

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WASHTENAW

FRANK J. KELLEY, Attorney General
for the State of Michigan, ex rel,
MICHIGAN NATURAL RESOURCES COMMISSION,
MICHIGAN WATER RESOURCES COMMISSION,
and MICHIGAN DEPARTMENT OF NATURAL
RESOURCES,

Plaintiffs,

v

GELMAN SCIENCES, INC.,
a Michigan corporation,

Defendant.

File No. 88-34734-CE

Honorable ~~Patrick J. Conlin~~
MELINDA MORRIS

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AMENDMENT TO CONSENT JUDGMENT

A Consent Judgment was entered in this case on October 26, 1992. The Consent Judgment requires Defendant, Gelman Sciences, Inc., to implement various remedial actions to address environmental contamination in the vicinity of Defendant's property in Scio Township, subject to the approval of the Michigan Department of Natural Resources ("MDNR").

Since the entry of the Consent Judgment, Executive Order 1995-18 reorganized the MDNR and transferred the MDNR functions relevant to this action to a new Michigan Department of Environmental Quality ("MDEQ").

Since the entry of the Consent Judgment, state environmental laws relevant to this action, including the former Michigan Environmental Response Act, 1982 PA 307, as amended, have been recodified and amended as Part 201 of the Natural Resources and Environmental Protection Act ("NREPA"), 1994 PA 451, as amended, MCL 324.20101 et seq. Those amendments have changed cleanup criteria, MCL 324.20120a, and, in MCL 324.20102a, required the MDEQ to approve requests by persons implementing response activities to change plans for such response activity to be consistent with the new cleanup criteria.

Defendant has requested the MDEQ to approve changes in the Remedial Action Plan attached to the Consent Judgment. The MDEQ has agreed that certain changes to the Remedial Action Plan are appropriate.

The Parties have agreed that it is appropriate to establish schedules for submittal and completion of certain remaining response activities at the site.

THEREFORE, the Parties agree to this Amendment to the Consent Judgment ("Amendment") and such Amendment is ordered, adjudged, and decreed as follows:

FIRST, modify Sections III.G, H, and N to read as follows:

G. "Groundwater Contamination" or "Groundwater Contaminant" shall mean 1,4-dioxane in groundwater at a concentration in excess of 77 micrograms per liter ("ug/l") as determined by the sampling and analytical method(s) described in Attachment B.

H. "MDEQ" shall mean the Michigan Department of Environmental Quality, the successor to the Michigan Department of Natural Resources ("MDNR") and to the Water Resources Commission. All references to the "MDNR" or to the "Water Resources Commission" in this Consent Judgment shall be deemed to refer to the MDEQ.

N. "Soil Contamination" or "Soil Contaminant" shall mean 1,4-dioxane in soil at a concentration in excess of 1500 ug/kg as determined by the sampling and analytical method(s) described in Attachment C or other higher concentration limit derived by means consistent with Mich Admin Code R 299.5711(2) or MCL 324.20120a.

SECOND, modify Section V.A.5 to read as follows:

5. Treatment and Disposal. Groundwater extracted by the purge wells(s) in the Evergreen System shall be treated as necessary using ultraviolet light and oxidizing agents or such other method as approved by the MDEQ and disposed of in accordance with the Evergreen System design approved by the MDNR or MDEQ. The options for such disposal are the following:

THIRD, insert new Section V.A.7 to read as follows:

7. On August 15, 1996, Defendant submitted to the MDEQ a written report based upon groundwater monitoring data and modeling, evaluating whether the existing Evergreen System is intercepting and containing the leading edge of the plume of groundwater contamination in the vicinity of the Evergreen Subdivision area. Unless that report demonstrates to the MDEQ's satisfaction that the existing Evergreen System is meeting that objective, Defendant shall, at MDEQ's written request, install additional monitoring and/or purge wells as needed to ensure that the objectives of the Evergreen System are achieved.

FOURTH, modify Section V.B.1 to read as follows:

1. Objectives. For purposes of the Consent Judgment, the "Core Area" means that portion of the Unit C3 aquifer containing 1,4-dioxane in a concentration exceeding 500 ug/l. The objectives of the Core System are to intercept and contain the migration of groundwater from the Core Area and remove contaminated

groundwater from the Core Area until the termination criterion for the Core System in Section V.D.1 is satisfied.

FIFTH, modify the last clause of Section V.B.2 to read as follows:

(c) the discharge level for 1,4-dioxane in groundwater to be reinjected in the Core Area shall be established based upon performance of further tests by Defendant on the treatment technology and shall, in any event, be less than 77 ug/l.

SIXTH, modify Section V.B.4 to read as follows:

4. Surface Water Discharge Alternative. Defendant shall, not later than September 30, 1996, submit to MDEQ for review and approval Defendant's design for the Core System, a schedule for implementing the design, an operation and maintenance plan for the System, and an effectiveness monitoring plan for the System. The Core System shall include groundwater purge wells as necessary to meet the objectives described in Section V.B.1. The design shall include, at a minimum, three purge wells.

Purged groundwater from the Core Area System shall be treated with ultraviolet light and oxidizing agent(s) or such other method approved by the MDEQ to reduce 1,4-dioxane concentrations to the level as required by NPDES Permit No. MI-008453, as amended or reissued. Discharge to the Honey Creek tributary shall be in accordance with NPDES Permit No. MI-008453, as amended or reissued.

SEVENTH, modify Section V.B.5 to read as follows:

5. Implementation of Program. Upon approval by the MDEQ, Defendant shall install the Core System according to the approved schedule and thereafter continuously operate and maintain the System according to the approved plans until Defendant is authorized to terminate operation pursuant to Section V.D. Defendant may thereafter, and at its option, continue purge operations as provided in this Section.

In any event, Defendant shall, beginning not later than December 28, 1996, continuously operate groundwater purge wells in the Core Area System at the rate of at least 65 gallons per minute until termination is authorized pursuant to this Judgment. This initial, minimum purging rate requirement is intended solely as a means of assuring progress toward remediation of the Core Area by a date certain and shall not be construed as an indication that the rate is sufficient to meet the objectives of the Core System.

EIGHTH, add a new Section V.B.7 to read as follows:

7. Modification of Program. Defendant may, at its option, propose to MDEQ for review and approval modification(s) to the Core System, provided such modification(s) will satisfy the objectives of the Consent Judgment as defined in Section V.B.1. Any proposed modification involving groundwater reinjection shall satisfy the requirements of Section V.B.3. If approved by the MDEQ, the modification(s) shall be implemented according to MDEQ approval plan(s) and schedule(s).

NINTH, modify Section V.C.3 to read as follows:

3. Remedial Investigation. No later than April 28, 1997, Defendant shall submit to the MDEQ for its review and approval a revised work plan for remedial investigation and design of the Western System and a schedule for implementing the revised work plan. The revised work plan shall include plans for installation of a series of test/purge wells, conduct of an aquifer performance test(s), groundwater monitoring, an operations and maintenance plan, and system design.

TENTH, modify Section V.D.1 as follows:

Change 3 ug/l to 77 ug/l and change 60 ug/l to 77 ug/l.

ELEVENTH, modify Section V.E.1 to read as follows:

1. For systems with a termination criterion of 77 ug/l, for a period of five (5) years after cessation of operation of any purge well, Defendant shall continue monitoring the purge well and/or associated monitoring wells, in accordance with the approved monitoring plan, to verify that the concentration of 1,4-dioxane in the groundwater does not exceed the termination criterion. If such post-termination monitoring reveals the presence of 1,4-dioxane in excess of the termination criterion, Defendant shall immediately notify MDEQ and shall collect a second sample within fourteen (14) days of such finding. If the second sample confirms the presence of 1,4-dioxane in excess of the termination criterion, Defendant shall restart the associated purge well system.

TWELFTH, add a new Section V.F to read as follows:

F. Minimum Monitoring. In the event that any groundwater system provided for in Section V is not operating for any reason other than compliance with the termination criteria of Section V.D, Defendant shall, not later than November 30, 1996, and at least semi-annually thereafter, collect and analyze for 1,4-dioxane samples from groundwater monitoring wells designated MW-15D, MW-16, MW-21, MW-28, MW-40S, MW-40D, MW-41S, MW-41D, and MW-43, and report the results to MDEQ. Such minimum monitoring shall not obligate Defendant to duplicate monitoring required under any MDEQ-approved monitoring plan for a groundwater system.

THIRTEENTH, modify the first paragraph of Section VI to read as follows:

Defendant shall design, install, operate, and maintain the systems described below to control, remove, and treat (as required) soil contamination at the GSI Property. The overall objective of these systems shall be to: (a) prevent the migration of 1,4-dioxane from contaminated soils into any aquifer in concentrations that cause groundwater contamination; (b) prevent venting of groundwater contamination into Honey Creek Tributary of 1,4-dioxane in quantities which cause the concentration of 1,4-dioxane at the groundwater-surface water interface of the Tributary to exceed 2000 ug/l; and (c) prevent venting of groundwater contamination to Third Sister Lake in quantities which cause the concentration of 1,4-dioxane at the groundwater-surface water interface of the Lake to exceed 2000 ug/l. Defendant also shall implement a monitoring plan to verify the effectiveness of these systems.

FOURTEENTH, modify Section VI.A.1 to read as follows:

1. Objectives. The objectives of this System are to: (a) remove contaminated groundwater from the Marshy Area located north of former Ponds I and II; (b) reduce the migration of contaminated groundwater from the Marshy Area into other aquifers; and (c) prevent the discharge of contaminated groundwater from the Marshy Area into the Honey Creek Tributary in quantities which cause the concentration of 1,4-dioxane at the groundwater-surface water interface of the Tributary to exceed 2000 ug/l.

FIFTEENTH, modify Sections VI.A.2 and VI.A.4 to read as follows:

2. Pilot Test and Design. No later than December 28, 1996, Defendant shall begin the Extended Pilot Test according to the plan conditionally approved by MDEQ on July 26, 1995. No later than March 1, 1998, Defendant shall submit to MDEQ for review and approval the Pilot Test Report, final design, and effectiveness monitoring plan. No later than June 13, 1998, Defendant shall submit to MDEQ for review and approval the operation and maintenance plan.

4. Installation and Operation. Upon approval of the final design by MDEQ and in any event not later than September 27, 1998, Defendant shall complete installation of the system according to the approved design and begin operation. Defendant shall thereafter continuously operate the system according to the approved plans until it is authorized to shut down the system pursuant to Section VI.D of the Consent Judgment.

SIXTEENTH, modify Section VI.B.1 to read as follows:

1. Objectives. The objectives of this program shall be to meet the overall objective of Section VI upon completion of the program and to prevent the discharge of groundwater contamination into Third Sister Lake in quantities which cause the concentration of 1,4-dioxane at the groundwater-surface water interface of Third Sister Lake to exceed 2000 ug/l.

SEVENTEENTH, modify Section VI.B.3 by striking the paragraph.

EIGHTEENTH, modify Section VI.C.2 to read as follows:

2. Defendant shall, no later than November 30, 1996, submit to MDEQ for review and approval a revised soils remediation plan for addressing identified areas of soil contamination. The areas to be addressed include the burn pit; the former Pond I area; the former Pond II area; the form Lift Station area; and Pond III. The plan submitted by Defendant shall be consistent with cleanup criteria as provided in MCL 324.20120a.

The Defendant's proposal must attain the overall objectives of Section VI.

NINETEENTH, modify Section VI.D.1.a to read as follows:

(a) Except as otherwise provided pursuant to Section VI.D.3, Defendant shall continue to operate the Marshy Area System until six (6) consecutive monthly tests of samples from the purge well(s) and associated monitoring well(s) fail to detect the

presence of 1,4-dioxane in groundwater at a concentration at or above 500 ug/l. This System shall also be subject to the same post-shutdown monitoring and restart requirements as those Systems described in Section V.E.

TWENTIETH, modify Section VI.D.1.b by deleting the paragraph.

TWENTY-FIRST, modify the last clause of Section VI.D. 2 to read as follows:

2. ... that the concentration of 1,4-dioxane in soils in the area in question does not exceed 1500 ug/kg or other higher concentration derived by means consistent with Mich Admin Code R 299.5711(2) or MCL 324.20120a.

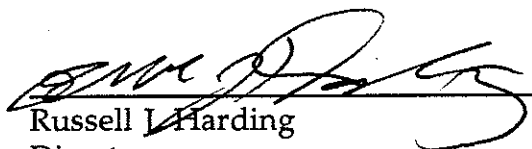
TWENTY-SECOND, modify Section IX.B as follows:

Modify the third sentence to read: "For purposes of this Paragraph, 'best efforts' includes, but is not limited to, seeking judicial assistance to secure such access pursuant to MCL 324.20135a." Delete the remainder of this subsection.

The Parties to the Amendment agree that no changes in the Consent Judgment other than those specified above are intended by this Amendment, that all provisions of the Consent Judgment remain in force to the extent they are not specifically and affirmatively altered by this Amendment, and that -- unless expressly stated otherwise -- all provisions of the Consent Judgment not altered by this Amendment apply to it.

IT IS SO STIPULATED AND AGREED:

PLAINTIFFS



Russell J. Harding
Director
Michigan Department of
Environmental Quality

Dated: 9/17/96



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Dated: 8/30/96

DEFENDANT

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GELMAN SCIENCES, INC.

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[Signature]

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Dated: September 3, 1996

IT IS SO ORDERED AND ADJUDGED this 23 day of September, 1996.

/S/ MELINDA MORRIS

HONORABLE PATRICK J. CONEIN
Circuit Court Judge

cases/9206322 amendment