person not party to this Consent Decree.

XIV.

This Consent Decree shall terminate upon filing of a certification by the parties that the requirements of the

Consent Decree have been satisfied. If a dispute as to the satisfaction of such requirements cannot be resolved by the parties within 30 days after a certification is proposed by CWM, any party may petition the Court for appropriate relief. This Consent Decree shall terminate, in whole or in part, prior to such satisfaction, upon and to the extent that each of the Plaintiffs or the Ohio Hazardous Waste Facilities Approval Board, or either of them issues a permit embodying all or part of the requirements of this Consent Decree.

XV.

The parties shall attempt to resolve any disputes concerning the construction, implementation, or amendment of the terms of this Consent Decree, or concerning U.S. EPA disapproval or modification of any proposal by defendants, in the following manner.

a. The parties between whom any such dispute arises shall confer, for a period not to exceed 30 days, in a good faith attempt to resolve their disagreement.

b. If agreement between the parties is not reached within 30 days any party may petition the Court to resolve the matter in dispute.

c. If agreement is not reached within 30 days on any dispute 30 days any dispute concerning a schedule for implementation of the Plan, or the certification of completion under Paragraph XIII, which U.S. EPA has disapproved or modified, then CWM shall have the burden to move the Court to resolve the dispute. If CWM does not submit the dispute to the Court for resolution within sixty (60) days of its receipt of the U.S. EPA notice of disapproval or modification, CWM shall have waived its objections, if any, to the U.S. EPA disapproval or modification.

XVI.

The Court shall retain jurisdiction of this matter for the purpose of enabling any party to apply to the Court for any further orders necessary to construe, carry out, modify, or enforce compliance with the term of this Consent Decree until its termination.

XV.

All reports, requests, or information submitted to Plaintiffs by CWM pursuant to this Consent Decree shall be submitted to:

U.S. EPA
Michael J. Walker, Esq.
Associate Regional Counsel
United States Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604

Ohio EPA

Ben L. Pfefferle, Esq.
Legal Advisor
Ohio Environmental Protection Agency
361 East Broad Street
Columbus, Ohio 43216

or to such persons and addresses as may be otherwise specified, in writing, by Plaintiffs to CWM. All reports, requests, or information submitted to CWM by Plaintiffs pursuant to this Consent Decree shall be submitted to:

Jeffrey G. Miller, Esquire
Bergson, Borkland, Margolis & Adler
11 Dupont Circle, N.W.

or to such persons and addresses as may be otherwise specified, in writing, by CWM to Plaintiffs.

CHEMICAL WASTE MANAGEMENT, INC.

By: _____
Jeffrey G. Miller
Bergson, Borkland,
Margolis & Adler

UNITED STATES OF AMERICA

By: _____
Assistant Attorney
General
Land and Natural
Resources Division

_____
Steven Willey
Environmental Enforcement
Section
Land and Natural Resources
Division

_____
Assistant U.S. Attorney
Northern District of
Illinois

_____
Michael J. Walker
Assistant Regional
Counsel
U.S. Environmental
Protection Agency

STATE OF OHIO

By: _____
Jack A. Van Kley
Assistant Attorney
General

Ben L. Pfefferle
Staff Attorney
Ohio Environmental
Protection Agency
Washington, D.C. 20036

APPROVED AND ENTERED
as an Order of the Court
this day of
19B3. -- ,

United States District Court
Judge

DECONTAMINATION

A PLAN FOR REMEDIAL WORK AND FUTURE OPERATION OF CHEMICAL WASTE MANAGEMENT, INC., VICKERY, OHIO, FACILITY

I. Ponds 4, 5, the North Half of Pond 7, and the Wet Well

CWM shall recommence closure of Pond 4 and shall commence closure of Pond 5, the north half of Pond 7 and the wet well by pumping aqueous wastes to the remaining surface impoundments. CWM thereafter shall treat the sludges from the ponds and wet well by chemical fixation. It shall dispose of at least one-half foot of clay from the exposed surfaces of the drained ponds and wet well, the rip rap or the PCB contaminated surfaces of the rip rap from the ponds, and the chemically fixed sludges from the ponds and wet well into the TSCA landfill. This closure requires approval of CWM's closure plan by the Ohio EPA, pursuant to OAC Part 3745-55, and of CWM's application for approval of a chemical waste landfill by U.S. EPA, pursuant to 40 C.F.R. : 761.75.

II. Ponds 11, 12 and the South Half of Pond 7

CWM shall commence closure of Ponds 11, 12 and the south half of Pond 7 by pumping aqueous wastes to the remaining surface impoundments. CWM thereafter shall treat the sludge from the ponds by chemical fixation. It shall dispose of at least one-half foot of clay from the exposed surfaces of the drained ponds, the chemically fixed sludges from the ponds, and the rip rap from Pond 12 into the TSCA Landfill, if sufficient airspace remains in the TSCA Landfill after the disposal described in Paragraph I of this Plan. If sufficient airspace does not remain in the TSCA Landfill after the disposal described in

Paragraph I of this Plan, C;M shall dispose of such sludge and rip rap in place in one or all of those ponds in accordance with OAC : 3745-67-2B(C). Either closure requires approval of CWM's closure plan by Ohio EPA, pursuant to OAC Part 3745-55.

III. Miscellaneous Closures

CWM shall commence closure of the Closed Facilities by pumping any aqueous wastes to the remaining surface imooun.dments and disposing of any free oil off-site in accordance with 40 C.F.R. Part 761. It shall treat any sludges by chemical fixation and dispose of the fixed sludges and at least one half foot of surrounding clay in the TSCA Landfill or, if PCBs have been detected in concentrations in excess of 500 ppm, off-site in accordance with 40 C.F.R. Part 761. Other material from the Closed Facilities in or on which PCBs have been detected at regulatory levels shall be decontaminated or shall be disposed of in the TSCA Landfill. This closure requires approval of CWM's application for approval of a chemical waste landfill by U.S. EPA, pursuant to 40 C.F.R. : 761.75.

IV. The TSCA Landfill

The TSCA Landfill shall be located within the boundaries of Ponds 4, 5 and 7. The bottom of the TSCA Landfill shall include backfill of native soil to 605 feet above sea level, a one foot granular capillarity break and gravity drain, a three foot clay liner, a 60 ml HDPE liner, and a one foot leachate collection system. The cap of the TSCA landfill shall consist of two feet of native soil, a 60 ml. HDPE liner and 1 foot of

native soil. CWM shall grade and seed the cap and allow runoff to flow into Myers Ditch. CWM shall dispose of leachate collected in the leachate collection system and shall perform post-closure monitoring and maintenance. CWM shall allow the capillarity break and gravity drain to drain into Myers Ditch. CWM shall submit final plans and specifications for the TSCA Landfill to Ohio EPA for approval as CWM's closure plan for Ponds 4, 5, the north half of 7, the wet well, and the Closed Facilities, and to U.S. EPA for approval as a chemical waste landfill pursuant to 40 C.F.R. § 761.75.

VI. Treatment and Storage Tanks

CWM will replace all surface impoundments at the Vickery Facility with a tank based, enclosed treatment and storage system of up to 10 million gallon capacity, with emissions controlled and vented through air pollution control devices and with a landfill for the disposal of sludge generated from treatment in the tanks. To construct and operate the system, CWM must obtain an RCRA permit from either U.S. EPA or the Ohio HWFAB (the latter if Ohio's submission for approval to issue RCRA permits has previously been approved by U.S. EPA), a hazardous waste disposal facility permit from the Ohio HWFAB, an air emissions permit from Ohio EPA, and an Underground Injection Control permit(s) (herafter "UIC permit") from either U.S. EPA or Ohio EPA, as provided in paragraph VIII.

II. Injection Wells

To continue operation of the injection wells at the Vickery Facility, CWM must obtain a UIC permit(s) from either U.S. EPA or Ohio EPA and/or a new NPDES permit from Ohio EPA. The appropriate permit issuer for the UIC permit cannot be identified until the first of (1) the approval of Ohio EPA's primacy application by U.S. EPA or (2) promulgation of a federal UIC program applicable in Ohio by U.S. EPA.

VIII. Schedule

(A) Closure of Ponds 4, 5, the North Half of Pond 7, and the Wet Well, Construction of TSCA Landfill.

(1) Submittal of closure plan to Ohio EPA and of application for approval of chemical waste landfill to U.S. EPA, on or before June 30, 19B4.

(2) Commencement of closure of Pond 4, wet well, and Closed Facilities within 30 days after the last of the approvals by Ohio EPA and U.S. EPA of the submittals referred to in VIII(A)(1).

(3) Completion of closure of Pond 4, wet well, and Closed Facilities within _____days after commencement of closure.

(4) Commencement of closure of Pond 5 within _____ days after completion of closure of Pond 4.

(5) Completion of closure of Pond 5 within _____ days after commencement of closure.

(6) Commencement of closure of the north half of Pond 7 within ___ days after the completion of closure of Pond 5.

(7) Completion of closure of Pond 7 within ____ days after commencement of closure.

(B) Treatment and Storage Tanks

(1) Submission of Part B applications to U.S. EPA and Ohio EPA for new storage and treatment works on or before (six months after entry of decree).

(2) Commencement of construction within 30 days after the last of the approvals by U.S. EPA and Ohio EPA of the applications referred to in VIII (B)(1) and the applications referred to in VIII (C)(1).

(3) Completion of construction within 18 months after commencement of construction.

(C) Injection Wells

(1) Application for UIC and/or NPDES Permit within three months following the effective date of a UIC program in the state of Ohio.

(D) Ponds 11, 12, and the South Half of Pond 7

(1) Submission of closure plan to Ohio EPA three r nths after the last of the dates in VIII(A)(7) and VIII(B)(3).

(2) Commencement of closure of the south half of Pond 7 within 30 days after approval of submission referred to in VIII(D)(1).

(3) Completion of closure of the south half of Pond 7 within _____ months after commencement of closure.

(4) Commencement of closure of Pond 11 within __ days after completion of closure of south half of Pond 7.

(5) Completion of closure of Pond 11 within ___ months after commencement of closure.

(6) Commencement of closure of Pond 12 within days after completion of closure of Pond 11.

(7) Completion of closure of Pond 12 within months after commencement of closure.

The schedule for submission of closure plans for existing hazardous waste facilities is designed to enable Ohio EPA to assess the com,.lete future operation and closure of specified existing facilities at the Vickery Facility. This requires submittal of closure plans for many of the existing facilities before the end of their useful life and of their actual anticipated use. In addition, because of the environmental advantages of coordinated closure, completion of closure for some facilities must await closure of other existing facilities or construction of new facilities. Accordingly, Ohio EPA will waive the request in OAC § 3745-55-13 that closures be accomplished within six months after closure plans are approved.

IX. Spill Response

CWM will inspect trucks entering and leaving the Vickery Facility for leaks. CWM will check the routes of trucks which, based on such inspection, CWM suspects of leaking, for a radius of three miles from the Vickery Facility and will remove liquids spilled from CWM trucks within that radius and maintain the capacity to respond to other spill incidents on a volunteer basis.

X. Monitoring Plan

CWM will establish, operate and maintain a groundwater and surface water monitoring system designed to detect escape of PCBs. CWM will submit the design and operating plan for the system to U.S. EPA and Ohio EPA as part of the submission required in VIII (B)(1) of this Plan.

XI. Interim Operations

Prior to the closures described in this Plan, CWM may continue to operate and maintain the facilities to be closed as it does at present, provided, however, that they shall be operated and maintained in compliance with state and federal regulations.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

MEMORANDUM

16 MAY 19[illegible]

SUBJECT: Department of Justice Review of Chemical Waste Management, Inc. Vickery, Ohio Consent Decree

FROM: Michael J. Walker
Associate Regional Counsel

TO: Robert M. Andersen, Acting
Deputy Regional Counsel

Pursuant to my conversation with Steve Ramsey, Steve Willey called me at home last night to apprise me of the remaining issues that the Department of Justice has concerning the subject Consent Decree. The issues (as determined by Ramsey and Willey) are these:

1. Does the water diverted to Myers Ditch that is subject to the Surface Water Management plan require a permit under the National Pollutant Discharge Elimination System?

2. Does the groundwater sampling and analysis program proposed in the decree adequately address the RCRA requirements for up and down gradient groundwater monitoring?

3. The provision in the decree allowing CWM to utilize twenty-four "working months" to construct and fill the TSCA chemical waste landfill may be too open ended in the view of the Department.

4. Civil penalties.

With respect to item 1., I advised Willey that we had requested a copy of the Surface Water Management from OEPA and would make an independent federal determination as to the need for a NPDES permit but that if the Department wanted to insert a requirement in the decree that "CWM would apply for a NPDES permit if the agencies determined that one was required", U.S. EPA would have no objection. I called his attention to the fact that the decree clearly specifies that CWM will operate the site in full compliance with all state and federal laws and that this would certainly give us an adequate basis in the decree for seeking compliance with the Clean Water Act.

With respect to item 2., Willey told me that he did not believe that there was sufficient evidence to establish that the pumping of groundwater for the truck washing facility had created a measurable cone of depression that would prevent the operation of requisite up gradient monitoring wells. Willey said he recalled a conversation with Jim Brossman who said that CWM had promised to do a pumping test to stress the aquifer but that it had never been done. Willey also stated that Brossman thought there might be an inter-connection between the upper aquifer and the lower (Willey said bedrock) aquifer. Willey also questioned whether or not there was one or two "waste areas" for RCRA groundwater monitoring requirements.

Finally, with respect to the "working months" issue, Willey said this was really a legal issue not a technical issue in that the Department viewed this provision as an open-ended force majure clause and certainly something that could create problems in other decrees or at other sites. I told him that U.S. EPA was certainly concerned about an open-ended arrangement for implementing the remedial work on closure of the PCB contaminated lagoons, but that we felt that the "twenty-four working months" was clearly and deliberately limited by the thirty-six month limit stated in the decree for full implementation of the lagoon closure/land fill construction aspect of the project.

Willey did not know of any other concerns that the Department had at this time. To resolve these outstanding issues, I told Willey that we would draft a memorandum for signature by Bill Constantelos that would include the following information:

A. Based upon a review of the surface water management plan, no NPDES permit is required. EPA does not object to the inclusion of langauge requiring CWM to apply for such a permit if one is ever determined to be needed.

B. The groundwater monitoring provisions as stated in the decree meet the requirements of RCRA or are functionally equivalent.

C. There is (or is not) a connection between the various aquifers at the site.

D. The overburden monitoring provisions are sufficent to identify any potential or actual release of materials from existing surface impoundments.

E. The twenty-four working months, limited by the thirty-six month deadline, appears to be sound based on U.S. EPA's technical and engineering analysis of the nature and type of work to be performed (especially the need to restrict odorous waste removal to cool months) and agency experience with cell construction/liner installation at other sites, such as CECOS.

I told him we would complete our review today and would send him this information by wire no later that Thursday, May 17, so that he could review it when he returns from his training conference in Williamsburg on Friday. I invited him to call me at home if he had any questions on either Wednesday or Thursday evenings.

Willey told me that Steve Ramsey would be calling Angus McBeth at home to discuss the penalty issue and that Willey would try to call call me from Williamsburg when he learned of any information on that subject.

cc: Schaefer
Ullrich
McPhee
Constantelos
Stringham
Banaszek
Brossman
Muno

forward their comments to Steve Willey (633-5413) who is the DOJ staff lawyer assigned to the case. He is working closely with Mike Walker in Region V to coordinate the federal review of the decree.

I would appreciate your comments on this.

Sincerely,

Carol Lynn Green

Carol Lynn Green
Assistant Chief
Environmental Enforcement Section

Enclosure

cc: w/o enclosure
Sanford Harvey
Robert Schaeffer

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST
CHICAGO ILLINOIS 60604

REPLY TO ATTENTION OF

May 7, 1984

MEMORANDUM

Subject: Draft Consent Decree - Chemical Waste Management, Inc. Vickery, Ohio Facility

From: Michael J. Walker
Associate Regional Counsel

To: Robert M. Andersen, Acting Deputy
Legal Counsel

Attached please find a copy of the Consent Decree that Steven Willey and I worked on today. This document contains all of the changes and revisions that Mr. Willey would like to make in the decree and reflects the input and technical participation of Dan Banaszek and Jim Brossman Waste Management Branch (RCRA issues, waste analysis plan, closure of pre-RCRA landfills), Sheldon Simon, Toxic Materials Branch (TSCA, waste oils), William Muno, Waste Management Branch (TSCA chemical waste landfill), and Robert Hilton, Water Division (UIC, injection well issues).

Mr. Willey advises me that he believes the technical aspects of the decree are sound and will recommend approval of the package. The only apparent outstanding issue is the federal civil forfeiture.

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

Attachment

cc: Schaefer
Ullrich
Gade
McPhee

(C) The results of the analyses will be submitted to Ohio EPA wit ninety (90) days after the submittal referred to in (A) above

(D) In the event that concentrations of any parameter listed in 40 C.F.R. 265, Appendix III in a sample from a sampling hole(s) a in excess of the standards listed in such Appendix, and in the event that concentrations of such parameters are determined by Ohio EPA to be above natural background levels or above acceptable sampling and laboratory analysis interference or error, CWM shall submit to the Ohio EPA within sixty (60) days this concentration determination, a plan for establishing a groundwater monitoring well(s) in the vicinity of the location(of the sampling hole(s) where such concentrations of tested parameters exceeded those standards; These monitoring wells shall be sampled and analyzed for the parameters exceeding those standards in accordance with the CWM groundwater monitoring for the Vickery Facility;

(E) Such monitoring wells surrounding Ponds 4, 5 and 7 may serve as part of the monitoring system for the closure cell, if approved for such use by Ohio EPA; and such monitoring wells surrounding Ponds 11 and 12 may serve as part of the monitoring system, if any is required, for those Ponds when they are closed, if approved for such use by Ohio EPA.

IX. DRINKING WATER WELL SAMPLING

16. CWM shall fund a program for the Sandusky County Board of Health to analyze off-site drinking water wells located near the Vickery Facility. The dusky County Board of Health shall collect the samples and pay for laboratory analysis of such samples. CWM shall reimburse the County for the costs of such analysis within thirty (30) days after the Board's submission of an invoice for these costs to CWM. The wells to be sampled, the sampling and

analytical procedures, the parameters to be analyzed, and the laboratory to perform the analyses are to be mutually agreed upon from time to time by Ohio EPA, CWM, and the Sandusky County Board of Health. No more than ten (10) wells will be sampled and analyzed per quarter. This sampling and analysis shall be conducted quarterly for two (2) years after entry of this Decree, semi-annually for the next two (2) years, and annually thereafter for the next four (4) years. Analytical procedures used shall be U.S. EPA approved standard methods. Any of Ohio EPA, CWM or the Sandusky County Board of Health may observe any sampling or analyses performed pursuant to this program and may take a split sample of any sample so taken.

X. AIR POLLUTION AND ODOR EMISSIONS

17. To abate air pollution and odor emissions at the Vickery Facility, CWM is prohibited from placing any waste receipts or allowing any waste receipts to be placed into surface impoundments at the Facility after the dates specified in this paragraph. If CWM chooses not to apply for permits or permit modifications* authorizing the installation of a tank based, enclosed treatment and storage system, or fails to submit applications for all such permits and permit modifications within four (4) months after entry of this Decree, CWM shall cease the receipt of waste at the Vickery Facility within four (4) months after entry of this Decree. Should CWM decide to install the tank system, CWM shall submit applications for these permits and permit modifications to the appropriate governmental agencies as soon as possible, but in no event later than four (4) months after entry of this Decree. If CWM

---

*These permits and permit modifications are the Permits to Install for the tanks, an amended federal RCRA Part A, and a modification to the Hazardous Waste Facility Approval Board permit.

submits such applications within four (4) months, CWM shall be prohibited f: placing any waste receipts or allowing any waste receipts to be placed into the surface impoundments at the Vickery Facility more than sixteen (16) mont after receiving final agency action on such applications. In addition, CWM shall install at the Vickery facility a truck wash and unloading facility by September 1, 1984. This truck wash and unloading facility shall be installe in accordance with Permit to Install 03-1567 issued to CWM. CWM shall treat and store malodorous waste streams in tanks equipped with odor control equipment. Such waste streams shall include those identified in CWM's letter to Ohio EPA, dated August 19, 1983 (Attachment B hereto), and other waste streams agreed upon by CWM and Ohio EPA from time to time. If Ohio EPA determines that receipt of a new waste stream subsequent to the entry of this Consent Decree causes a malodorous condition, CWM shall handle such waste stream in an enclosed manner, cease acceptance of the waste stream, or take other measures to prevent such conditions from subsequent receipts of that waste stream.

18. To control emissions of air pollutants from the Vickery Facility, CWM shall install best available technology on hazardous waste storage and treatment tanks and the facility for truck unloading and internal truck washing, as described in this Paragraph. Tanks shall be controlled by closed systems vented to emissions control devices. All waste streams determined by waste profile analysis to contain greater than five (5) percent concentration of volatile organic constituents shall be placed in a tank or tanks vented to an activated carbon treatment system or systems. CWM shall amend its waste analysis plan by July 1, 1984 to include volatile organic analysis of waste streams. Other waste streams shall be placed in tanks vented to a caustic scrubber system designed to control odor and other emissions consistent with the system described in CWM's submission of October 18, 1983 to Ohio EPA, entitled Odorous Waste Treatment Process (Attachment C hereto). CWM shall c ure as much emission as practical from the truck unloading and internal washing operations and vent them to such caustic scrubber system, provided that emissions from unloading trucks with waste streams containing greater than five (5) percent concentrations of volatile organic constituents shall

also be treated with an activated carbon control system. Such trucks shal not be internally washed in the facility unless emissions from that operat are similarly treated.

XI. SURFACE WATER MONITORING AND REPORTING

19. In order to assure that contaminants are not discharged from the surface of the Vickery Facility into surface waters of the state, for a peri of six (6) months from entry of this Consent Decree CWM shall weekly sample and analyze the water upstream and downstream from the runoff point(s) from the Vickery Facility for pH, Chemical Oxygen Demand, Oil and Grease, Phenols Chlorides, Cadmium, Chromium, Copper, Lead, Zinc, and Mercury and shall monthly sample and analyze this water for Total Organic Halogens. Thereafter CWM shall sample and analyze surface water on a monthly basis unless and unti Ohio EPA Permit To Install 03-1567 is amended to modify or terminate this requirement.

XII. SITE MONITORING

20. Until six (6) months after the closure of the last surface impoundment at the Vickery Facility, CWM shall pay into the Hazardous Waste Cleanup Special Account forty thousand dollars ($40,000.00) per year to fund the inspection and monitoring of the Vickery Facility by Ohio EPA unless and until legislative authorization specifically provides funding for a full time Oho EPA inspector at the Vickery Facility. This money will be used to reimburse Ohio EPA for employees' salaries, equipment, transportation, and other expenses incurred in monitoring the Vickery Facility approximately forty (40) hours per week.

XVII. WASTE PRODUCTS REVIEW

33. By July 1, 1984, CWM shall submit to Ohio EPA for review and approv a waste analysis plan which complies with the requirements of O.A.C. 3745-65-13. This waste analysis plan shall include, at a minimum, all of th provisions contained in the draft waste analysis plan dated October 31, 1983 which has been submitted to Ohio EPA by CWM. Before waste oil is accepted f recycling at the Vickery Facility, the plan shall be amended to provide for the implementation of all of the requirements in Part XVI above.

34. Within thirty (30) days after entry of this Consent Decree, CWM shal submit to Ohio EPA a list of all waste streams from which it had received waste loads in the twelve (12) months prior to entry of this Consent Decree. CWM is prohibited from accepting a waste load from a waste stream not on that list without giving Ohio EPA at least ten (10) days advance notice. Such notice shall include the submission of information required by Ohio EPA to make the determinations outlined in (A) through (E) below. CWM shall not accept such waste if, within ten (10) days after receiving CWM's submission of information, Ohio EPA has notified CWM of Ohio EPA's determination that:

(A) The waste is not among those which the Vickery Facility is authorized to accept by a permit issued for it by the Ohio Hazardous Waste Facility Approval Board;

(B) Acceptance of the waste at the Vickery Facility is contrary to specific regulation promulgated by Ohio EPA;

(C) The waste is incompatible with the inventory of wastes at the Vickery Facility or acceptance of the waste would cause harm to the environment or to operation of the Vickery Facility as a result;

(D) The waste differs in a material respect from other wastes accepted at the Vickery Facility in a mannner that will cause harm to the environment even if properly disposed of at the Vickery Facility;

the operation of the Vickery Facility, to provide the Committee with an upda on activities taken pursuant to this Decree, and to give the Committee a tour to observe the activities taken to implement this Decree. CWM is not obliged to disclose financial or otherwise confidential information (as defined by O.A.C. 3745-49-03) at such meetings. The requirements of this paragraph shall terminate when the Vickery Facility is closed.

XIX. MANAGEMENT AUDITS

38. CWM shall conduct an annual environmental compliance audit of its operating facilities in Ohio. In addition, CWM shall appoint an independent environmental entity acceptable to Ohio EPA, which entity shall annually audit the efficiency of the compliance, audit and employee reporting mechanisms implemented by CWM at their operating facilities in Ohio. This audit shall be reported to CWM and shall recommend specific improvements in CWM's environmental compliance, environmental compliance audit, and employee and management environmental compliance reporting systems.

XX. STIPULATED PENALTIES

39. In the event CWM violates a provision or provisions of this Decree, CWM shall automatically pay a stipulated civil penalty for each violation specified below in the following amounts:

$50,000 for any violation of Pars. 6(C), 10, 13, 27, 28, 29, 30, 31, or 32.
$10,000 for any violation of Pars. 7, 14, 25, 33, 34, or 36;
$5,000 for any violation of Pars. 8, 9, 15, 16, or 19; and
$1,000 for any violation of pars. 11, 17, 21, 22, 23, 24, or 26.

se penalties shall be paid within ten (10) days after the occurrence of the violation by delivering to Plaintiff's counsel or a successor

stipulated penalties are not to be suspended in part or in whole. By acceptance of stipulated penalties, Plaintiff does not waive any rights it m have in contempt or otherwise to seek redress for violations of Ohio Revised Code Chapters 3734, 3767, or 6111 or for violations of this Decree.

XXI. MISCELLANEOUS

41. CWM shall comply with the reporting requirements of its permits fc the Vickery Facility and, in addition, shall notify the Hazardous Materials Section of the Ohio EPA Northwest District Office as soon as practical, but i no event later than two (2) hours after discovery of any waste spill, discharge of waste into waters of the State, or injection well malfunction.

42. CWM shall submit to Ohio EPA and U.S. EPA a monthly progress repor: describing all actions which have been taken to implement Paragraphs 15, 17, 18, 25, and 26 of this Consent Decree. The report for each month shall be submitted by the fifteenth (15th) of the following month. The requirements of the paragraph shall terminate when all of the actions required in Paragraphs 15, 17, 18, 25 and 26 have been completed.

43. CWM is hereby prohibited and enjoined from violating any terms or conditions of permits issued by Ohio EPA and the Hazardous Waste Facility Approval Board which are applicable to the Vickery Facility. CWM is also prohibited and enjoined from violating Ohio Revised Code Sections 3734.11, 3734.12, 3767, 6111.043, 6111.04, 6111.07, and the hazardous waste rules applicable to the Vickery Facility.

44. CWM shall allow personnel from U.S. EPA and Ohio EPA and their authorized representatives access to the Vickery Facility to monitor compliance with this Consent Decree without a warrant. Any person taking a sample for analysis in the implementation of or to determine compliance with the requirements of this Consent Decree shall provide the parties to this ..ree, upon request, with splits of that sample.

45. Nothing in this Consent Decree shall relieve CWM of its obligat: to comply with applicable federal, state or local statutes, regulations or ordinances or shall constitute a waiver or release of any right, remedy, defense or claim of CWM with regard to any person not a party to this Conse Decree.

46. The Findings and Orders of the Director of Ohio EPA dated June 3(and July 19, 1983, in the matter of Chemical Waste Management, Inc. are withdrawn and replaced by this Consent Decree. The parties shall so notify the Ohio Environmental Board of Review and withdraw from the Board the proceeding before it regarding such Findings and Orders, Chemical Waste Management, Inc. v. Maynard, E.B.R. 721049.

47. The Court shall retain jurisdiction of this matter for the purpos of enabling any party to apply to the Court for any further orders necessary to construe, carry out, modify, or enforce compliance with the term of this Consent Decree, including disputes arising out of actions or determination of the Director taken on submissions or otherwise made pursuant to this Consent Decree.

48. All reports, requests, or information submitted to Plaintiff by CW pursuant to this Consent Decree shall be submitted to:

Ohio EPA

Richard L. Shank, Manager
Surveillance and Enforcement Section
Division of Hazardous Materials Management
Ohio Environmental Protection Agency
361 East Broad Street
Columbus, Ohio 43215

U.S. EPA

Daniel J. Banaszek, Chief
Technical Unit
Waste Management Division
230 South Dearborn Street
Chicago, Illi-

or to such persons and addresses as may be otherwise specified, in writing, CWM to Plaintiff.

49. Where this Decree requires actions to be performed by CWM, Defendar WMI shall be the guarantor of CWM and shall assume the responsibility to perform such actions if not performed by CWM. WMI shall be liable under thi Decree if WMI fails to perform actions not performed by CWM.

CHEMICAL WASTE MANAGEMENT, INC.

By: _____
Jeffrey G. Miller
Bergson, Borkland,
Margolis & Adler

UNITED STATES OF AMERICA

By: _____
F. Henry Habicht, II
Assistant Attorney General
Land and Natural Resources Divisio

_____
Steven J. Willey
Environmental Enforcement Section
Land and Natural Resources Divisior

_____
Assistant U.S. Attorney
Northern District of Ohio

_____
Courtney M. Price
Assistant Administrator for
Enforcement
U.S. Environmental Protection Agency

_____
Michael J. Walker
Associate Regional Counsel
U.S. Environmental Protection Agency

STATE OF OHIO, ex re. Anthony J. Celebrezze, Jr., Attorney General of Ohio

_____
Anthony J. Celebrezze, Jr.
Attorney General of Ohio

By: _____

Jack A. Van Kley
Susan Flannery
Assistant Attorneys General
Environmental Enforcement Secti
30 East Broad St., 17th Floor
Columbus, Ohio 43215
(614) 466-2766

APPROVED AND ENTERED
as an Order of the Court
this _____ day of _____, 1984.

_____
United States District Court
Judge xxxx

MAY 08 1981

654 8800

Mr. Jeffrey R. Diver
Senior Environmental Cousel
Waste Management, Inc.
900 Jorie Blvd.
Oak Brook, Illinois 60521

Re: Ohio Liquid Disposal
Docket no. V-W-81-R-21
Supplemental Consent Agreement
and Final Order

Dear Mr. Diver:

This is to acknowledge receipt of the Supplemental Consent Agreement and Final Order signed by you. A fully executed copy of the Consent Agreement and Final Order is enclosed for your files. Payment of the TWO THOUSAND DOLLARS ($2,000.00) penalty should be directed to me at the above address in a check made payable to the United States of America.

Your cooperation in resolving this matter is appreciated.

Very truly yours,

Jane E. Schulteis
Chief, Litigation Unit II

Enclosure

cc: Ernest Neal
RCRA Enforcement Coordinator
Ohio Environmental Protection Agency

David Northrup
Office of Ohio Attorney General

bcc: Leder, w/enclosure
Donaldson, Biros, w/Enclosure
Brenda Lillstrom, State Implementation Officer, w/enclosure
Regional Hearing Clerk, w/enclosure
Benedict, w/enclosure
Balmat, w/enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION V

4/14/81

IN THE MATTER OF:	)	Docket No. V-M-81-R-21
Ohio Liquid Disposal Vickery, Ohio	)	SUPPLEMENTAL CONSENT AGREEMENT AND FINAL ORDER
EPA ID NO. OH D 020273819	)	

AGREEMENT

WHEREAS,

1. This administrative proceeding was initiated pursuant to Section 3008 of the Resource Conservation and Recovery Act, as amended (42 U.S.C. § 6901 et seq.) hereinafter RCRA;

2. This action was instituted by a Complaint and Notice of Opportunity for Hearing by Complainant on December 18, 1980, charging that Ohio Liquid Disposal, hereafter Respondent, was in violation of Subtitle C of RCRA, section 3005, 42 U.S.C. § 6925 and regulations 40 C.F.R. §§ 265.12(a), 265.17(b), 265.53(b), 265.71(a)(5), 265.223 and 265.251. These violations occurred at Respondent's facility located at 3956 State Route 412, Vickery, Ohio 43464. They were observed by officials of the United States Environmental Protection Agency, hereafter U.S. EPA, during an inspection of the facility on December 2, 1980, and by representatives of the Ohio Environmental Protection Agency during an inspection of the facility on December 9, 1980.

3. The parties discussed settlement of the proposed Two Thousand Five Hundred Dollar ($2,500) penalty through an informal settlement conference held on February 9, 1981 between Craig Benedict, an attorney, Joel Balmat and Charles Grigalouski, engineers, for U.S. EPA, and Jeffrey Diver, attorney, G. Michael Shannon, Midwest Area Manager and Donald A. Wallgren, Director of Environmental Management of Respondent Company at the U.S. EPA Region V office.

WHEREFORE, for the purpose of this proceeding only, and without predjudice to any other proceeding:

1. Respondent hereby admits the jurisdictional allegations contained in the Complaint;

2. Respondent readopts the Consent Agreement and Final Order entered into with U.S. EPA on January 30, 1981 except as modified through this Supplemental Consent Agreement and Final Order;

3. Respondent explicitly withdraws its request for a hearing on the proposed penalty and waives all rights to said hearing;

4. The parties stipulate that Respondent's representative, Jeffery Diver, has represented that:

a. Respondent will conduct EP toxicity tests on the "pug" material now being used as fill in various lagoons at its faciity. All test results will be shared with U.S. EPA, and, if, said results indicate that the pug material is hazardous, Respondent shall immediately handle it in accordance with the requirements of RCRA;

b. Respondent consents to the payment of Two Thousand Dollars ($2,000) as full satisfaction for violations of RCRA as cited in the Consent Agreement and Order signed January 30, 1981;

5. Respondent consents to the issuance of the Final Order hereinafter recited.

ORDER

The Respondent Ohio Liquid Disposal Company shall, effective immediately, unless otherwise stated, comply with the following requirements:

a. Respondent shall conduct EP toxicity tests on the "pug" material now being used as fill in various lagoons at its faciity. All test results shall be shared with U.S. EPA, and, if, said results indicate that the pug material is hazardous, Respondent shall immediately handle it in accordance with the requirements of RCRA;

b. Respondent shall remit payment of Two Thousand Dollars ($2,000) as satisfaction in full for violations of RCRA cited in the Consent Agreement and Order signed January 30, 1981.

The above order is hereby consented to by both of the parties to this proceeding.

Jeffrey R. Diver

Ohio Liquid Disposal Company

Dated: 4/2/81 At: 9:20 A.M.

Therefore, it is so ordered. This order shall become effective immediately

Sandra S. Gardebring
Director, Enforcement Division
United States Protection Agency
Region V

Dated: 14 April 1981 At: Chicago

Valdas V. Adamkus
Regional Administrator
United States Environmental
Protection Agency
Region V

Dated: 16 APRIL '81 At: CHICAGO, ILL.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

APR 27 1983

REPLY TO ATTENTION OF:

5C-16

Milo D. Harrison, President
Chemical Waste Management, Inc.
3003 Butterfield Road
Oak Brook, Illinois 60521

Re: Consent For Removal of PCB
Contaminated Oil

Dear Mr. Harrison:

On Monday, April 25, 1983, my staff met with George Vander Velde to discuss the removal and disposal of PCB-contaminated oil from the Ohio Liquid Disposal facility in Vickery, Ohio. Messrs. Diver and Miller also participated in that meeting. One purpose of that meeting was an effort to resolve federal concerns regarding the removal of these oils as proposed in your letter of April 22, 1983 to Robert Maynard, Director of the Ohio Environmental Protection Agency.

This letter will serve as written approval for Chemical Waste Management, Inc. to begin removing all PCB contaminated waste oils from the site so long as they are treated as if containing 500 parts per million (ppm) or greater. Our understanding is that removal, transportation, storage and disposal would be done in accordance with the requirements of the Toxic Substances Control Act and the Resource Conservation and Recovery Act, where applicable. U.S. EPA has no objection to the immediate removal of the first 30,000 gallons of oil that have been confirmed by tests to contain levels of PCBs greater than 500 ppm.

With regard to the customer waste certification format currently being utilized by Chemical Waste Management to screen waste that may contain PCBs, U.S. EPA does not object to modifying the generator certification for this procedure since Chemical Waste Management is continuing to reject all loads of oily waste and will continue to test incoming wastes for PCBs according to the protocol accepted by U.S. EPA.

We appreciate the willingness of Chemical Waste Management to work with U.S. EPA to address the problems of PCB contamination at this facility. If you have any questions, please do not hesitate to contact Mr. Daniel Banaszek at 312-886-4187 or Mr. Michael J. Walker at 312-886-6662.

Sincerely,

Basil G. Constantelos
Director, Waste Management Division

cc: Jeffrey Miller, Esquire
Robert Maynard, Director
Ohio Environmental Protection Agency

Mr. Jeffrey Diver
Senior Environmental Counsel
Waste Management Inc.
900 Jorie Blvd.
Oak Brook, Illinois 60521

JUN 18 1981

Re: Ohio Liquid Disposal
V-W-81-R-21
Consent Agreement and
Final Order

Dear Mr. Diver:

This is to acknowledge receipt of the check for $2000.00 in payment of a penalty assessed in the above referenced case. A fully executed copy of the Consent Agreement and Final Order has already been sent to you for your files.

Your cooperation in resolving this matter is appreciated.

Very truly yours,

Jane E. Schulteis
Chief, Litigation Unit II

Enclosure

cc: Ernest [illegible]
[illegible] Enforcement Coordinator
Ohio Environmental Protection Agency

bccc: Leder, w/enclosure
Donaldson, [illegible] w/enclosure
Brenda Lillstrom, State Implementation Officer, w/enclosure
Finanacial Operations Section
Balmat, w/enclosure
Benedict, w/enclousre

JESCHUTEIS:6-6733:ddw:6/17/81:

Waste Management, Inc.
900 Jorie Boulevard • Oak Brook, Illinois 60521

April 2, 1981

Ms. Sandra S. Gardebring
Director, Enforcement Division
United States Environmental Protection Agency
Region V
230 South Dearborn St.
Chicago, IL 60604

Re: Ohio Liquid Disposal
Docket No. V-W-81-R-21

Dear Ms. Gardebring:

I am returning to you herewith two executed copies of the "Supplemental Consent Agreement and Final Order" which you forwarded to me with your letter of March 27, 1981. You will note I have penned in some changes to the factual recitations in paragraph 2 of the Agreement, to make the recitations conform to the facts alleged in the original Complaint. You may either leave the Agreement as interlineated, or you may have page one of the Agreement retyped to include the changes. This letter serves as our ratification of such retyped page.

Per your instructions, we shall await receipt of a fully executed copy of the Agreement before making payment of the agreed penalty. When you forward the fully executed copy to me, please include instructions as to the proper payee as well as the person to whom payment should be directed.

Sincerely,

Jeffrey R. Diver
Senior Environmental Counsel

JRD/bas

Enclosure

cc: Donald Wallgren
Michael Shannon
Ronald Shawl

312/654-8800 • Telex: 253094 • TWX: 910-651-0029

SENIOR

MAR 2 7 1981

ver
ment, In
ward
thois 60521

Re: Ohio Liquid Disposal Company
Docket No. Y-M-81-R-21

Dear:

Enclosed please find an original and one copy of the Supplemental Consent Agreement and Final Order regarding the above-referenced case. Please execute the original and copy and forward these to this office within one week from receipt of this letter. It is important that the signed document be returned to this office within this time frame.

Upon our receipt of the executed Supplemental Consent Agreement a fully executed copy will be returned to you for your file. At that time you will have sixty days (60) within which to forward by cashier or certified check payment in the amount of TWO THOUSAND DOLLARS ($2000) as stated in the Order. Payment cannot be accepted until the Agreement and Order are fully executed by both parties.

Very truly yours,

Original Signed by Sandra S. Gardebring

Sandra S. Gardebring
Director, Enforcement Division

Enclosure

cc: James F. McAvoy, Director
Ohio Environmental Protection Agency

David Northrop, Chief
Environmental Law Section
Office of the Attorney General

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF THE
ADMINISTRATOR

IN RE	)	
	)	DOCKET NO. V-M-81-R-21
OHIO LIQUID DISPOSAL	)	
	)	ORDER
Respondent	)	

By letter dated March 4, 1981, counsel for the Respondent advised that this matter has been settled and the appropriate paper work is being prepared. This fact was later confirmed by phone by counsel for the Complainant to my secretary.

Accordingly, the parties shall have until March 24, 1981 to execute the final settlement in this matter. Should any problems arise which would make meeting that deadline impossible, counsel should so advise the Court immediately.

DATED: March 9, 1981

T. B. Yost
Thomas B. Yost
Administrative Law Judge

CERTIFICATION OF SERVICE

I hereby certify that the original of this Order was served on the Regional Hearing Clerk, Region V; and that true and correct copies were served on: Jeffrey R. Diver (for Respondent), c/o Waste Management Inc., 900 Jorie Boulevard, Oak Brook, Illinois 60521; and Craig Benedict, Esquire (for Complainant), Enforcement Division, Environmental Protection Agency, 230 South Dearborn Street, Chicago, Illinois 60604; all by Certified Mail, Return Receipt Requested. Dated in Atlanta, Georgia this 9th day of March, 1981.

Sandra A. Beck
Sandra A. Beck
Secretary to Judge Yost

Judge Thomas B. Yost
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30303
Phone Number — 404/881-2881

RECEIVED
MAR 1 1 1981
U.S. ENVIRONMENTAL PROTECTIVE AGENCY
REGION V
Regional Hearing Clerk

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Diver, OLD Atty, wrote ALJ & said settlement is near so no need unless breakdown occurs for additional attention on ALJ's part. GAB 3/5/81

IN RE)
) DOCKET NO. V-M-81-R-21
OHIO LIQUID DISPOSAL)
) ORDER
Respondent)

My reading of the file, including the agreement entered into between the parties dated January 30, 1981, indicates that all matters in controversy between the parties have been settled except for the amount of the penalty to be assessed for past violations.

I am therefore seeking guidance from the parties as to how they wish to proceed. It occurs to me that two options are open: (1) we can have a hearing on the question of the appropriate amount of the penalty to be assessed; or (2) the parties may wish to avail themselves of the procedures set forth in 40 C.F.R. §22.20 for an accelerated decision without a hearing.

The parties are therefore directed to consult and advise the Court of their decision, no later than March 10, 1981. If the decision is for a hearing, dates therefore should be suggested. If option number 2 is chosen, a suggested schedule for the submission of briefs should be included.

DATED: February 25, 1981

T. B. Yost
Thomas B. Yost
Administrative Law Judge

CERTIFICATION OF SERVICE

I hereby certify that the original of this Order was served on the Regional Hearing Clerk, Region V; and that true and correct copies were served on: Jeffrey R. Diver (for Respondent), c/o Waste Management, Inc., 900 Jorie Boulevard, Oak Brook, Illinois 60521; and Craig Benedict, Esquire (for Complainant), Enforcement Division, Environmental Protection Agency, 230 South Dearborn Street, Chicago, Illinois 60604; all by Certified Mail, Return Receipt Requested. Dated in Atlanta, Georgia this 25th day of February 1981.

Sandra A. Beck
Sandra A. Beck
Secretary to Judge Yost

Judge Th[illegible]
Environ[illegible]
34[illegible]
Atlanta [illegible]
Phone Num[illegible]

Waste Management, Inc.
900 Jorie Boulevard • Oak Brook, Illinois 60521

March 4, 1981

Judge Thomas B. Yost
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: In Re Ohio Liquid Disposal,
Docket No. V-M-81-R-21

Dear Judge Yost:

This is in response to your order of February 25, 1981, in the above matter. Please be advised that counsel for the respective parties have reached a settlement of the remaining issue, pertaining to the amount of penalty to be assessed for the alleged violations. Counsel for complainant, Craig Benedict, is in the process of preparing a supplement to the Consent Agreement previously entered into by the parties on January 30, 1981.

I assume you will be hearing from Attorney Benedict in the near future.

I trust this letter suffices as a response to your order.

Sincerely,

Jeffrey R. Diver
Senior Environmental Counsel

JRD:yb

cc: Craig Benedict

312/654-8800 • Telex. 253094 • TWX: 910-651-0029

Waste Management, Inc.
900 Jorie Boulevard • Oak Brook, Illinois 60521

February 17, 1981

Craig Benedict, Esq.
U.S. Environmental Protection Agency
Enforcement Division
230 South Dearborn Street
Chicago, Illinois 60604

Attention: Water & Hazardous Materials Enforcement Branch, Compliance Section

Re: Ohio Liquid Disposal
(OH D 020273819)
Docket No.: V-W-81-R-21
Our File: 602

Dear Mr. Benedict:

We have considered the matters raised at the informal settlement conference of February 9, at your Chicago offices, and have concluded we are prepared to enter a Consent Agreement along the lines outlined by you. As we understand it, this would involve a reduction in the civil penalty from $2,500 to $2,000. Further, we would agree to conduct EP toxicity tests of the "pug" material, now being used as fill material in various closed lagoons at the OLD facility. We will share the analytical results with USEPA, and, if the results indicate that the pug material is, itself, a hazardous waste, we agree to handle such material in accordance with pertinent interim status regulations.

Please advise me at your earliest opportunity whether your superiors will authorize settlement on the above basis. If the settlement is approved, would you please prepare a Supplemental Consent Agreement, and forward it to me for my signature.

Thank you for your cooperation and assistance in resolving this matter voluntarily.

Sincerely,

Jeff Diver

Jeffrey R. Diver
Senior Environmental Counsel

JRD:yb

cc: Don Price, Don Wallgren, Mike Shannon, Dick Ross and Ron Shawl

312/654-8800 • Telex. 253094 • TWX: 910-651-0029

U[illegible]TATES ENVI[illegible]MENTAL PROTEC[illegible] AGENCY

Telephone (312) 886-6673 5RHC

February 5, 1981

Honorable Herbert L. Perlman
Chief Administrative Law Judge
Office of the Administrative
Law Judges (A-110)
U.S. Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460

Re: Ohio Liquid Disposal
Docket No. V-M-81-R-21

Dear Judge Perlman:

I am enclosing Complaint and Findings of Violation in subject proceeding, Compliance Order, and Agreement, as well as Respondent's Limited Waiver of Right to Hearing, while not withdrawing or waiving its request for a hearing on the propriety of a civil monetary penalty.

The Enforcement Division attorney has requested that an Administrative Law Judge be assigned to this matter to conduct a hearing.

Please advise as to which Administrative Law Judge will be assigned.

Sincerely,

Teresa Wysocki
Regional Hearing Clerk

Enclosures

cc: Craig Benedict, Attorney
Enforcement Division, Region V
U.S. Environmental Protection Agency

CONCURRENCES

SYMBOL	5RHC						
SURNAME	Wysocki						
DATE	2/5/81						

EPA Form 1320-1 (12-70) OFFICIAL FILE COPY

Waste Management, Inc.
900 Jorie Boulevard • Oak Brook, Illinois 60521

January 30, 1981

Craig Benedict, Esq.
U.S. Environmental Protection Agency
Enforcement Division
230 South Dearborn Street
Chicago, Illinois 60604

Attention: Water & Hazardous Materials Enforcement Branch, Compliance Section

Re: Ohio Liquid Disposal
(OH D 020273819)

Docket No.: V-W-81-R-21

Dear Mr. Benedict:

Now that we have reached agreement (in the form of a Consent Order) on all of the alleged regulatory violations, I believe it would be appropriate for the parties to sit down and attempt to reach a settlement on the subject of the civil monetary penalty. We assume you are open to this suggestion, given the statement in the original Complaint:

> "U.S. EPA encourages all parties to pursue the possibilities of settlement through informal conferences."

Also, as the next procedural step is for the Presiding Officer to schedule a prehearing conference, to discuss, among other matters, settlement, it would be helpful for us to have assured ourselves we have gone as far as possible toward voluntary resolution.

312/654-8800 • Telex: 253094 • TWX: 910-651-0029

Please advise me at your earliest opportunity whether EPA is willing to pursue resolution of the penalty issue. If so, also advise me which individuals at Region V will be at any settlement discussions, and whether such individuals will have authority to approve any settlement which may be reached.

Thank you for your attention to this request.

Sincerely,

Jeff Diver

Jeffrey R. Diver
Senior Environmental Counsel

JRD:yb

cc: Don Price
Don Wallgren
Ron Shawl

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION V

IN THE MATTER OF:	)	Docket No. V-M-81-R-21
	)	
Ohio Liquid Disposal Cleveland, Ohio	))	CONSENT AGREEMENT AND
	)	FINAL ORDER
EPA ID NO. OH D 020273819	)	

AGREEMENT

WHEREAS,

1. This administrative proceeding was initiated pursuant to Section 3008 of the Resource Conservation and Recovery Act, as amended (42 U.S.C. § 6901 et seq.) hereinafter RCRA;

2. This action was instituted by a Complaint and Notice of Opportunity for Hearing by Complainant on December 18, 1980, charging that Ohio Liquid Disposal, hereafter Respondent, was in violation of Subtitle C of RCRA, section 3005, 42 U.S.C. § 6925 and regulations 40 C.F.R. §§ 265.12(a), 265.17(b), 265.53(b), 265.71(a)(5), 265.223 and 265.251. These violations occurred at Respondent's facility located at 3956 State Route 412, Vickery, Ohio 43464. They were observed by officials of the United States Environmental Protection Agency, hereafter U.S. EPA, during an inspection of the facility on December 18, 1980.

3. The parties discussed settlement of this action through an informal settlement conference held on January 7, 1981 between Edward DiDomenico and Joel Balmat, engineers for U.S. EPA, and Ronald Shawl, Plant Manager, G. Michael Shannon, Midwest Area Manager and Donald A. Wellgren, Director of Environmental Management of Respondent Company at the U.S. EPA Region V office.

WHEREFORE, for the purpose of this proceeding only, and without predjudice to any other proceeding:

1. Respondent hereby admits the jurisdictional allegations contained in the Complaint;

2. Respondent admits the allegations numbered one through six as set forth in the Complaint;

3. Respondent explicitly waives its right to request a hearing on allegations one through six of the Complaint filed herein;

4. The parties stipulate that Respondent's representative, Donald Wallgren, for Ronald Shawl, has represented that:

a. Notification shall be sent to the Regional Administrator four weeks prior to receipt of hazardous waste from a foreign source;

b. A written explanation has been submitted regarding the reactor accident as well as future operational plans for the reactor's safe maintainence. Any redesign or reconstruction plans affecting the reactor shall be submitted to U.S. EPA prior to commencement of said changes;

c. A contingency plan has been prepared and submitted to local authorities, and to U.S. EPA for review;

d. Copies of each manifest shall be maintained at Respondent's facility for at least three years;

e. The erosion affecting the dike has been repaired. Said area shall be covered by the spring of 1981.

5. Respondent's facility was reinspected on January 28, 1981 by Charles Grigalouski, U.S. EPA, who conducted the original December 2, 1980 inspection of said facility. Mr. Grigalouski found Respondent's facility to be in compliance with all violations addressed in the above Findings.

6. U.S. EPA hereby strikes Finding 7 and Order 1(f) contained in the Findings of Violation and Compliance Order. Respondent hereby strikes its request for a Hearing as to said Finding 7 and Order 1(f).

7. No stipulation has been entered into regarding the payment of the TWO THOUSAND FIVE HUNDRED DOLLAR ($2500) civil penalty for past violations as set forth in paragraph 3 of the Compliance Order. This issue remains contested as to the appropriateness of the penalty for past violations.

8. Respondent consents to the issuance of the Final Order hereinafter recited.

ORDER

The Respondent Ohio Liquid Disposal Company shall, effective immediately, unless otherwise stated, comply with the following requirements:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Review and Comment on Draft Complaint and Consent Agreement between Region V and Chemical Waste Management, Re: TSCA and RCRA Violations at Vickery, Ohio

FROM: Tony Baney
Compliance & Implementation Branch (WH-527)

TO: Keith Onsdorff
Office of Enforcement & Compliance Monitoring (LE-134S)

In general I agree with the scope and depth of these two draft documents. Many of the original problems at Vickery are being addressed in the state decree. I would like to suggest several modifications or additions to the documents under review which should further aid in bringing the facility into compliance.

COMPLAINT

I. Page 5, Item 26; a new Item should be added which addresses the problem of failure to report releases of hazardous substances from the facility. This is a violation of Sections 103(a) and 111(9) of CERCLA.

II. Page 7, "Penalty"; in addition to the violations cited, the above mentioned CERCLA violations should also be cited.

AGREEMENT

III. Page 3, paragraph "B"; add changes for violation of above mentioned CERCLA sections.

IV. Page 15, paragraph "0"; insert CERCLA after the acronym TSCA.

V. Page 14, prior to paragraph "M"; add the following order: The respondent will comply with Section 103(a) of CERCLA by immediately notifying the Federal government of any release from the facility by telephoning the National Response Center at 1-800-424-8802. This notice must include:

1) Name and telephone number of reporter;
2) Name and address of facility;
3) Time of release and type of incident causing release (i.e., fire, mixing of waste in surface impoundment, etc.);
4) Name and quantity of materials) involved;
5) Extent of injuries, if any; and
6) The possible hazards to human health and the environment.

In addition, the Respondent will comply with section 111(g) of CERCLA by placing a written, NOTICE OF RELEASE, in the _____, a daily newspaper which serves the residents in the geographical area around the facility. The Respondent will make arrangement with the _____ to place the notice in the next edition unless that edition has gone to press. In these instances, the following edition will carry the notice. News stories covering the release will not be considered to be sufficient to comply with this order. This notice shall be published in the first section of the newspaper.

The "Notice of Release" must include:

1) Name and address of the facility
2) Name and address of facility
3) Time of release and type of incident causing release (i.e., fire, mixing of wastes in surface impoundments etc.)
4) Name and quantity of materials involved;
5) Geographic area outside facility most likely involved (for airborne releases);
6) The possible hazards to human health and the environment.

VI. Section 103(b) provides for a penalty of up to 10,000 or 1 year in jail or both. If no imprisonment is contemplated the a $10,000 penalty should be added to the "Stipulated Penalties" section.

VII. The Agency should consider a §3013 Order aimed at monitoring contamination from old (not used after 11/18/80) units.

VIII. The Complaintant must not be restricted by these documents from seeking further remedial action from the Respondent. It is likely that a proper ground-water monitoring program will detect leakage from the facility and the Agency's ability to order corrective action (e.g. under Section 3008[d]) or additional closure activities must not be restricted.

VIII. The draft Decree lacks a Force Majeure clause. If Region V can get CWM to agree to the release language contained in the draft, that will be a major victory.

a) The well has been reconstructed in accordance with the specifications contained on pages 70-71 of the study prepared by Underground Resource Management, Inc. entitled "Evaluation of a Subsurface Waste Injection System near Vickery, Ohio," which pages are attached hereto as Exhibit "A" and fully incorporated herein by reference; and

b) The Director of Ohio EPA has provided prior written approval for injection of waste into the well.

VI. INJECTION WELL MONITORING AND REPORTING

6. During the operation of any injection well, CWM shall check and record the injection pressure, the annulus pressure, and the injection rate of each such well at least once every two hours. A graphical and a written record of all such injection pressures, annulus pressures, and injection rates for each well shall be kept at the Vickery Facility and made available for inspection and copying by Ohio EPA until three years after the plugging and abandonment of the well.

7. CWM shall submit to Ohio EPA a monthly report listing the daily minimum, maximum, and average injection pressures, annulus pressures, and injection rates for each well for each day during which waste was injected into the well during that month. For each minimum and maximum injection rate reported, CWM shall list in the report the injection pressure and annulus pressure occurring during the time the well was operating at this minimum or maximum injection rate. The report for each month shall be due by the fifteenth day of the next month.

CWM shall not operate any of its injection wells with a surface injection pressure of more than 790 pounds per square inch.

VII. INJECTION WELL TESTING

8. To ensure that all injection wells at the Vickery Facility are safely and properly operating, CWM shall perform integrity tests on each of its wells. For each of its injection wells, CWM shall perform the following tests at least once every twelve months:

a) a pressure test of the long string casing, performed with a test packer set within twenty feet from the bottom of the long string casing of the well; this test shall be conducted at a surface pressure of 1000 pounds per square inch with no more than a three percent loss of pressure during a one hour period;

b) a 40 arm caliper log test of the long string casing; and

c) a radioactive tracer log test to determine the points of fluid exit and possible upward migration of fluid outside the casing.

These three types of tests shall be performed on each well during a testing period of no longer than seven consecutive days. For each well, no more than twelve months shall be allowed to lapse between each annual seven day testing period.

9. CWM shall provide written notification of its intent to test the wells to the Northwest District Office of Ohio EPA and the Sandusky County Board of Health at least thirty (30) days prior to the performance of each test, shall arrange with Ohio EPA and the Board of Health for a mutually agreeable time to perform the test, and shall allow Ohio EPA and Board of Hewalth personnel to observe the performance of the test at the mutually agreed upon time.

10. Results of each test shall be reported to Ohio EPA and the Sandusky County Board of Health in writing within ten days after completion of the seven day testing period. If at any time the test results show an injection well to be operating in violation of law, regulation, or a CWM permit, CWM shall immediately cease to inject waste into such well unless and until the Director of Ohio EPA authorizes further injection.

II

shall remove PCB-contaminated material which is located on the property owned or controlled by . legally described as follows:

"
45
To
in
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which is approximately two miles southeast of

County (site), in accordance with the plan attached to this Consent Decree and by reference made a part hereof (the "Plan").

III

Defendant shall allow access to the site to defen and its representatives and contractors, as necessary for the purpose of implementing this Consent Decree. shall allow U.S. EPA and its representatives and contractors access to the s site for the purposes of sampling soils or water, observing the clean-up by and monitoring progress at any time during the implementation of this Consent Decree.

IV

shall complete the implementation of the Plan in accordance with the schedule developed under the terms of the Plan. ll certify the date of completion in writing to U.S. EPA through the parties designated in Part V below and simultaneously shall request that U.S. EPA certify that the requirements of the Plan have been satisfactorily completed.

V

Wheneve required to request approval of or make a certification to the U.S. EPA under this Consent Decree ll request such approval from, or make such certification in writing to the Director, Waste Management Division, United States Environmental Protection Agency, Region V, 230 South Dearborn Street, Chicago, Illinois. A copy of any such request or certification shall be sent to the Office of Regional Counsel at the same address. The U.S. EPA shall approve, disapprove or modify the request within thirty (30) days of its receipt thereof. If the U.S. EPA does not advis its disapproval or modification within said thirty (30) days, the request shall be deemed approved. If the U.S. EPA disapproves the request in writing, the provisions of Part VI below shall apply.

VI

The parties shall attempt to resolve any disputes concerning the construction, implementation, or amendment of the terms of this Consent Decree, or concerning U.S. EPA disapproval or modification of any proposal by defendants, in the following manner:

a. The parties between whom any such dispute arises shall confer, for a period not to exceed 30 days, in a good faith attempt to resolve their disagreement.

b. If agreement between the parties is not reached within 30 days any party may petition the Court to resolve the matter in dispute.

c. If agreement is not reached within 30 days on any dispute concerning a schedule for implementation of the Plan, or the certification of completion under Paragraph XI, which U.S. EPA has disapproved or modified, th ill have the burden to move the Court to

resolve the dispute. I s not submit the dispute to the Court for resolution within sixty (60) days of its receipt of the U.S. EPA notice of disapproval or modification, l have waived its objections, if any, to the U.S. EPA disapproval or modification.

VII

hall provide to U.S. EPA and/or , upon request, a split of any sample taken pursuant to this Decree.

VIII

This Decree shall apply to and be binding upon the parties, their officers, agents, servants, employees, successors and assigns. Defendants shall provide a copy of this Decree to each contractor that performs work contemplated hereunder, and shall condition any contract for such work upon compliance with this Decree. h Services continue to be solely responsible for compliance with this Decree.

IX

This Consent Decree shall in no way relieve : or their officers, agents, servants, employees, successor and assigns, of their obligation to comply with all applicable federal, state and local statutes, regulations and ordinances.

X

The Court shall retain jurisdiction of this matter for the purpose of enabling any party to apply to the Court for any further orders which may be necessary to construe, carry out, modify, or enforce compliance with the terms of this Decree until its termination.

XI

This Consent Decree shall terminate upon the certification by the U.S. EPA that all requirements of the Consent Decree have been satisfied.

XII

Upon termination of this Consent Decree, shall be released from any and all alleged violations of the law stated in the complaint with respect to the distribution in commerce and disposal of the PCB contaminated oil currently located in Pond #1 at the s site. Nothing in this Consent Decree shall releas 1 s from liability relating to contamination by chemicals or substances other than PCB at Pond #1, any PCB or other contaminants at any other part of the te, or chemical contamination of groundwater at or near the , nor prohibit the U.S. EPA from acting to remedy such contamination. r T s reserves any and all rights, claims and defenses that they might have under law and equity to any claim, cause of action or administrative action brough by the U.S. EPA tha /or 1 s are responsible for such contamination.

XIII

Nothing in this Consent Decree shall be construed as a waiver or release of any right, remedies, defenses or claims of any nature between

1

XIV

Each of the undersigned representatives of the parties certifies that he or she is authorized by the party or parties whom he or she represents to enter into the terms and conditions of this Consent Decree and to legally bind that party to it.

The parties hereby consent to the entry of this Consent Decree without further notice.

By: _____
One of Its Attorneys

By: _____
One of Its Attorneys

UNITED STATES OF AMERICA

By: _____
Carol E. Dinkins
Assistant Attorney General
Land and Natural Resources Division
U.S. Department of Justice

Alan Levin (Acting)
Valdas V. Adamkus
Regional Administrator
U.S. Environmental Protection Agency, Region V

_____
Courtney M. Price
Acting Associate Administrator and Acting General Counsel
U.S. Environmental Protection Agency

By: _____
[illegible] nes
United States At[illegible] y
[illegible] States Attorney
[illegible]rict [illegible]s

_____
[illegible] Department of Justice
Washington, D.C.

Thomas W. Daggett
[illegible] Counsel
U.S. Environmental Protection Agency, Region V
Chicago, Illinois

APPROVED AND SO ORDERED.

_____
DATE

_____
UNITED STATES DISTRICT JUDGE

PLAN FOR THE REMOVAL OF PCB-CONTAMINATED
MATERIAL IN POND #1 AT THE

The will undertake the removal of PCB-contaminated material in Pond #1 at the s site in accordance with the following plan (the "Plan"):

I. Schedule

Within forty-five (45) days from the lodging of this Consent Decree, shall submit a schedule to the U.S. EPA for approval. This schedule shall provide for completing the implementation of this plan as soon as practicable, but in no case shall the completion of the Plan extend beyond December 31, 1983. This schedule shall also include the specific procedures to be followed in implementing this Plan, including specific protocols to be used for sampling and analysis of water, sludge and solids required under the Plan, as developed by onsultation with any professional cleanup firm it may engage.

II. Oil Removal

A. The "free oil" at the top of Pond #1 will be removed by a skimming pump. "Free oil" is defined as oil of burnable quality. The exact amount of free oil will be determined during the cleanup operation.

1. The "free oil" removed by the skimming pump will be transferred to closed tanker trucks for transport to Davenport Works. A oil shall be incinerated in a furnace that has been approved for disposal of this PCB contaminated oil by the Regional Administrator of Region VII, U.S. EPA, Kansas City, Missouri, in accordance with 40 C.F.R. § 761.60(a)(3). If this oil is to be stored at the prior to incineration, it will be stored in full compliance with 40 C.F.R. 761.65.

B. The oil and water emulsion that is immediately below the "free oil" in Pond #1 will be removed by the skimming pump.

1. The material extracted will be transferred to closed tanker trucks for transport to a chemical waste landfill approved by the U.S. EPA for PCB disposal.

C. After the "free oil" and emulsion layers have been removed, the new surface will be spot-checked visually for residual oil. If enough residual oil is found such that it could have a detrimental effect on the filtration/adsorption system to be used in the removal of the water as set out in item III, below, or if it becomes apparent during the oil removal process that most of the surface oil cannot be removed by a skimming pump, sorbent booms or sorbent pads will be used to remove any residual oil which could adversely affect the filtration/adsorption system to be used in the water removal system. The sorbant pads or booms shall be disposed of in a chemical waste landfill approved by the U.S. EPA for PCB disposal.

III. Water Removal

A. The PCB contaminated water that comprises the fraction of the liquid in Pond #1 immediately beneath the oil and water emulsion shall be removed by a pump and passed through a sand filter follwed by a carbon adsorption column. The sand filter-carbon adsorption column treatment apparatus shall be designed to attain an effluent water containing one (1) part per billion of PCB or less. This effluent water shall be held in Pond #2 and or Pond #3 until its residual PCB contamination level has been tested. Grab samples of the treated water shall be taken from the effluent stream at least once every eight hours of operation and a composite of these samples shall be analyzed every other day that the water treatment system is operated starting on the first

more than background levels of PCBs as defined herein. PCB contaminated soil from the loading area immediately adjacent to Pond #1 will similarly be removed so that the soil that remains will contain no more than background levels of PCBs. Afte ves side wall material, bottom sediment and soil underlying Pond #1, and soil from the loading area immediately adjacent to Pond #1, in such amounts as it determines, l submit a plan for U.S. EPA approval to determine the average PCB-contamination in the remaining soil. Once U.S. EPA has approved th testing plan, perform testing in accordance with the Plan. If the testing results demonstrate that the remaining soil PCB contamination is no greater than background levels as defined herein, l have no further obligation to remove any further soil. If the testing shows specific areas which have a PCB contamination greater than background levels l submit a remedial plan to remove such soil so that the remaining soil will contain no more than background levels of PCB. All of the soil and other material removed pursuant to this paragraph, as well as the sand and carbon from the adsorption/filtration system described in Part III of this Plan, and any sorbent pads or booms used under Part II. C of this Plan, shall be disposed of at a chemical waste landfill approved by U.S. EPA for disposal of PCBs. For purposes of this Consent Decree only, the parties agree that the background level of PCB at Pond #1 and the adjacent loading area is an average of one part per million PCBs by weight. ll certify, and request certification by the U.S. EPA, that the remaining soil underlying Pond #1 and at the immediately adjacent loading area contains only background levels of PCB, as defined herein, prior to concluding its soil and sediment removal activities.

V. Decontamination of Equipment

All equipment used by its contractors in implementing the clean-up set out in this part, including pumps, pipes, and tank trucks, will be decontaminated pursuant to 40 C.F.R. 761.79 after use. The internal surfaces of pumps and pipe lines that have been exposed to PCB - contaminated materials shall be decontaminated by continuously recycling a solvent meeting the criteria of 40 C.F.R. § 761.79(a) for a period of one hour or longer.

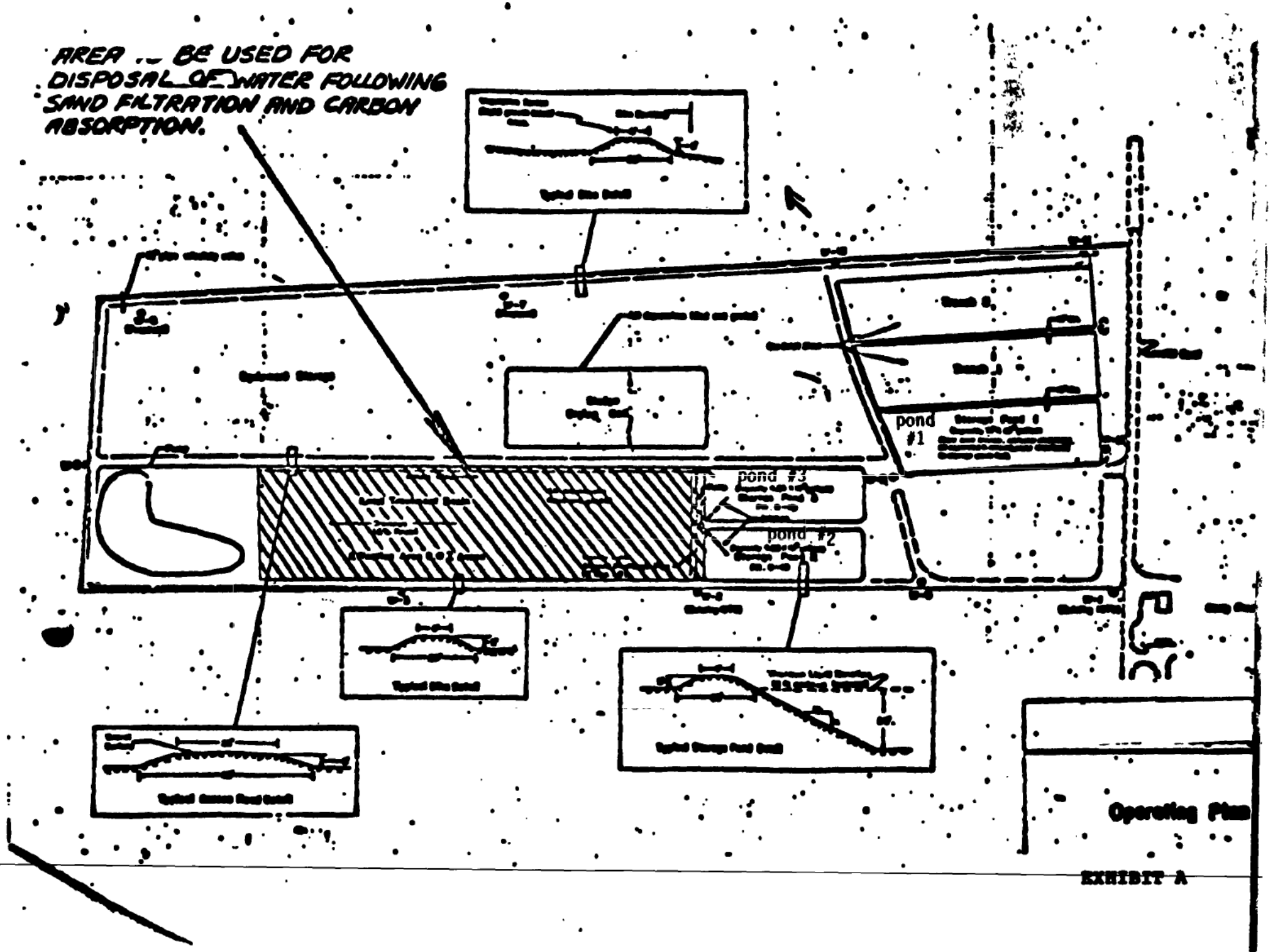
AREA .. BE USED FOR
DISPOSAL OF WATER FOLLOWING
SAND FILTRATION AND CARBON
ABSORPTION.
pond #1
pond #3
pond #2
Operating Plan

EXHIBIT A