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KELLY vs HOOKER CHEMICAL & PLASTICS COR

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DISTRICT 3
WATER QUALITY DIV.

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF INGHAM

FRANK J. KELLEY, Attorney General
for the State of Michigan, FRANK J.
KELLEY, ex rel, MICHIGAN NATURAL
RESOURCES COMMISSION: and HOWARD A.
TANNER, Director of the Michigan
Department of Natural Resources,

Plaintiffs,

File No. 79-22878-CE

vs.

CONSENT JUDGMENT

HOOKER CHEMICALS & PLASTICS CORP.,

Defendant.

_____ /

At a session of said Court, held in the
Ingham County Building, in the County
of Mason, State of Michigan, on the 30th
day of October, 1979.

MICHAEL J. HARRISON

PRESENT: HONORABLE _____,
Circuit Judge

The parties having STIPULATED and AGREED that a Judgment may
be entered in this cause, incorporating the following terms and
conditions, and the Court being fully advised in the premises:

NOW, THEREFORE, IT IS ORDERED AND ADJUDGED, that:

I. The Court determines, from a review of the matters
before the Court, that the terms and conditions contained
herein are reasonable, adequately resolve the environmental
issues raised in this action, constitute a full restorative
program for eliminating any threat to the lands and waters of
this State, properly protect the interests of the people of
the State of Michigan, and are hereby adopted by this Court.

II. Hooker Chemicals & Plastics Corp., (hereinafter Hooker) will, upon entry of Judgment in this cause, to the extent hereinafter provided, implement a plan to contain certain wastes upon Hooker premises. This plan will include: purging and treatment of contaminated groundwater now located beneath and adjacent to the Hooker premises in Montague Township, Michigan; removal and proper disposal of solid and liquid toxic wastes disposed of on-site. The details of this abatement plan, as set forth in this Judgment, will be initiated, under supervision of the State of Michigan Department of Natural Resources, within thirty (30) days of entry of this Judgment by the Court.

III. All industrial wastes, surface wastes, soils, and other contaminated wastes located in the waste disposal areas, as identified on the map which has been initialed by the parties, the original of which is on file with the Court and an initialed copy of which is attached hereto as Exhibit A, shall be disposed of as follows:

A. All materials and soils in Areas I, II, III, IV, V, VI, VII, VIII, IX, XI to a depth of three (3) inches below the surface of the ground shall be removed and placed in the containment vault(s).

B. All soils below a depth of three (3) inches from the surface of the ground in Areas I, II, VII, XI are to remain in place.

C. All soils from three (3) inches below the surface of the ground down to the depth of

the water table in Areas III, IV, shall be excavated and placed in the containment vault(s).

D. All soils in Areas V, VI, VIII, from three (3) inches below the surface of the ground up to a depth of two (2) feet from the surface of the ground shall be excavated and placed in the containment vault(s); however, the depth of excavation in Areas V, VI, VIII shall continue to the depth necessary to remove any and all chlorinated hydrocarbon contamination observed during excavation.

E. All soils in Area IX shall be excavated to a depth of five (5) feet below the furthest extent of the brine sludge and shall be placed along with the overlying brine sludge in the containment vault(s); however, the depth of excavation in Area IX shall continue to a depth necessary to remove chlorinated hydrocarbon contamination which is or may be uncovered in the upper five (5) feet of soil.

F. Following excavation of the areas identified in paragraphs III C, III D and III E, Hooker shall regrade the areas in accordance with good engineering practice.

G. All contents of Area X shall be removed. The liquid shall be treated with activated carbon to remove chlorinated hydrocarbons prior to discharge with the plant effluent through outfall 001 in accordance with Hooker's National Pollution Discharge Elimination System, Permit No. MI 0002631. The remaining

semi-solids will be solidified and placed in the containment vault(s). Plans and specifications to accomplish this removal shall be submitted to and approved by the Director of the Department of Natural Resources within one hundred-eighty (180) days of entry of this Order. Hooker may utilize the emptied old equalization pond (Area X) as part of its pollution incident prevention plan, if approved by the Director of the Department of Natural Resources within ninety (90) days after the date of this Judgment.

IV. SOLID WASTE CONTAINMENT SYSTEMS. All industrial wastes, contaminated soils and fly ash, and any other waste material contaminated with chlorinated hydrocarbons under the identified waste areas which are observed during excavation will be placed into claylined containment vault(s) constructed on Hooker property to the following minimum specifications:

A. The vault(s) shall be constructed with a minimum thickness of ten (10) feet of clay liner on the bottom, top, and sides of the vault(s). The clay shall be a particle size gradation to be approved by the Director of the Department of Natural Resources and shall be compacted in place in 9 to 12-inch lifts. Hooker shall compact the clay liner to ensure a uniform permeability of 0.0000001 centimeters per second or less. A plan, including design specifications for the vault(s) and location on site, shall be submitted to and approved by the

Director of the Department of Natural Resources prior to beginning construction.

B. Hooker shall construct the containment vault(s) with a minimum of eight (8) feet of clearance between the lowest point of the clay liner and the maximum elevation of the water table, determined at the site of the containment vault(s), unless a different clearance is specifically requested by Hooker and approved, in advance, by the Director of the Department of Natural Resources.

C. The vault(s) shall be constructed with an internal leachate collection system which will continuously collect and remove any and all leachate from the vault. Prior to the construction of the internal leachate collection system, Hooker shall submit detailed plans and specifications to the Director of the Department of Natural Resources and shall obtain his approval of such plans and specifications.

D. Plans shall further be provided to the Director of the Department of Natural Resources for review and approval for treatment and ultimate disposal of any and all leachate collected from the vault(s). Upon approval by the Director of the Department of Natural Resources of such plans, Hooker shall construct the leachate treatment and disposal system in accordance with such plans and specifications. Hooker will also provide a con-

tingency plan of action to be taken in the event the leachate collection system fails for any period of time exceeding twelve (12) hours. All plans, designs, and specifications required by this paragraph shall be submitted by Hooker to the Director of the Department of Natural Resources no later than one hundred-eighty (180) days after entry of this Judgment.

E. The vault(s) shall be constructed with an approved venting system to release internal gases, if any. This venting system shall provide for appropriate treatment of internal gases such that air quality is protected. Plans and specifications for this venting system shall be submitted to and approved by the Director of the Department of Natural Resources prior to construction.

F. Hooker shall construct a sufficient number of ground water monitoring wells to determine background water quality and provide an adequate and continuous ground-water monitoring system beneath the vault(s). Hooker shall maintain and continuously monitor this system. A plan for the number, size of wells, placement, and design of the monitoring system and monitoring frequency shall be reviewed and approved by the Director of the Department of Natural Resources. Upon approval by the Director of the Department of Natural Resources, Hooker shall construct and thereafter continuously operate this groundwater

monitoring system in accordance with the approved plan.

G. During filling of the vault(s), the hexachlorocyclopentadiene (hereinafter C-56) process wastes and other contaminated waste materials shall be covered on a daily basis so as to reduce void spaces and to prevent excessive settling. Each such layer shall be properly compacted. The cover may consist of soils from the waste areas or fly ash.

H. The top surface of the vault(s) must have adequate slope not to exceed one (1) foot of rise for every three (3) feet of horizontal distance. The purpose of this slope is to provide positive and continual surface water runoff away from the vault(s).

I. Hooker will: provide evidence of marketable title of the areas containing the vault(s), including a three hundred (300) foot buffer zone on all sides measured from the edge of the vault(s); provide a survey prepared by a licensed surveyor of the areas containing the vault(s) including the buffer zone; execute and deliver to the State of Michigan a document in recordable form (to be recorded, and to be filed with the Register of Deeds of Muskegon County by the Attorney General on behalf of the State of Michigan) placing the following restrictions, on

the property so identified in language acceptable to the Attorney General, which restrictions will run with the land and be binding upon all successor holders of any right, title, easements, or any other interests in the property so identified:

1. No vehicles, except vehicles needed and actually used for maintenance and inspection, shall be allowed within the areas which are enclosed by a sound and secure fence pursuant to Paragraph IV I 4.

2. No excavation or construction, except as necessary to maintain the integrity of the vault, shall be allowed after completion of the vault(s) in the areas which are enclosed by a sound and secure fence, pursuant to Paragraph IV I 4.

3. No uses of the property shall be made which may or will impair the integrity of the vault(s).

4. Hooker shall erect and it and its successors in interest shall thereafter continuously maintain until further order of the court: (a) a secure and sound fence enclosing the area containing the vault(s) at least fifty (50) feet measured from all edges of the vault; (b) one (1) granite marker for each gate which accurately identifies the material in the vault(s), states that it is toxic, and identifies the boundaries of the vault(s); and (c) a sign stating: "Warning Toxic Material Burial Area, KEEP OUT" inside

the fence, visible from each side.

5. Hooker shall notify the Attorney General of Michigan of its intent to convey any interest in land located in Section 30 or the North 1/2 of Section 31 in Montague Township, Muskegon County, Michigan. No conveyances of title, easement, or other interest in the property shall be consummated by Hooker without adequate and complete provision for continued maintenance of the vault(s) and the vault(s) monitoring system. For the purpose of assuring adequate maintenance of the vault(s) and the vault(s) monitoring system, no property owned by Hooker in the above sections shall be conveyed without prior written approval of the Attorney General of Michigan. Such approval by the Attorney General is not to be unreasonably withheld.

6. Until further Order of this Court, Hooker and its successors in interest will operate, maintain, and monitor the vault(s), the vault(s) groundwater monitoring system, and the groundwater purge treatment system. Hooker shall file as Appendix D of this Judgment, an executed guaranty by Occidental Petroleum Corporation in the amount of Two Million Dollars (\$2,000,000.00) to secure the cost of Hooker's obligations to maintain, monitor and operate the vault(s), the vault(s) groundwater monitoring system, and the groundwater purge treatment system. This guaranty shall continue for a period of fifty (50) years from the date of entry of this Judgment. Should Hooker fail to maintain, monitor or operate the vault(s), the vault(s)

groundwater monitoring system or the groundwater purge treatment system at any time during such period, the guarantor shall pay over to the State of Michigan a sufficient portion of such Two Million Dollars (\$2,000,000.00) necessary to procure substitute performance of such obligations.

7. Any governmental agency of the State of Michigan or its political subdivisions adversely affected by any violations of these restrictions may seek to enforce them by legal actions in the Circuit Court.

V. After the contents of Area X have been removed, the area will be filled with sand and completely covered with a minimum of three (3) feet of clay, with a particle-size gradation approved by the Director of the Department of Natural Resources, compacted in nine (9) to twelve (12) inch lifts to ensure a uniform permeability of 0.0000001 centimeters per second or less, except as provided for in Paragraph III G.

VI. Hooker shall dismantle the entire C-56 production facility and place all nonsalvageable materials into the containment vault(s) or into Area X prior to filling. All materials to be removed as salvage from the C-56 production facility shall be decontaminated as provided in Paragraph XIII. All solvents and other materials used for the decontamination shall be disposed of at a site and in a manner approved by the Director of the Department of Natural Resources.

VII. Hooker shall excavate all soils under the C-56 production facility from the surface of the ground to the depth of the water table and place all such soils into the containment vault(s). The area to be included in the excava-

tion is included in the drawing attached as Appendix B.

VIII. Notwithstanding any other provision of this Judgment, Hooker shall dispose of any and all C-56 production wastes and contaminated material now located on Hooker property, including two (2) tank trailers previously used for hauling C-56 residues, by placing such wastes in the containment vault(s) described herein.

IX. Notwithstanding any other provision of this Judgment, Hooker shall, as long as the containment vault(s) described herein remain open, place in the containment vault(s) any containers (including any remains thereof and surface soils in the immediate proximity of the container) of C-56 production waste material generated by Hooker, other than any C-56 waste material that was delivered by Hooker to Approved Industrial Removal Systems, Inc., for disposal between January 1, 1972, and June 1, 1977, which are found by the Court to have been placed on the land or buried at locations in the State of Michigan other than Hooker's 880-acre tract in Montague Township. A finding by the Court shall not be required in any instance where the parties, following written notice to Hooker from the Director of the Department of Natural Resources, agree to the placement in the vault(s) of any such containers of C-56 waste material discovered. As to any C-56 production waste material generated by Hooker which is discovered after closure of the vault(s) and any such material which was delivered by Hooker to Approved Industrial Removal Systems, Inc., for disposal between January 1, 1972, and June 1, 1977, the parties are left to such claims and defenses as they might otherwise have in other courts

or other causes, this consent judgment operating neither as an admission or waiver by the defendant nor as a release or bar to other or further litigation by plaintiffs.

X. After the contaminated wastes and soils have been moved, roads on and off the company property shall be dealt with as follows:

A. All existing unpaved roads on the Hooker Montague site shall be scraped to a minimum depth of four (4) inches with the scraped material placed into the containment vault(s).

B. After completion of work specified in Paragraph X A above, all roads to be used intermittently subsequent to site cleanup shall be covered with gravel.

C. After completion of work specified in Paragraph X A above, all roads to be used every day subsequent to site cleanup shall be paved or covered with gravel and oiled.

D. All paved roads on the Hooker Montague site subsequent to site cleanup shall be cleaned with the material collected placed into the containment vault(s).

E. Public road shoulders of the portions of Whitbeck Road and Old Channel Trail which border the Hooker Company premises shall be scraped and replaced. All scraped material shall be placed into the containment vault(s).

XI. The cleanup and disposal program will be completed in no more than three (3), two hundred (200) dry day construction seasons. Hooker shall complete the abatement program required

under this Judgment by no later than thirty-six (36) months after the date of this Judgment. The Court may, upon a showing of good cause, extend this period of time.

XII. During solid waste excavation, any liquid C-56 waste material in containers larger than fifty-five (55)- gallon drums shall be removed off site in a safe, secure manner for incineration at a facility approved by the Director of the Department of Natural Resources.

XIII. Hooker shall have the right to salvage and relocate the existing muriatic acid production facility to another area on the Hooker plant site. Any materials so relocated must be decontaminated by the following procedure:

A. Equipment will be washed with high-pressure water to remove any visible evidence of organic materials, loose scale and soil.

B. The materials will then be given a solvent wash with hexane or other suitable solvent, which will be sprayed or manually applied. This wash will be performed in such a manner that all visible evidence of hard, tarry, or clear organic materials will be removed prior to relocation.

C. The solvents and wash water used in such wash operations will be collected and disposed of in a manner approved in advance by the Director of the Department of Natural Resources.

D. Delicate instrumentation and electrical components may be cleaned without the high-pressure wash procedure, providing a thorough solvent wash is applied.

XIV. Within thirty (30) days after completion of the vault(s), Hooker will take test samples from the vault(s) ground-water monitoring well system and will perform analyses for those compounds listed in Appendix C. According to the test protocol specified in Appendix C. Hooker will sample and analyze, once every ninety (90) days, and report the results of such analyses to the Director of the Department of Natural Resources, for those compounds listed in Appendix C.

If approved by the Director of the Department of Natural Resources, Hooker may sample and analyze for an indicator compound(s) in lieu of all of the compounds listed in Appendix C.

XV. GROUNDWATER.

A. Within sixty (60) days of the entry of this Judgment Hooker shall furnish a detailed [one (1)-foot intervals] groundwater contour map showing the direction and rate of groundwater movement beneath the Hooker property.

B. Hooker shall submit plans and specifications to the Director of the Department of Natural Resources for a groundwater purge and treatment system within one hundred-eighty (180) days after the effective date of this Judgment. Subject to the provisions of Paragraph XV H, such system shall be continually operated and maintained to completely halt the flow of groundwater contaminated with chlorinated hydrocarbons into White Lake. Hooker shall implement the approved plan and demonstrate with field tests that the purge system is operating as designed within eighteen (18) months after the approval of the plan by the Director of the Department of Natural Resources.

C. Within ninety (90) days after the effective date of this Judgment, Hooker shall produce fence diagrams and any other charts, table, and diagrams necessary to depict the areal and vertical extent of contamination, and rate and direction of groundwater movement.

D. For purposes of this Judgment, the definition of groundwater contamination shall be determined by analysis for the compounds related to C-56 production, using analytical test levels of detectability as established by test protocol, as listed in Appendix C.

E. Two (2), three (3), and four (4)-inch wells may be used by Hooker to determine the piezometric surface of the water table. Two (2), three (3), and four (4)-inch wells may be used by Hooker to determine chemical quality of the aquifer(s) in question. Appropriate wells will be cased and maintained as monitoring/sampling wells until the groundwater cleanup project is completed. Plans and specifications detailing the location, number, and type [two (2), three (3), and four (4)-inch] of wells to be permanently operated and maintained as monitoring wells will be submitted to and approved by the Director of the Department of Natural Resources. Any water well removed from service must be plugged according to the Department of Natural Resources' specifications and approved by the local health department.

F. The areal and vertical extent of contaminated groundwater, including that entering White Lake from the

groundwater aquifer(s), shall be identified by Hooker by monitoring wells. Based on the extent of contamination, Hooker shall install a groundwater collection and treatment system such that contaminated groundwater is collected and treated, and that the movement of contaminated groundwater outside of the zone identified in Paragraph XV C above, and to White Lake, is completely halted. Contaminated groundwater now off-site must either be removed by off-site purge operations (if any such affected landowner consents to Hooker's entry on his land) or drawn back on site, purged, and treated in accordance with the plans submitted under Paragraph XV B. Wells shall be located on land and shall be installed and constructed in accordance with standard construction procedures. After the purge system has been in operation for one (1) year, Hooker shall reevaluate the areal and vertical extent of the zone of contamination to demonstrate if the movement of contaminated groundwater off-site has been halted, and, within four (4) months following such date, will submit such reevaluation plan for corrective measures, if necessary, to the Director of the Department of Natural Resources.

G. Each purge well shall be sampled by Hooker in accordance with the protocol in Appendix C on a monthly basis and analyzed for the compounds listed in Appendix C. The analytical results of these samples will be forwarded to the Department of Natural Resources in the waste water discharge monthly report which follows the receipt by Hooker of the results of the analyses, or within ninety (90) days

after the samples are collected, whichever is earlier. If approved by the Director of the Department of Natural Resources, Hooker may sample and analyze for an indicator compound(s) in lieu of all of the compounds listed in Appendix C.

H. Hooker shall operate and maintain such purge well of the groundwater collection and treatment system until such time as six (6) consecutive samples from the purge well for a six (6)-month period are no longer contaminated as determined in Paragraph XV D. After review and approval by the Director of the Department of Natural Resources, an individual purge well may be shut down. Sampling of any shutdown purge well shall continue monthly for an additional six (6) months, then quarterly for the next year thereafter, then annually for as long as required by the Director of the Department of Natural Resources. If any sample taken during monitoring of shutdown purge wells shows contamination, full operation as a purge well shall forthwith and continually be resumed. Subsequent shutdown of a restarted purge well shall be done in accordance with the terms of this paragraph, as if the well had never been shut down. If approved by the Director of the Department of Natural Resources, Hooker may sample and analyze for indicator compound(s) in lieu of full testing of all compounds listed in Appendix C.

I. The "Order for Preliminary Injunction To Install and Continuously Operate A Purge Well System and for Other Relief", entered by this Court on June 6, 1979, shall remain

in full force and effect until the groundwater purge and treatment system required by paragraph XV B, above, is fully operational, at which time it shall no longer have any force or effect.

XVI. Hooker shall provide a demonstration to the Director of the Department of Natural Resources that the well water it uses for solution mining does not, or will not under a proposed plan, cause a violation of its National Pollution Discharge Elimination System, Permit No. MI 0002631. Hooker shall further demonstrate that the well water does not cause unacceptable contamination levels in its products. Both such demonstrations shall be submitted within twelve (12) months of entry of this Judgment. A plan for preparing such demonstrations shall be developed by Hooker and submitted to and approved by the Director of the Department of Natural Resources within ninety (90) days of the date of this Judgment. The plan shall become a part of this Judgment. The Court shall have continuing jurisdiction with respect to this paragraph until Hooker provides both such demonstrations and secures approval of same by the Director of the Department of Natural Resources.

XVII. If residential or municipal water wells within or adjacent to the plume of contaminated groundwater to be identified pursuant to Paragraph XV are found unfit for domestic use by the Michigan Department of Public Health and/or the Muskegon County Health Department because of C-56 or other waste contaminants from Hooker, Hooker will provide a potable water supply, approved

by the State of Michigan and local Health Departments, to such homes for all domestic purposes until such time as the Michigan Department of Public Health or Muskegon County Health Department determines that the water wells are no longer unfit for domestic use due to such contaminants. This requirement is subject to the property rights of the landowner.

XVIII. The Court, pursuant to Sections 2(2) and 4(2) of the Michigan Environmental Protection Act, 1970 P.A. 127, MCLA 691.1202 and 691.1204, MSA 14.528 (202) and 14.528(204), hereby determines that the standards set out in this Judgment are reasonable, and directs the adoption of same for purposes of this matter. In the construction and filling of the containment vault(s), activities in compliance with this Judgment shall not constitute a violation of Air Pollution statutes.

XIX. This Judgment shall not constitute an admission of law or fact or evidence of same, nor of any violation of any law or regulation. The obligations of Hooker under this Judgment which require Hooker to first obtain a State, Federal, or Local Permit shall be conditioned upon Hooker's receipt of such permits. The rights of persons not parties hereto shall not be affected by the terms of this Judgment.

XX. AIR QUALITY. Hooker shall comply with the following emission limits and air quality standards at the property boundary for the period specified.

A. During construction of the vault(s), excavation of material, disposal of contaminated materials or associated activities, the following conditions shall apply:

1. All relocation of drummed C-56 wastes from any of the areas and sludges from Area X shall be conducted when ambient air temperatures are below fifty degrees (50°) F. Hooker shall monitor ambient air levels of C-56 at the property line. If the eight (8)-hour time-weighted average during construction activity exceeds 0.1 ppb (1/100th of the Threshold Limit Value) by volume C-56 at the property line, Hooker will immediately notify the Department of Natural Resources. If so ordered by the Director of the Department of Natural Resources, or his designated representative, the Company shall cease and/or revise its construction activity.

2. In order to minimize total air-suspended particulates, Hooker will implement a dust control program approved by the Director of the Department of Natural Resources which will provide for treating roads and other potential dust sources with oil, water, and/or suitable dust suppression materials. The total suspended particulate shall not exceed 150 ug/m³ measured at company property line, twenty-four (24)-hour average.

3. Asbestos emissions shall comply with all applicable National Emission Standards for Hazardous Air Pollutants, 40 CFR S 61(B) (1978).

4. Odors resulting from construction, excavation, and disposal operations shall not violate Michigan Air Pollution Control Commission Rule 336.46, as amended.

5. In the event the standards set out in Paragraphs XX A 1, XX A 2, XX A 3, or XX A 4 are exceeded, Hooker shall immediately notify the Department of Natural Resources of such fact, and will cease and/or revise its construction activity if so instructed by the Director or his designated representative.

6. If the work is stopped by order of the Director or his designated representative for any reason as permitted in Paragraphs XX and XXI, the time period for completion of work required herein shall be extended for a period equal to the period of work stoppage.

B. Hooker will submit and obtain approval by the Director of the Department of Natural Resources an Air Quality Monitoring Program designed to determine compliance with the standards set forth in Paragraphs XX A 1, XX A 2, XX A 3 and XX A 4. Such program shall be implemented prior to construction, excavation, and disposal operations.

XXI. After closure of the vault(s), the following conditions shall apply:

A. Ambient air levels of C-56 shall not exceed current detectable levels (0.02 ppb by volume) at the property line. In the event this standard is exceeded,

Hooker shall immediately notify the Department of Natural Resources of such fact. If so directed by the Director of the Department of Natural Resources, Hooker shall develop and implement such program as approved by the Director of the Department of Natural Resources to reduce C-56 emissions below the detectable level.

B. Hooker will conduct a sampling program approved by the Director of the Department of Natural Resources to insure compliance with Paragraph XXI A above.

XXII. Hooker shall develop and implement a program as approved by the Director of the Department of Natural Resources to keep vehicles providing goods and services relevant to waste containment activities and using public roads segregated from highly-contaminated areas of construction, excavation, or areas to be occupied by heavy equipment for the purpose of moving waste materials. All heavy equipment, vehicles, or other devices used for construction excavation and exposed to contaminated materials shall not leave the plant property without proper decontamination. Such decontamination will consist of a high-pressure water wash to remove soils or other contaminated materials. Those vehicles utilized for movement or compacting of C-56 residues, such as drums, will be given a further solvent wash to remove any visible evidence of C-56 residues. Such solvents and wash water will be collected and properly disposed of in a manner approved by the Director of the Department of Natural Resources.

XXIII. Hooker will immediately cooperate with the Michigan Department of Natural Resources in a study to determine the concentrations of the chemical dioxin (tetrachlorodioxin) at

and associated with the Company's Montague, Michigan facility if any. Such study will include chemical analyses for dioxin to determine the concentrations in the soils, in the surface water discharge to White Lake, in the fish and sediments of White Lake, and in the groundwater. The Department of Natural Resources shall collect these samples and transmit them to a laboratory agreed to by both parties. The cost for the analyses of up to thirty (30) samples shall be borne directly by Hooker. The results of such study will be provided both to Hooker and to the Department of Natural Resources.

XXIV. Hooker shall pay to the State of Michigan the sum of One Million Dollars (\$1,000,000.00) within ninety (90) days of entry of this Consent Judgment. Such payment is made in full discharge and release of the following claims:

A. For costs which have been or will be incurred by the State of Michigan for past surveillance of Hooker's Montague facility and for future monitoring of: (1) Hooker's Montague facility; and (2) the remedial program set out in this Consent Judgment, and

B. For any fines, penalties, damages, and other relief which Plaintiffs have sought in the Complaint in this proceeding, including without limitation, any alleged damage to the groundwater or surface waters of the State of Michigan up to the date of entry of this Judgment, due to contaminants emanating from Hooker's 880-acre tract in Montague Township, if any, and the improper storage or disposal of waste material in the areas described in Paragraph III and Appendix A, if any, and

C. For any fines, penalties, damages, and other relief which the State of Michigan or any of its duly authorized offices or agencies might have sought for alleged past violations of Hooker's National Pollution Discharge Elimination System (NPDES) Permit No. MI 0002631, effective July 1, 1977, as previously modified by the Final Order of Abatement, dated September 24, 1977, and Order of this Court, dated June 6, 1979, including any alleged discharge of material through Outfall 001 previously reported to the Plaintiffs in Hooker's Monthly Operating Reports for the Months of July, 1978 through September, 1979. These discharges shall include Carbon Tetrachloride, Trichlorethylene, and Chloroform discharges through September 30, 1979, which were first reported by Hooker on May 9, 1979, to the Department of Natural Resources. Fifty Thousand Dollars (\$50,000.00) of the sum set forth above shall be deemed to be paid in satisfaction of any liability for such violations.

In consideration of the Abatement Program and payments described above, Hooker shall incur no further liability or penalty for any leaching of contaminants into the groundwater under its 880-acre tract in Montague Township from the areas described in Paragraph III, prior to, during, or subsequent to construction and filling of the vault(s).

XXV. Wherever this Judgment requires approval of plans or procedures by the Department of Natural Resources, such approval shall not be unreasonably withheld.

XXVI. ACCESS. Until all work is completed and accepted by the Plaintiffs, the Michigan Department of Natural Resources shall have authority to enter all property of Hooker in Muskegon County at all reasonable times for the purposes of inspecting records, operating logs, contracts, and the progress of Hooker in designing, engineering, installing, constructing, operating, and maintaining the abatement and cleanup program described above, and further for the purpose of verifying the data submitted to the Plaintiffs by Hooker concerning such programs. Hooker shall forthwith honor all reasonable requests for such access by the Michigan Department of Natural Resources conditioned only upon presentation of proper credentials.

XXVII. The work Hooker is ordered to complete under this Consent Judgment shall be performed within the time periods set out, unless performance is delayed by events which constitute excusable delay. Excusable delay is the delay in the completion or scheduling of the work which arises from unforeseeable causes beyond the control and without fault or negligence of Hooker. In the event of any delay subject to the provisions of this Paragraph, an order of the Court will not be required if the parties can agree to any necessary extension of time limits. Should the parties fail to agree, either party may, upon notice to the other, petition the Court to extend or enforce the time limits of this Judgment.

XXVIII. ENFORCEMENT. This Court specifically retains jurisdiction over both the subject matter hereof and the parties

hereto to enforce this Judgment until December 31, 2030,
and thereafter until jurisdiction in this cause is terminated
by Order of this Court.

XXIX. The Court having determined on October 30, 1979,
after review of this Judgment and taking Proofs, that
additional terms and conditions should be incorporated
into this Judgment, and the parties having consented and
agreed:

A. The clay required in paragraphs IV(A) and
V of this Judgment shall, as a minimum, have a particle
size gradation which meets the following criterion:
Allow greater than 30 percent passage through a number
200 sieve (ASTM Test D 1140).

B. All provisions of this Judgment requiring
Hooker to operate, maintain and monitor the vault(s),
the vault(s) groundwater monitoring system, and the
groundwater purge treatment system shall be the
obligations of Hooker, its successors in interest,
and its assigns.

MICHAEL G. HARRISON

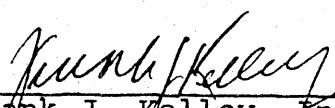
CIRCUIT JUDGE

Countersigned:

ELIZABETH L. MURPHY

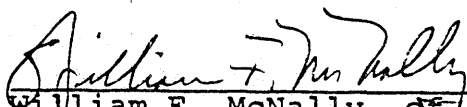
Deputy Clerk

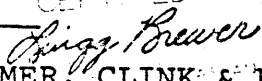
APPROVED AS TO FORM
AND CONTENT:



Frank J. Kelley, individually, and
as Attorney for Plaintiffs

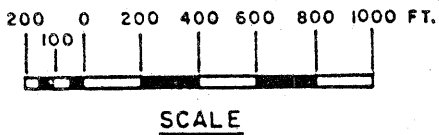
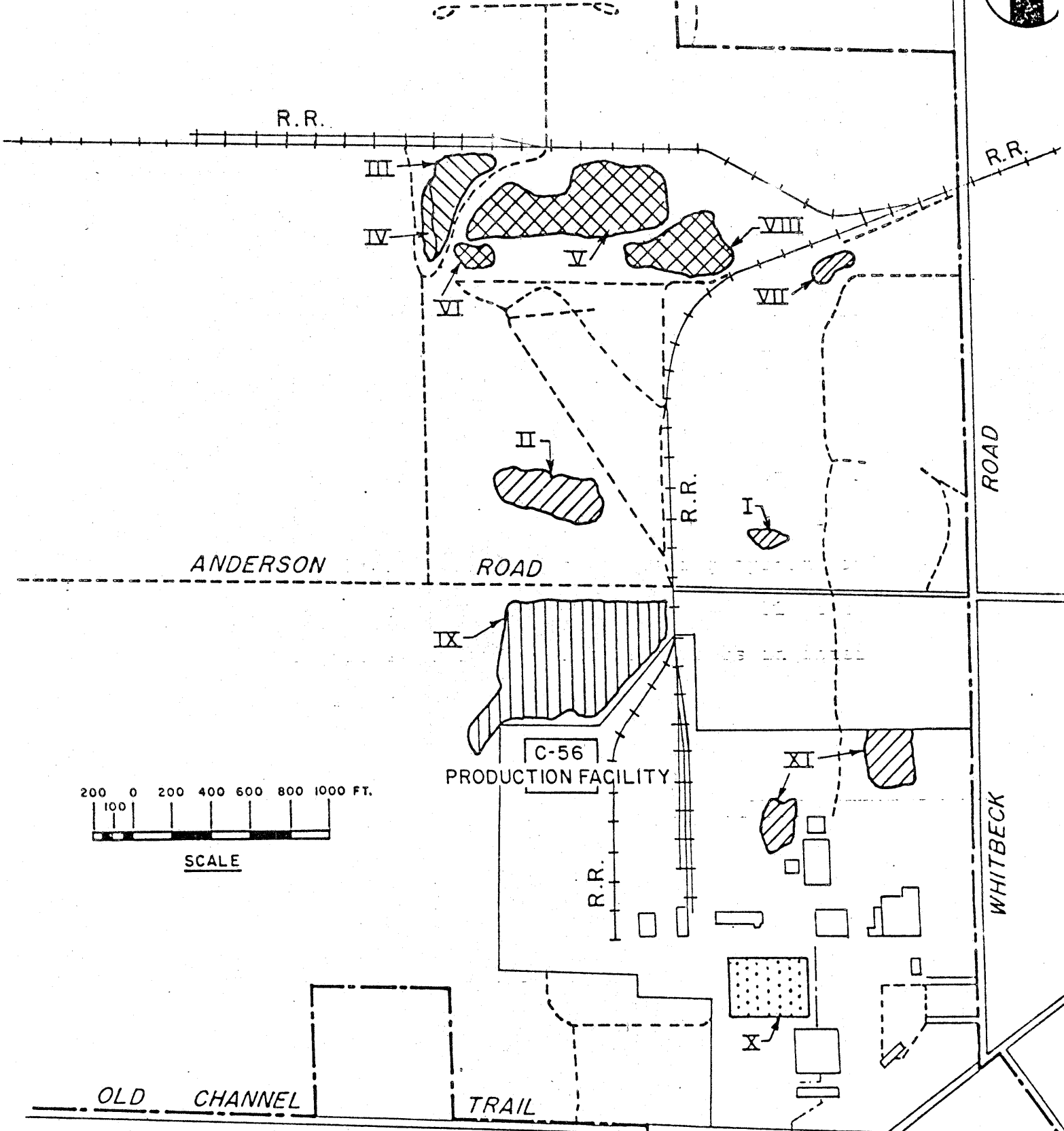
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



William F. McNally, of 
LANDMAN, HATHAWAY, LATIMER, CLINK & ROBB
Attorneys for Defendant

CERTIFIED E

APPENDIX 'A'
 WASTE SITES
 MONTAGUE MICH. PLANT

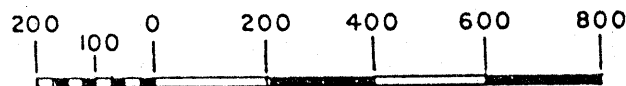
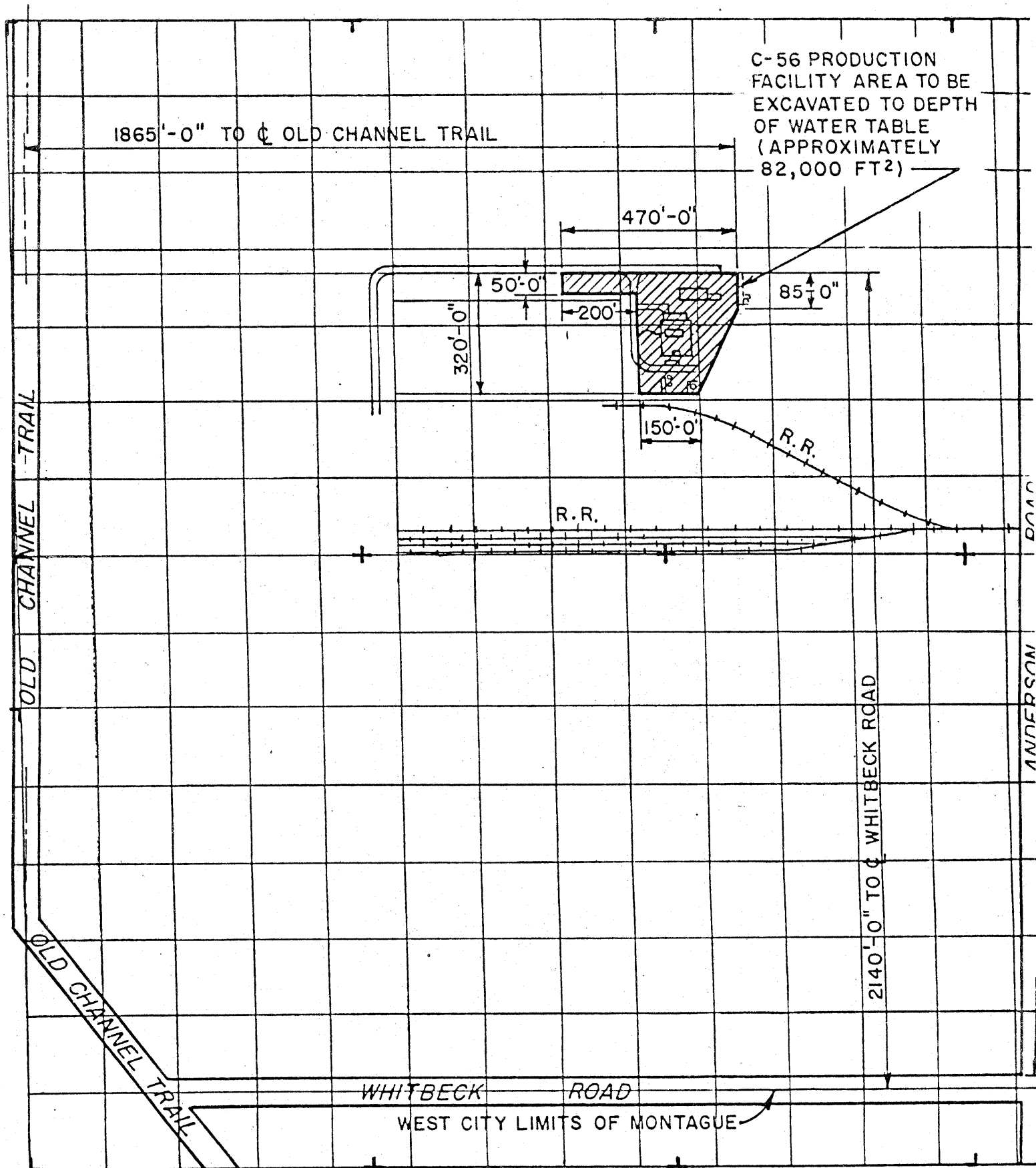


LEGEND

-  EXCAVATION TO 3" BELOW SURFACE
-  EXCAVATION TO WATER TABLE
-  EXCAVATION UP TO DEPTH OF 2'
-  EXCAVATION TO DEPTH OF 5' BELOW BRINE SLUDGE
-  EQUALIZATION POND

WHITE LAKE
 A-

APPENDIX 'B'
MONTAGUE MICH. PLANT



SCALE

APPENDIX C

The level of detectability of chlorinated hydrocarbons and the laboratory test protocol for determining same are as follows:

Detectability Required
(ppb = parts per billion)

<u>Compound</u>		<u>Test Method</u>
Chloroform (CHCl ₃)	1 ppb	A
Carbon tetrachloride (CCl ₄)	1 ppb	A
Trichloroethylene (C ₂ HCl ₃)	1 ppb	A
Perchloroethylene (C ₂ Cl ₄)	1 ppb	A
Hexachlorobutadiene (C-46)	0.05 ppb	B
Hexachlorocyclopentadiene (C-56)	1 ppb	B
Octochlorocyclopentene (C-58)	1 ppb	B
Hexachlorobenzene (C-66)	0.2 ppb	B
Mirex	1 ppb	B

Test Method

1. Laboratory Glassware Preparation:

The laboratory glassware is first washed with a liquid detergent and rinsed with distilled water. Then it is soaked in a chromic acid cleaning solution for 15 minutes. It is finally rinsed successively with distilled water, acetone, hexane, acetone, and finally distilled water and dried at 103°C for approximately one hour. The solvents used exclusively are pesticide grade Burdick & Jackson, distilled in glass. This procedure will remove organic interference from the laboratory ware.

2. Sample Collection and Preservation Technique:

A. Test Method - A

All samples for low bioler analyses are taken in 125 ml (milliliter) hypo-vials. The hypo-vials are filled with sample to the

very top so that no air space remains and a teflon-lined silicone septa is used to seal the sample vial. The vials are then stored at 2°C for shipment to the analytical laboratory.

B. Test Method - B

To a cleaned, one-liter amber bottle, add approximately 50 ml (milliliters) of Burdick & Jackson distilled in glass hexane. Approximately 900 ml (milliliters) water sample is added to the bottle and a teflon-lined cap is used to seal the sample. No tape is used to further seal the bottle, as it could cause contamination of the hexane layer. The samples are stored at 2°C for shipment to the analytical laboratory.

3. Method of Analysis:

A. Test Method - A

The low boiler components are analyzed by the static head space technique, using a gas chromatography with an electron capture detector.

B. Test Method - B

1) The sample is first extracted with the hexane which was initially in the sample bottle during the collection process. Two subsequent extractions are also carried out using hexane containing 15 percent benzene.

2) The hexane-benzene solvent mixture is concentrated by either Kuderna-Danish evaporator concentrator or Brinkman Model SC-48 sample concentrator. The concentrate is analyzed directly by gas chromatography using an electron capture detector.

An alternate procedure for high boiler analysis is to take samples in hypo-vials for high boilers just as they are taken for low boilers. The extraction is carried out in the hypo-vial on 100 ml (milliliters) of water using 10 ml (milliliters) of hexane and the Brinkman polytron homogenizer to complete the extraction. Samples are then concentrated using the Brinkman concentrator and the hexane analyzed directly by gas chromatography-electron capture detector.

For Mirex samples which contain significant interferences, the extract may be cleaned with florisil prior to gas chromatography-electron capture detection analysis. As an alternative to florisil clean-up glass capillary chromatography with electron capture detection may be used.

4. Quality Control

Laboratory quality control of the above test methods will be maintained with precision being determined through duplicate sample analysis with accuracy determined through analysis of spiked samples. All such quality control data will be provided to the Director of the Department of Natural Resources.

A P P E N D I X - D

GUARANTY

GUARANTY, made this 24th day of October, 1979,
by OCCIDENTAL PETROLEUM CORPORATION, A California Corporation,
of Los Angeles, California, (hereinafter called "Occidental"),
to the STATE OF MICHIGAN (hereinafter called "State").

1. General Agreement. The State has entered into a Consent Judgment in a case filed in the Circuit Court for the County of Ingham, State of Michigan, File No. 79-22878-CE, the terms of which require Hooker Chemicals & Plastics Corp., the Defendant therein, (hereinafter called "Hooker") to perform certain obligations in regard to the operation and maintenance of certain vault(s), vault(s) groundwater monitoring systems, and groundwater purge treatment systems, such obligations being set forth specifically in paragraph No. IV I 6 of said Consent Judgment. The State entered into said Consent Judgment on the condition that Hooker obtain this Guaranty from Occidental to secure the costs of such maintenance and operation for a period of Fifty (50) years, such Guaranty not to exceed the sum of Two million and no/100 Dollars (\$2,000,000.00).

2. Liabilities Defined. The term "liability," as used in this Guaranty, shall mean the reasonable cost of required maintenance, monitoring, or operation of the vault(s), vault(s) groundwater monitoring system, or groundwater purge treatment system, as provided in paragraph No. IV I 6 of said Consent Judgment, which Hooker fails or refuses to perform or cause to be performed, which the State, pursuant to the Consent Judgment, after notice to Hooker, performs or causes to be performed in lieu thereof. Should the necessity for, or adequate performance of, any such maintenance, monitoring, or operation be in dispute, any party to the Judgment or Occidental may petition the Circuit Court of Ingham County for determination of such dispute, in which event Occidental's performance under this Guaranty shall be suspended until final determination of such dispute.

3. Guaranty. Occidental guarantees to the State the payment of such liability, if incurred, within Thirty (30) days of demand therefor.

4. Duration. The obligation of Occidental hereunder shall continue for a period of Fifty (50) years from the date of entry

of the Consent Judgment set forth above, at the expiration of which time, Occidental's obligation hereunder shall terminate.

5. Maximum of Guaranty. In no event shall Occidental be liable for any amount in excess of Two Million and no/100 Dollars (\$2,000,000.00), for the failure or refusal of Hooker to perform as required in the Consent Judgment, and the payment of such amount shall fully discharge Occidental's obligations hereunder.

6. Remedies. The State may, at its option, proceed against Occidental to collect the obligation covered by this Guaranty, without first proceeding against Hooker, or any other person, firm, or corporation.

7. Modification. This instrument contains the entire agreement between Occidental and the State. Neither party shall be bound by any verbal or written agreement, statement, term, or condition not contained within this instrument.

8. Choice of Law. This Guaranty is established and accepted by the State, under the Laws of the State of Michigan, and all questions concerning its validity and construction shall be determined under such laws.

9. Consent to Jurisdiction. Occidental consents to the jurisdiction of the Circuit Court for the County of Ingham, State of Michigan, should any action to enforce this Guaranty be necessary, but solely for this purpose.

OCCIDENTAL PETROLEUM CORPORATION

By *James G. Jordan*

Its *President*

C E R T I F I C A T E

I, PAUL C. HEBNER, Secretary of Occidental Petroleum Corporation, a corporation organized and existing under the laws of the State of California, do hereby certify that at a meeting of the Board of Directors of the said corporation duly held on October 18, 1979, at which a quorum was present and acting throughout, the resolution set forth in Exhibit "A" hereto was duly adopted, and that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of Occidental Petroleum Corporation this 19th day of October, 1979.



Paul C. Hebner
Secretary

(corporate seal)

WHEREAS, Hooker Chemicals & Plastics Corp. ("HCPC"), an indirect wholly-owned subsidiary of Occidental Petroleum Corporation, and the State of Michigan have agreed on the form and content of a Consent Judgment to be entered in an action filed in the Circuit Court for the County of Ingham, Michigan, File No. 79-22878-CE.

WHEREAS, the terms of the proposed Consent Judgment require that HCPC operate, maintain and monitor the vault(s) and groundwater purge treatment systems specified therein and the State is willing to enter into the Consent Judgment on the condition that this Corporation guarantee the cost of such maintenance and operation for a period of fifty (50) years in an amount not to exceed Two Million Dollars (\$2,000,000). This Corporation proposes to guarantee such obligation, which guarantee shall be filed as an appendix to the Consent Judgment.

RESOLVED, that the Guarantee of this Corporation to the State of Michigan in the form attached hereto as Exhibit "1" and incorporated by this reference, be and hereby is approved and ratified.

FURTHER RESOLVED, that the President or any Vice President of this Corporation be, and each of them hereby is, authorized and empowered to execute and deliver in the name and on behalf of this Corporation the above described Guarantee (and his action in doing so is hereby ratified) in such final form as he may determine, his execution thereof to be conclusive evidence of such approval and to take any and all further actions and sign all other documents which he deems necessary or appropriate to carry out the purposes of this resolution.

Exhibit "A"

2. Liabilities Defined. The term "liability," as used in this Guaranty, shall mean the reasonable cost of required maintenance, monitoring, or operation of the vault(s), vault(s) groundwater monitoring system, or groundwater purge treatment system, as provided in paragraph No. IV I 6 of said Consent Judgment, which Hooker fails or refuses to perform or cause to be performed, which the State, pursuant to the Consent Judgment, after notice to Hooker, performs or causes to be performed in lieu thereof. Should the necessity for, or adequate performance of, any such maintenance, monitoring, or operation be in dispute, any party to the Judgment or Occidental may petition the Circuit Court of Ingham County for determination of such dispute, in which event Occidental's performance under this Guaranty shall be suspended until final determination of such dispute.

3. Guaranty. Occidental guarantees to the State the payment of such liability, if incurred, within Thirty (30) days of demand therefor.

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of the Consent Judgment set forth above, at the expiration of which time, Occidental's obligation hereunder shall terminate.

5. Maximum of Guaranty. In no event shall Occidental be liable for any amount in excess of Two Million and no/100 Dollars (\$2,000,000.00), for the failure or refusal of Hooker to perform as required in the Consent Judgment, and the payment of such amount shall fully discharge Occidental's obligations hereunder.

6. Remedies. The State may, at its option, proceed against Occidental to collect the obligation covered by this Guaranty, without first proceeding against Hooker, or any other person, firm, or corporation.

7. Modification. This instrument contains the entire agreement between Occidental and the State. Neither party shall be bound by any verbal or written agreement, statement, term, or condition not contained within this instrument.

8. Choice of Law. This Guaranty is established and accepted by the State, under the Laws of the State of Michigan, and all questions concerning its validity and construction shall be determined under such laws.

9. Consent to Jurisdiction. Occidental consents to the jurisdiction of the Circuit Court for the County of Ingham, State of Michigan, should any action to enforce this Guaranty be necessary, but solely for this purpose.

OCCIDENTAL PETROLEUM CORPORATION

By _____

Its _____

RESTRICTIVE COVENANTS

Hooker Chemicals & Plastics Corp., a New York corporation, Post Office Box 728, Niagara Falls, New York. 14302, is the record owner of the following described premises in the Township of Montague, Muskegon County, Michigan, to-wit:

SEE ATTACHED EXHIBIT - A

Hooker is in the process of constructing on a portion of its property above described, burial vaults for the storage of toxic material, pursuant to a Consent Judgment entered in the Circuit Court for the County of Ingham, State of Michigan, File No. 79-22878-CE; the location of such vaults being described in Appendix A, attached hereto, and hereby made a part hereof.

NOW, THEREFORE, these Restrictive Covenants are executed by Hooker Chemicals & Plastics Corp., to insure the care, maintenance, and monitoring of said vaults for the safety of the people of the State of Michigan, to-wit:

(1) No vehicles, except vehicles needed and actually used for maintenance and inspection, shall be allowed within the areas which are enclosed by a sound and secure fence, pursuant to Paragraph (4), below.

(2) No excavation or construction, except as necessary to maintain the integrity of the vault(s), shall be allowed after completion of the vault(s) in the areas which are enclosed by a sound and secure fence, pursuant to Paragraph (4), below.

(3) No uses of the property shall be made which may or will impair the integrity of the vault(s).

(4) Hooker shall erect, and it and its successors in interest, shall thereafter continuously maintain until further order of the Court: (i) a secure and sound fence enclosing the area containing the vault(s) at least Fifty (50) feet measured from all edges of the vault; (ii) one granite marker for each gate which accurately identifies the material in the vault(s), states that it is toxic, and identifies the boundaries of the vault(s); and, (iii) a sign stating: "Warning, Toxic Material Burial Area, KEEP OUT," inside the fence, visible from each side.

(5) Hooker shall notify the Attorney General of Michigan of its intent to convey any interest in land located in Section 30 or the North 1/2 of Section 31 in Montague Township, Muskegon County, Michigan. No conveyance of title, easement, or other interest in the property shall be consummated by Hooker without adequate and complete provision for continued maintenance of the vault(s) and the vault(s) groundwater monitoring system. For the purpose of assuring adequate maintenance of the vault(s) and the vault(s) monitoring system, no property owned by Hooker in the above sections shall be conveyed without prior written approval of the Attorney General of Michigan. Such approval by the Attorney General is not to be unreasonably withheld.

(6) Until further Order of the Court, set forth above, Hooker and its successors in title will maintain and monitor the

EXHIBIT - A TO RESTRICTIVE COVENANTS

DATED OCTOBER 24, 1979

The North half of the Northeast quarter, the Southwest quarter of the Northeast quarter, the South half of the Northwest quarter, the Northwest quarter of the Southwest quarter, except commence at the West quarter corner of Section 30, thence South 88° 49' 36" East along the East and West quarter line of said section 309.13 feet, thence South 48° 07' 33" East 442.9 feet, thence Southeasterly 473.23 feet on a 666.2 foot radius curve to the left the long chord of which bears South 68° 28' 36" East 463.35 feet, thence South 88° 49' 56" East to the East line of the Northwest quarter of the Southwest fractional quarter of said section, thence South 0° 15' 36" East 100.04 feet, thence North 88° 49' 36" West 786.6 feet, thence Southwesterly 859.58 feet to the West line of said Section 30, on a 666.2 foot radius curve to the left the long chord of which bears South 54° 12' 54" West 801.19 feet, thence North 0° 44' 06" West 1032.49 feet to the place of beginning, the Northeast quarter of the Southwest quarter, the South half of the Southwest quarter, the Southeast quarter, the West 5 acres of the East half of the Northwest quarter of the Northwest fractional quarter, all in Section 30, Town 12 North, Range 17 West.

The North half of the Northeast quarter, the South half of the Northeast quarter, except the West 6 acres thereof, the Northeast quarter of the Northwest quarter, the West half of the Northwest quarter, the West quarter of the Southeast quarter of the Northwest quarter, the East 15 acres of the North half of the Southeast quarter of the Northwest quarter, the East half of the Southwest quarter of the Southeast quarter of the Northwest quarter, and;

Government Lot 1, except commence on the East and West quarter line 958.78 feet East of the center of Section 31 for place of beginning, thence South 2500.08 feet more or less to shore of White Lake to a point 21 feet Westerly of an iron stake on the West line of the East 20 acres of the West half of Southeast quarter near the original meander line of White Lake and 2500.08 feet South of an iron stake on said East and West quarter line 965.58 feet East of the center of said Section 31 thence Easterly along shore of White Lake 700 feet, more or less, thence North 2500.08 feet, more or less, to said East and West quarter line, thence West 700 feet to place of beginning, all in Section 31, Town 12 North, Range 17 West.

Lots 1, 2, 21, 22, and 23 of Blueberry Ridge, Section 31, Town 12 North, Range 17 West.



HOOKER Chemicals & Plastics Corp.

345 THIRD STREET, BOX 728 NIAGARA FALLS, N.Y. 14302

CHECK No. 03 001065

October 19, 1979

66-49 XXX
531

PAY

EXACTLY ONE THOUSAND DOLLARS

DOLLARS \$1,000,000.00

HOOKER CHEMICALS & PLASTICS CORP.

TO THE ORDER OF
State of Michigan
Law Building
Lansing, Michigan 48913

WACHOVIA BANK AND
TRUST COMPANY, N.A.
WINSTON-SALEM,
NORTH CAROLINA 27102

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