



State of Ohio Environmental Protection Agency

STREET ADDRESS:

zarus Government Center
122 S. Front Street
Columbus, Ohio 43215

TELE. (614)644-3020 FAX: (614)644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

May 22, 2002

RE: Director's Final Findings & Orders

CERTIFIED MAIL

Morgan County Commissioners
19 East Main Street.
McConnelsville, OH 43756

William R. Miller
Route 3
McConnelsville, OH 43756

Dear Sir or Madam:

Transmitted herewith are Final Findings & Orders of the Director concerning the matter indicated.

You are hereby notified that this action of the Director of Environmental Protection (Director) is final and may be appealed to the Environmental Review Appeals Commission pursuant to ORC Section 3745.04. The appeal must be in writing and set forth the action complained of and the ground upon which the appeal is based. It must be filed with the Appeals Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director within three (3) days of filing with the Appeals Commission. An appeal may be filed at the following address:

Environmental Review Appeals Commission
236 East Town Street
Columbus, Ohio 43215

Sincerely,

Kimberly Reese
Systems Management Unit
Division of Solid & Infectious Waste Management

Enclosure: Director's Final Findings and Orders

cc: Bruce McCoy, CO, DSIWM
Rich Fox, SEDO, DSIWM
Steve Rine, SEDO, DSIWM
Pete Thompson, SEDO, DSIWM

Bob Taft, Governor
Maureen O'Connor, Lieutenant Governor
Christopher Jones, Director

OHIO E.P.A.

MAY 22 2002

ENTERED DIRECTOR'S JOURNAL

Date Issued: MAY 22 2002

Date Effective: MAY 22 2002

**BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY;**

In the Matter Of:

Morgan County Commissioners
19 East Main Street
McConnelsville, OH 43756

William R. Miller
Route 3
McConnelsville OH 43756

**Director's Final
Findings and Orders**

Respondents

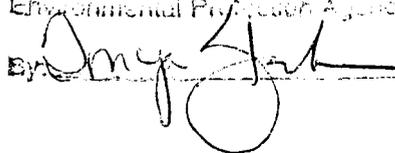
I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are hereby issued to the Morgan County Commissioners and William R. Miller (collectively the "Respondents") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under section 3734.13 of the Ohio Revised Code ("**ORC**").

II. PARTIES

These Orders shall apply to and be binding upon the Morgan County Commissioners and William R. Miller and their heirs and successors in interest as bound under Ohio law. No changes in ownership relating to the Morgan County Landfill will in any way alter the responsibilities of the Morgan County Commissioners and William R. Miller under these Orders. The obligations of the Morgan County Commissioners and William R. Miller under these Orders may be altered only by the written approval of the Director of Ohio EPA.

I certify this to be a true and accurate copy of the
official documents filed in the name of the Ohio
Environmental Protection Agency

 5/22/02

111. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as used in ORC Chapters 3734 and 6111 and the regulations promulgated thereunder.

IV. FINDINGS OF FACT

The Director has determined the following findings of fact:

1. The Morgan County Commissioners (Commissioners) are the lessees and original applicants for plan approval of the Morgan County Landfill (Facility) located on Route 3, McConnelsville, Ohio in Morgan County. The Commissioners leased the land owned by F.E. (Gene) and Eileen Haines for the purpose of establishing and operating a solid waste disposal facility.
2. Mr. William R. Miller was the operator and license holder for the Facility during the period from 1974 to 1988.
3. F.E. (Gene) and Eileen Haines own the property on which the Facility is located.
4. Following cessation of waste acceptance at the Facility, the Respondents subsequently failed to properly close the Facility, in violation of the State's environmental laws and regulations.
5. On February 13, 1995, the Respondents entered into Director's Final Findings and Orders (Director's Orders) which specified a schedule to attain compliance with applicable regulations.
6. On March 20, 1996, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
 - a. Order (l)(c)(ii)(a-b) for failure to conduct the required cap thickness delineation.
 - b. Order (1)(d) for failure to complete construction of the final cap on the Facility.
 - c. Order (l)(d)(iii) for failure to ensure that all waste materials at the Facility are covered with two feet of compacted cover material.
 - d. Order (l)(e) for failure to establish a dense vegetative cover over the final cap.
 - e. Order (l)(g) for failure to limit access to the Facility.
 - f. Order (l)(h) for failure to control leachate.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this

chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated March 22, 1996.

7. On May 28, 1996, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
 - a. Order (1)(d) for failure to complete construction of the final cap on the Facility.
 - b. Order (1)(d)(iii) for failure to ensure that all waste materials at the Facility are covered with two feet of compacted cover material.
 - c. Order (1)(e) for failure to establish a dense vegetative cover over the final cap.
 - d. Order (1)(g) for failure to limit access to the Facility.
 - e. Order (1)(h) for failure to control leachate.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated June 5, 1996.

8. On July 26, 1996, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
 - a. Order (1)(d) for failure to complete construction of the final cap on the Facility.
 - b. Order (1)(d)(iii) for failure to ensure that all waste materials at the Facility are covered with two feet of compacted cover material.
 - c. Order (1)(e) for failure to establish a dense vegetative cover over the final cap.
 - d. Order (1)(g) for failure to limit access to the Facility.
 - e. Order (1)(h) for failure to control leachate.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated August 1, 1996.

9. On March 19, 1997, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
 - a. Order (1)(a) for failure to delineate all areas of waste placement at the Facility and survey current facility topography.
 - b. Order (1)(d) for failure to complete construction of the final cap on the Facility.

- c. Order (1)(d)(iii) for failure to ensure that all waste materials at the Facility are covered with two feet of compacted cover material.
- d. Order (1)(e) for failure to establish a dense vegetative cover over the final cap.
- e. Order (1)(g) for failure to limit access to the Facility.
- f. Order (1)(h) for failure to control leachate.
- g. Order (9) regarding failure to submit monthly reports.
- h. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated March 20, 1997.

10. On May 23, 1997, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
- a. Order (1)(e) for failure to establish a dense vegetative cover over the final cap.
 - b. Order (1)(g) for failure to limit access to the Facility.
 - c. Order (1)(h) for failure to control leachate.
 - d. Order (9) regarding failure to submit monthly reports.
 - e. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
 - f. Order (1)(f) for failure to post signs indicating that the Facility is permanently closed.
 - g. Order (20) for failure to submit a plat of the Facility.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated June 30, 1997.

11. On July 16, 1997, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
- a. Order (1)(e) for failure to establish a dense vegetative cover over the final cap.
 - b. Order (1)(g) for failure to limit access to the Facility.
 - c. Order (1)(h) for failure to control leachate.
 - d. Order (9) regarding failure to submit monthly reports.

- e. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
- f. Order (1)(f) for failure to post signs indicating that the Facility is permanently closed.
- g. Order (20) for failure to submit a plat of the Facility.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated July 29, 1997.

12. By letter dated August 6, 1997, the Morgan County Commissioners responded to the July 29, 1997 Ohio EPA inspection letter, indicating the following:

- a. Erosion and sparse vegetation has been noted to the contractor.
- b. Signs and gates have been installed.
- c. All entrances have been blocked.
- d. Leachate being defused through ponding.
- e. Work in progress for plat map.
- f. Status reports are filed when information is available.
- g. Morgan County is progressing with the credit project. Bid specifications have been written.

13. On December 12, 1997, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:

- a. Order (1)(e) for failure to establish a dense vegetative cover over the final cap.
- b. Order (1)(h) for failure to control leachate.
- c. Order (9) regarding failure to submit monthly reports.
- d. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
- e. Order (20) for failure to submit a plat of the Facility.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated December 16, 1997.

14. On August 5, 1998, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:

- a. Order (1)(e) for failure to establish vegetative cover.
- b. Order (1)(h) for failure to control leachate.
- c. Order (9) regarding failure to submit monthly reports.
- d. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
- e. Order (20) for failure to submit a plat of the Facility.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code...". This inspection was documented in a letter to the Respondents dated August 27, 1998.

15. On March 4, 1999, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:

- a. Order (1)(e) for failure to establish vegetative cover.
- b. Order (1)(g) for failure to limit access to the Facility.
- c. Order (1)(h) for failure to control leachate.
- d. Order (9) regarding failure to submit monthly reports.
- e. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
- f. Order (1)(f) for failure to post signs indicating that the Facility is permanently closed.
- g. Order (20) for failure to submit a plat of the Facility.
- h. Order (1)(d) for failure to complete closure of the Facility by no later than January 1, 1996.
- i. Order (1)(c)(iii) for failure to grade the facility and provide drainage structures as necessary to direct surface water off the site and not allow ponding of water.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated March 24, 1999.

16. On June 23, 1999, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:

- a. Order (1)(e) for failure to establish vegetative cover.
- b. Order (1)(g) for failure to limit access to the Facility.
- c. Order (1)(h) for failure to control leachate.
- d. Order (9) regarding failure to submit monthly reports.

- e. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
- f. Order (1)(f) for failure to post signs indicating that the Facility is permanently closed.
- g. Order (20) for failure to submit a plat of the Facility.
- h. Order (1) for failure to complete closure of the Facility by no later than January 1, 1996.
- i. Order (1)(c)(iii) for failure to grade the facility and provide drainage structures as necessary to direct surface water off the site and not allow ponding of water.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated June 28, 1999.

- 17. By letter dated August 3, 1999, the Morgan County Commissioners responded to the July 28, 1999 Ohio EPA inspection letter. This letter describes the Morgan County Commissioners' plans to attain substantial compliance with the 1995 Director's Orders.
- 18. On July 12, 1999, Ohio EPA received a verified complaint pursuant to ORC Section 3745.08, which alleged surface water and ground water violations at the Facility, as well as specific violations of the 1995 DFFOs. With respect to the ground water violations, the Complaint alleged that certain underground testing wells are testing above drinking levels with PCE contamination. During the course of its investigation, Ohio EPA representatives met with the complainant who's concerns were clarified as follows: 1) the 1995 Orders are not protective of human health and the environment, and 2) the Respondents have not complied with the 1995 Orders regarding the Facility alleging violations of, among other things the failure of the Respondents to comply with the 1995 Director's Orders.
- 19. On July 26, 1999, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
 - a. Order (1)(e) for failure to establish vegetative cover.
 - b. Order (1)(g) for failure to limit access to the Facility.
 - c. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
 - d. Order (1)(f) for failure to post signs indicating that the Facility is permanently closed.
 - e. Order (20) for failure to submit a plat of the Facility.
 - f. Order (1) for failure to complete closure of the Facility by no later than

January 1, 1996.

- g. Order (1)(c)(iii) for failure to grade the facility and provide drainage structures as necessary to direct surface water *off* the site and not allow ponding of water.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.7 3 of the Revised Code..." This inspection was documented in a letter to the Respondents dated August 27, 1999.

20. On December 7, 1999, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders **and** applicable rules:
 - a. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
 - b. Order (20) for failure to submit a plat of the Facility.
 - c. Order (1) for failure to complete closure of the Facility by no later than January 1, 1996.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated December 17, 1999.

21. By letter to Ohio EPA dated December 22, 1999, the Morgan County Commissioners detailed the County's plans to attain compliance with the 1995 Director's Orders. With regard to the credit project, the Commissioners indicated that they intended to budget \$10,000 each year for the 2000, 2001, and 2002 budgets in order to complete the credit projects within that timeframe.
22. On May 2, 2000, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
 - a. Order (1)(e) for failure to establish vegetative cover.
 - b. Order (1)(h) for failure to control leachate.
 - c. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
 - d. Order (1) for failure to complete closure of the Facility by no later than January 1, 1996.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this

chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated June 1, 2000.

23. On December 20, 2000, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
- a. Order (1)(e) for failure to establish vegetative cover.
 - b. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
 - c. Order (1) for failure to complete closure of the Facility by no later than January 1, 1996.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated December 29, 2000.

24. By letter dated January 12, 2001, the Morgan County Commissioners responded to the December 20, 2000 Ohio EPA inspection letter. This letter describes the Morgan County Commissioners' plans to attain substantial compliance with the 1995 Director's Orders. In addition, the Morgan County Commissioners submitted copies of invoices regarding the credit project. The expenses totaled \$1,910 and represented costs that Morgan County incurred cleaning up open dumps in order to fulfill a portion of the \$31,500 requirement specified in Order (11).
25. On April 23, 2001, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
- a. Order (1)(d)(iii) for failure to ensure that all waste materials at the Facility are covered with two feet of compacted cover material.
 - b. Order (1)(e) for failure to establish vegetative cover.
 - c. Order (1)(h) for failure to control leachate.
 - d. Order (11) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
 - e. Order (1) for failure to complete closure of the Facility by no later than January 1, 1996.
 - f. ORC 6111.04 for causing pollution to waters of the state by failing to control or properly manage leachate at the Facility.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the

Revised Code..." This inspection was documented in a letter to the Respondents dated May 2, 2001.

26. On May 21, 2001, the Morgan County Commissioners notified Ohio EPA that the County had expended an additional \$2836.75 for the clean up of an open dump in order to fulfill a portion of the credit project requirement. At that time, the County had provided a total of \$4,746.75 toward the \$31,500 credit project required by order No. (1I).
27. On December 4, 2001, Ohio EPA inspected the Facility and observed the following violations of the Director's Orders and applicable rules:
 - a. Order (1)(d)(iii) for failure to ensure that all waste materials at the Facility are covered with two feet of compacted cover material.
 - b. Order (1)(e) for failure to establish vegetative cover.
 - c. Order (1)(h) for failure to control leachate.
 - d. Order (1) for failure to complete the supplemental environmental project to clean up open dumps within Morgan County.
 - e. Order (1) for failure to complete closure of the Facility by no later than January 1, 1996.
 - f. ORC 6111.04 for causing pollution to waters of the state by failing to control or properly manage leachate at the Facility.

The failure to comply with Orders of the Director is also a violation of ORC 3734.11, which states in pertinent part that, "...No person shall violate any section of this chapter, any rule adopted under it, or any order issued under section 3734.13 of the Revised Code..." This inspection was documented in a letter to the Respondents dated December 21, 2001.

28. On January 3, 2002, the Morgan County Commissioners notified Ohio EPA that the County had expended an additional \$623.00 for the clean up of an open dump in order to fulfill a portion of the credit project requirement. At that time, the County had provided a total of \$5,369.75 toward the \$31,500 credit project required by order No. (1I).
29. Ohio EPA's investigation of the verified complaint has revealed that the Respondents are in violation of a number of requirements of the 1995 Orders, as well as the rules regarding closure of the Landfill. With regard to the ground water violations alleged in the Complaint, Ohio EPA confirmed that elevated concentrations of certain parameters have been detected in the ground water monitoring wells at the Landfill. However, the Respondents, as of the date of these Orders, were in compliance with OAC Rule 3745-27-10, and were following the ground water assessment procedures contained in that rule.

V. ORDERS

Respondents shall achieve compliance with ORC Chapter 3734 and the regulations promulgated thereunder according to the following compliance schedule:

1. The Director's Final Finding and Orders issued to the Respondent February 13, 1995, remain in full force and effect and shall be a part hereof as if fully incorporated herein. (Attachment A)
2. Leachate Collection and Disposal:
 - a. Within fourteen (14) days after the effective date of these Orders, Respondents shall take all necessary interim measures to properly contain and manage any leachate outbreaks at the Facility to prevent pollution to waters of the State.
 - b. Not later than November 1, 2002, Respondents shall install a leachate collection system that collects leachate from all leachate seeps, associated with the Northern Municipal Waste Disposal Area of the Facility. At a minimum, the leachate collection system shall extend along the entire eastern edge of the Northern Municipal Waste Disposal Area adjacent to the "Upper Pond." The system shall include an underground network of leachate collection pipes and a leachate storage tank(s). The collection pipes shall be embedded within non-carbonate granular material that exhibits a minimum permeability of one times ten to the minus 2 centimeters per second (1×10^{-2} cm sec) wrapped with a six ounce non-woven geotextile. The leachate pipes shall convey all leachate to a collection tank with a minimum capacity of 20,000 gallons with 110% secondary containment. The Respondents shall apply for and obtain all necessary permits and authorizations required for the installation of the leachate collection system.
 - c. The installation of the leachate collection system shall be supervised by a registered professional engineer.
 - d. Respondents shall collect all leachate outbreaks and ensure that all leachate is contained by the leachate collection system.
 - e. Respondents shall regularly transport the collected leachate from the temporary or permanent tanks to a permitted, off-site treatment facility.
 - f. Respondents shall not allow any discharge of leachate or the leachate collection tank to overflow.

- g. During construction of the collection system, the Respondents shall employ appropriate temporary measures to prevent any discharge of leachate and will properly dispose of all collected leachate at a permitted treatment facility,
- h. Within thirty (30) days of completing construction of the leachate collection system, Respondents shall prepare an as-built plan drawing(s) of the leachate collection system and submit it to Ohio EPA.

3. Final Cover:

Within ninety (90) days after the effective date of these Orders, Respondents shall repair all eroded areas of the final cover on the Facility to ensure that a minimum of two feet of soil covers all waste materials at the Facility to attain compliance with Order No. (1)(d)(iii) of the 1995 Director's Orders.

4. Vegetation:

Within one hundred and ten (110) days after the effective date of these Orders, Respondents shall seed all areas of the Facility's final cover where vegetation is non-existent or sparse with sod forming grasses to attain compliance with Order No. (1)(e) of the 1995 Director's Orders. The seed mixture for establishing and maintaining vegetation shall consist of fifty (50) percent tall fescue, twenty (20) percent creeping red fescue, ten (10) percent perennial rye, ten (10) percent Kentucky bluegrass, and ten (10) percent annual rye applied at the rate of one hundred fifty (150) pounds per acre, unless otherwise agreed to in writing by Ohio EPA. Fertilizer shall be applied typically at a minimum of eighty (80) pounds total nitrogen, eighty (80) pounds total potassium, and eighty (80) pounds total phosphorus per acre or as soil tests indicate, unless otherwise agreed to in writing by Ohio EPA. Straw mulch shall be immediately applied at a rate of three (3) tons per acre following seeding.

5. Credit Project:

By no later than December 31, 2002, Respondents shall complete the credit project specified in Order No. (1)(f) of the 1995 Director's Orders.

VI. TERMINATION AND SATISFACTION

Respondent's obligations under these Orders shall terminate when Respondents certify in writing and demonstrate to the satisfaction of Ohio EPA, Division of Solid and Infectious Waste Management, that all obligations under these Orders have been performed and Ohio EPA, Division of Solid and Infectious Waste Management, acknowledges, in writing, Ohio EPA's acceptance of this certification and demonstration.

This certification shall be submitted by the Respondents and shall be signed by a responsible official of the Respondentz. The certification shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

For purposes of these Orders, a responsible official is the chief administrative officer of the Respondent Morgan County Commissioners.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a signatory to these Orders, for any liability arising out of or relating to the operation of Respondent's Facility.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable federal, state, and local laws and regulations. Nothing in these Orders shall be construed as waiving or compromising in any way the applicability and enforcement of any other statutes or regulations applicable to Respondents' operation of its Facility. Ohio EPA reserves all rights and privileges except as specified herein.

IX. NOTICE

All documents demonstrating compliance with these Orders and all other documents required under these Orders to be submitted to Ohio EPA shall be addressed to:

Ohio Environmental Protection Agency
Southeast District Office
Division of Solid and infectious Waste Management
Attn: Unit Supervisor, DSIWM
Logan, OH 43138

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

X. RESERVATION OF RIGHTS

Nothing contained herein shall be construed to prevent Ohio EPA from seeking legal or equitable relief to enforce the terms of these Orders or from taking other administrative, legal or equitable action as deemed appropriate and necessary, including seeking penalties against the Respondents for noncompliance with these Orders or for violations of the State's environmental laws.

Nothing contained herein shall restrict Ohio EPA from taking administrative, legal or equitable action, as deemed appropriate and necessary, against the Respondents for violations of the State's solid and infectious waste laws and regulations which have occurred at the Facility, including seeking civil penalties for all violations including those violations addressed in these Orders.

Nothing contained herein shall be construed to prevent Ohio EPA from exercising its lawful authority to require the Respondents to perform additional activities pursuant to ORC Chapter 3734 and/or 6111 or any other applicable law in the future. Nothing herein shall restrict the right of the Respondents to raise any administrative, legal or equitable claim or defense with respect to such further actions which Ohio EPA may seek to require of the Respondents. Nothing in these Orders shall be construed to limit the authority of Ohio EPA to seek relief for violations addressed or not addressed in these Orders.

IT IS SO ORDERED:



Christopher Jones, Director
Ohio Environmental Protection Agency

Attachment A

Issuance Date: FEB 13 1995

Effective Date: FEB 7 3 1995

**BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY**

IN THE MATTER OF:

Morgan County Commissioners :
19 East Main Street :
McConnelsville, OH 43756 :

F.E. (Gene) and Eileen Haines :
3869 North Monastery Road :
McConnelsville, OH 43756 :

William R. Miller :
Route 3 :
McConnelsville, OH 43756 :

Director's Final
Findings and Orders

Respondents :

PREAMBLE

It is hereby agreed by **and** among the parties hereto **as** follows:

I. JURISDICTION

These Director's Final Findings and Orders (Orders) are hereby issued to the Morgan County Commissioners, F.E. (Gene) and Eileen Haines, and William R. Miller (Respondents) pursuant to the authority vested in the Director of Environmental Protection (Director) under Ohio Revised Code (ORC) Sections 3734.13 and 3745.01.

II. PARTIES

These Orders shall apply to and be binding upon the Respondents, and their agents, servants, assigns and successors in interest.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning **as** used in **ORC** Chapter 3734 and **Ohio** Administrative Code (OAC) Chapter 3745-27 **as** promulgated on June 1, 1994.

IV. FINDINGS OF FACT

The Director has determined the following findings of fact:

I certify this to **be** a true and accurate copy of the official document **as** filed in the records of the Ohio Environmental Protection Agency.

By: Mary Gavin Date 2-13-95

OHIO E.P.A.
FEB 13 95
OHIO DIRECTOR'S JOURNAL

1. The Morgan County Commissioners (Commissioners) are the lessees and original applicants for plan approval of the Morgan County Landfill (Facility) located on Route 3, McConnelsville, Ohio in Morgan County. The Commissioners leased the land owned by F.E. (Gene) and Eileen Haines for the purpose of establishing and operating a solid waste disposal facility.
2. Mr. William R Miller was the operator and license holder for the Facility during the period from 1974 to 1988.
3. F.E. (Gene) and Eileen Haines own the property on which the Facility is located. Attachment I (incorporated by reference herein) describes the property leased by the Haines' to the Commissioners. Attachment II (incorporated by reference herein) describes the Facility boundaries as originally approved by the Ohio Department of Health.
4. The Facility was declared closed on September 1, 1988 by letter dated June 30, 1985 from Mr. William Miller to Ohio EPA pursuant to OAC Rule 3745-27-10(A)(1) as that rule was effective July 29, 1976.
5. Pursuant to OAC Rule 3745-27-10(C) as that rule was effective July 29, 1976, the Operator was to have completed proper closure of the Facility within sixty (60) days after September 1, 1985. Further, pursuant to OAC Rules 3745-27-10(E) through (H) as effective July 29, 1976, the Operator was required to have maintained the site in such a manner as to ensure continued proper closure of the Facility.
6. During inspections conducted on February 27, 1989; April 5, 1989; July 10, 1989; October 26, 1989; May 17, 1990; August 7, 1990; October 16, 1990; February 27, 1991; April 19, 1991; July 17, 1991; October 10, 1991; and January 22, 1992; Ohio EPA documented the following violations of OAC Rule 3745-27-10, as effective July 29, 1976:
 - a. Failure to establish a minimum of two feet of well compacted cover material over deposited waste materials;
 - b. Failure to establish a dense vegetative cover over the Facility;
 - c. Failure to properly grade all final slopes at the Facility;
 - d. Failure to properly grade the surface of the Facility and provide drainage facilities so as to direct surface water off the site and not allow ponding of water;
 - e. Failure to install gas ventilation structures;
 - f. Failure to post signs at the Facility stating in letters not less than three inches high that the Facility is permanently closed;
 - g. Failure to submit a plat of the Facility to the Morgan County Board of Health, Morgan County Recorder, and the Director;

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.

By: Mary Carwin Date 2-13-95

OHIO E.P.A.
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- h. Failure to block access roads and prevent unauthorized access to the Facility;
- i. Failure to either contain and properly treat leachate on-site or collect and transport leachate off-site for proper treatment or otherwise take action to minimize or eliminate the conditions that contribute to leachate production;
- j. Failure to **maintain** monitoring wells in such condition that water samples may be obtained; and
- k. Failure to submit an explosive gas monitoring plan, in violation of OAC Rule 3745-27-12 **as** effective June 12, 1989.

Certain Respondents were notified of the above violations by letters dated March 14, 1989; **April** 26, 1989; July 26, 1989; December 5, 1989; June 11, 1990; August 27, 1990; October 26, 1990; March 7, 1991; April 22, 1991; July 31, 1991; October 18, 1991; and February 28, 1992.

7. Analytical results from a ground water assessment conducted by Respondents were submitted to the Ohio EPA in a report dated July 31, 1984. The report concluded that ground water quality at the Facility had been degraded by the landfilling activities by both organic and inorganic contaminants.

The following organic contaminants were measured in monitoring wells at the Facility: bis(2-ethylhexyl) phthalate, tetrachloroethylene, and trichloroethylene. Additional contaminants measured in developed springs include phenol, methylene Chloride, chloroform, benzene, toluene, chlorobenzene, 1,1 dichloroethane, as well **as** the contaminants found in the monitoring wells. Elevated levels of the following inorganic constituents were also present in the groundwater at the Facility: iron, manganese, magnesium, calcium, chloride, sulfate, total dissolved solids and conductivity.

The results of the groundwater quality assessment and the groundwater contamination were discussed in **Ohio** EPA interoffice communications dated May 17, 1983; September 12, 1984; February 24, 1986; and January 23, 1991, as well **as** in a June 10, 1986 letter to the Respondent.

8. **On April 25, 26, and 27, 1984**, sediment samples from both the upper and lower sediment ponds at the Facility were analyzed and the results were submitted to the **Ohio** EPA in a report dated July 31, 1984. Analysis of the sediments of these ponds indicated levels of trace metals in the pond sediments may be elevated in violation of OAC 3745-27-08(I) **as** effective July 29, 1976. The Ohio EPA requested a response to this information in letters dated June 10, 1986; October 26, 1987; February 26, 1988; April 12, 1988; July 19, 1988; March 14, 1989; April 26, 1989; July 26, 1989; December 5, 1989; June 11, 1990; August 27, 1990; October 36, 1990; March 7, 1991; April 22, 1991; July 31, 1991; October 18, 1991; and February 28, 1992.
9. To date, the Facility remains in violation of the closure provisions of OAC Rule 3745-27-10 specified in Finding No. 7 above.

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official document as filed in the records of the Ohio
Environmental Protection Agency.

By: Mary Carwin Date 2-13-95

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V. ORDERS

The Respondents shall achieve compliance with ORC Chapter 3734 and regulations promulgated under that Chapter in accordance with the following schedule:

1. No later than January 1, 1996, the Respondents shall achieve compliance with the closure provisions in OAC Rule 3745-27-11(M), by completing the following activities in Areas 1, 3, and the asbestos disposal section of Area 2 of the Facility, as delineated on the original plan approval:
 - a. By April 1, 1995, Respondents shall delineate all areas of waste placement at the Facility, survey current Facility topography, and place grade stakes for the installation of the cap.
 - b. By May 1, 1995, Respondents shall delineate areas at the Facility where borrow soils will be obtained, arrange for the inspection of the borrow soils by Ohio EPA including the digging of test pits, and submit new or existing analytic data demonstrating the borrow soils at 95% compaction have a permeability no greater than 1×10^{-5} centimeters per second. The soil material for the cap shall be inspected every 3000 cubic yard by digging test pits and shall have the particle size distribution specified in Order No. 1(c)(ii)(b).
 - c. By July 1, 1995, Respondents shall:
 - i. Install appropriate erosion and sediment controls prior to the removal of vegetation and top soil.
 - ii. Remove all vegetation and properly grade, and otherwise-prepare the Facility for the installation of the cap, except in areas where the Respondents can demonstrate, by submitting test results, in accordance with the April 13, 1993, Guidance Document "Measurable Criteria for Questionable Pre-1990 Landfill Caps," attached hereto and incorporated by reference herein as Attachment No. III, that the requirements of OAC 3745-27-10, as effective July 29, 1976, have been met.

The demonstration shall require the Respondents to:

- a. Measure the thickness of the existing cap on a maximum 100' grid sampling pattern (hand augering is acceptable) to verify the thickness of material used for the existing cap.
- b. Provide data that indicates the existing soil cover has the following particle size distribution:
 - 100% of the material must pass a 10" screen with no more

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By: *Mary Carver* Date *2-13-95*

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The Morgan County Commissioners (Commissioners) are the lessees and original applicants for plan approval of the Morgan County Landfill (Facility) located on Route 3, McConnelsville, Ohio in Morgan County. The Commissioners leased the land owned by F.E. (Gene) and Eileen Haines for the purpose of establishing and operating a solid waste disposal facility.

2. **Mr. William R Miller** was the operator and license holder for the Facility during the period from 1974 to 1988.
3. F.E. (Gene) and Eileen Haines own the property on which the Facility is located. Attachment I (incorporated by reference herein) describes the property leased by the Haines' to the Commissioners. Attachment II (incorporated by reference herein) describes the Facility boundaries as originally approved by the Ohio Department of Health.
4. The Facility was declared closed on September 1, 1988 by letter dated June 30, 1988 from **Mr. William Miller** to Ohio EPA pursuant to OAC Rule 3745-27-10(A)(1) as that rule was effective July 29, 1976.
5. Pursuant to OAC Rule 3745-27-10(C) as that rule was effective July 29, 1976, the Operator was to have completed proper closure of the Facility within sixty (60) days after September 1, 1985. Further, pursuant to OAC Rules 3745-27-10(E) through (H) as effective July 29, 1976, the Operator was required to have maintained the site in such a manner as to ensure continued proper closure of the Facility.
6. **During** inspections conducted on February 27, 1989; April 5, 1989; July 10, 1989; October 26, 1989; May 17, 1990; August 7, 1990; October 16, 1990; February 27, 1991; April 19, 1991; July 17, 1991; October 10, 1991; and **January 22, 1992**; **Ohio** EPA documented the following violations of OAC Rule 3745-27-10, as effective July 29, 1976:
 - a. Failure to establish a **minimum** of two feet of well compacted cover material over deposited waste materials;
 - b. Failure to establish a dense vegetative cover over the Facility;
 - c. Failure to properly grade all final slopes at the Facility;
 - d. Failure to properly grade the surface of the Facility **and** provide drainage facilities so as to direct surface water **off** the site **and** not allow ponding of water;
 - e. Failure to **install** gas ventilation structures;
 - f. Failure to post signs at the Facility stating in letters not less **than** three inches **high** that the Facility is permanently closed;
 - g. Failure to submit a plat of the Facility to the Morgan County Board of Health, Morgan County Recorder, and the Director;

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By: Mary Carvin Date 2-13-95

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- h. Failure to block access roads and prevent unauthorized access to the Facility;
- i. Failure to either contain and properly beat leachate on-site or collect and transport leachate off-site for proper treatment or otherwise take action to minimize or eliminate the conditions that contribute to leachate production;
- j. Failure to maintain monitoring wells in such condition that water samples may be obtained; and
- k. Failure to submit an explosive gas monitoring plan, in violation of OAC Rule 3745-27-12 as effective June 12, 1989.

Certain Respondents were notified of the above violations by letters dated March 14, 1989; April 26, 1989; July 26, 1989; December 5, 1989; June 11, 1990; August 27, 1990; October 26, 1990; March 7, 1991; April 22, 1991; July 31, 1991; October 18, 1991; and February 28, 1992.

7. Analytical results from a ground water assessment conducted by Respondents were submitted to the Ohio EPA in a report dated July 31, 1984. The report concluded that ground water quality at the Facility had been degraded by the landfilling activities by both organic and inorganic contaminants.

The following organic contaminants were measured in monitoring wells at the Facility: bis(2-ethylhexyl) phthalate, tetrachloroethylene, and trichloroethylene. Additional contaminants measured in developed springs include phenol, methylene chloride, chloroform, benzene, toluene, chlorobenzene, 1,1 dichloroethane, as well as the contaminants found in the monitoring wells. Elevated levels of the following inorganic constituents were also present in the groundwater at the Facility: iron, manganese, magnesium, calcium, chloride, sulfate, total dissolved solids and conductivity.

The results of the groundwater quality assessment and the groundwater contamination were discussed in Ohio EPA interoffice communications dated May 17, 1983; September 12, 1984; February 24, 1986; and January 23, 1991, as well as in a June 10, 1986 letter to the Respondent.

8. On April 25, 26, and 27, 1984, sediment samples from both the upper and lower sediment ponds at the Facility were analyzed and the results were submitted to the Ohio EPA in a report dated July 31, 1984. Analysis of the sediments of these ponds indicated levels of trace metals in the pond sediments may be elevated in violation of OAC 3745-27-08(I) as effective July 29, 1976. The Ohio EPA requested a response to this information in letters dated June 10, 1986; October 26, 1987; February 26, 1988; April 12, 1988; July 19, 1988; March 14, 1989; April 26, 1989; July 26, 1989; December 5, 1989; June 11, 1990; August 27, 1990; October 30, 1990; March 7, 1991; April 22, 1991; July 31, 1991; October 18, 1991; and February 28, 1992.
9. To date, the Facility remains in violation of the closure provisions of OAC Rule 3745-27-10 specified in Finding No. 7 above.

I certify this to be a true and accurate copy of the
official document as filed in the records of the Ohio
Environmental Protection Agency.

By: Maria Carvin Date 2-13-95

OHIO EPA.
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V. ORDERS

The Respondents shall achieve compliance with ORC Chapter 3734 and regulations promulgated under that Chapter in accordance with the following schedule:

1. No later than January 1, 1996, the Respondents shall achieve compliance with the closure provisions in OAC Rule 3745-27-11(M) by completing the following activities in Areas 1, 3, and the asbestos disposal section of Area 2 of the Facility, as delineated on the original plan approval:
 - a. By April 1, 1995, Respondents shall delineate all areas of waste placement at the Facility, survey current Facility topography, and place 'grade stakes for the installation of the cap.
 - b. By May 1, 1995, Respondents shall delineate areas at the Facility where borrow soils will be obtained, arrange for the inspection of the borrow soils by Ohio EPA including the digging of test pits, and submit new or existing analytic data demonstrating the borrow soils at 95% compaction have a permeability no greater than 1×10^{-5} centimeters per second. The soil material for the cap shall be inspected every 3000 cubic yard by digging test pits and shall have the particle size distribution specified in Order No. 1(c)(ii)(b)J.
 - c. By July 1, 1995, Respondents shall:
 - i. Install appropriate erosion and sediment controls prior to the removal of vegetation and top soil.
 - ii. Remove all vegetation and properly grade, and otherwise prepare the Facility for the installation of the cap, except in areas where the Respondents can demonstrate, by submitting test results, in accordance with the April 13, 1993, Guidance Document "Measurable Criteria for Questionable Pre-1990 Landfill Caps," attached hereto and incorporated by reference herein as Attachment No. III that the requirements of OAC 3745-27-10, as effective July 29, 1976, have been met.

The demonstration shall require the Respondents to:

- a. Measure the thickness of the existing cap on a maximum 100' grid sampling pattern (hand augering is acceptable) to verify the thickness of material used for the existing cap.
- b. Provide data that indicates the existing soil cover has the following particle size distribution:

- 100% of the material must pass a 10" screen with no more

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By: *Mary Cain* Date *2-13-95*

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than two particles from a 50 cubic foot sample retained on a 6" screen.

- 95% of the material must pass a 3" sieve.
- 70% of the material must pass the #10 sieve.
- The material that passes the #10 sieve must be classified using the USDA classification chart and be a soil type listed in OAC Rule 3745-27-09(F)(4), as effective July 29, 1976.

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Data shall be collected at the following frequency per acre of cap:

- Excavate one test pit (5' x 5' x cap depth) to test for maximum cobble and gravel requirements.
 - Excavate three additional samples at least one cubic foot in volume from random locations within the acre area of cap. Composite these samples with another cubic foot sample from the test pit, and sieve out the material above the #10 sieve to determine for USDA soil classification.
- iii. Properly grade all final slopes of the Facility to no less than one (1) percent and no greater than twenty-five (25) percent to achieve compliance with OAC Rule 3745-27-10(C)(3) as effective July 29, 1976. The Respondents shall grade the Facility and provide drainage structures as necessary to direct surface water off the site and not allow ponding of water to achieve compliance with OAC Rule 3745-27-10(C)(4) as effective July 29, 1976;
- d. By August 1, 1995, Respondents shall begin installing the cap at the Facility in those areas where the cap does not meet the requirements of OAC 3745-27-10, as effective July 29, 1976, in accordance with the June 9, 1993, Guidance Document "Standards for Construction of a 1976 Cap System" attached hereto and incorporated by reference herein as Attachment IV. The cap shall have the following specifications:
- i. Soils used to construct the cap system shall have the specifications listed in Order No. 1(c)(ii)@ above and shall be tested once every 3000 cubic yards of soil used for the following:
 - a. Sieve and hydrometer testing (ASTM D-422) for particle size gradation.
 - b. Moisture/density relationship using either the Standard Proctor (ASTM D-698) or Modified Proctor (ASTM D-1557) methods.
 - ii. A permeability of no greater than 1×10^{-5} centimeters per second at 95

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By: Mary Casper Date: 12-92

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percent compaction. Permeability shall be verified during & after construction in accordance with the June 9, 1993, Guidance Document "Standards for Construction of a 1976 Cap System."

- iii. Cover all waste materials deposited at the Facility with at least two feet of well compacted cover material that meets the requirements set forth in Regulation 3745-27-09(F) and OAC Rule 3745-27-10(C)(1) as effective July 29, 1976.
 - iv. Be installed in loose lifts not to exceed 8 inches in thickness to achieve uniform compaction. The lifts shall be well compacted by using at least 6 passes of a sheep's foot compactor at least 10 tons in weight.
 - e. The Respondents shall seed the site with grasses or other vegetation as many times as is required to form a dense vegetative cover to achieve compliance with OAC Rule 3745-27-10(C)(2) as effective July 29, 1976;
 - f. The Respondents shall post signs at all entrances to the Facility stating in letters not less than three inches high that the Facility is permanently closed, to achieve compliance with OAC Rule 3745-27-10(C)(7) as effective July 29, 1976;
 - g. The Respondents shall block all entrances and access roads with locked gates, fencing, or other sturdy obstacles to prevent unauthorized access to the Facility to achieve compliance with OAC Rule 3745-27-10(C)(9) as effective July 29, 1976;
 - h. The Respondents shall either contain leachate and properly treat it on-site or collect leachate and transport it off-site for proper treatment to achieve compliance with OAC Rule 3745-27-10(H) as effective July 29, 1976; and OAC Rule 3745-27-11(0) as effective June 1, 1994.
2. By January 1, 1996, the Respondents shall submit a plat of the site to the Morgan County Board of Health, Morgan County Recorder, and Director of Ohio EPA which shall accurately locate and describe the completed site, and include information relating to the area, depth, volume, and nature of wastes disposed in the Facility to achieve compliance with OAC Rule 3745-27-10(C)(8) as effective July 29, 1976;
 3. Within sixty (60) days after closure activities are completed, Respondents shall submit a certification and a quality assurance/quality control report, prepared by a registered professional engineer, that the closure activities specified in Order No. 1 achieve compliance with OAC Rule 3745-27-10, as effective July 29, 1976.
 4. The Respondents shall conduct post-closure monitoring at the Facility for thirty years upon completion of proper closure of the Facility as required by Order No. 1 of these Orders in accordance with OAC Rule 3745-27-14.
 5. By June 1, 1995, the Respondents shall submit an explosive gas monitoring plan with a schedule of implementation that meets the requirements in OAC rule 3745-27-12 as that

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By: Mary Casper Date 2-13-95

rule ~~was~~ effective June 12, 1989, unless the Respondents can demonstrate that a residence or other occupied structure is no located ~~within~~ one thousand (1000) feet horizontal distance from emplaced solid wastes. The Respondents shall implement the explosive gas monitoring plan ~~within~~ fifteen (15) days after receipt of written approval & om Ohio EPA in accordance with the schedule of implementation contained therein.

6. By September 1, 1995, the Respondents shall submit a Ground Water Monitoring Program for the Facility in accordance with **OAC** Rule 3745-27-10, as effective June 1, 1994. The Respondents shall implement the approved Ground Water Monitoring Program within fifteen (15) days after receipt of written approval from Ohio EPA in accordance with schedules of compliance contained therein.
7. By June 1, 1995, the Respondents shall submit a Work Plan to Ohio EPA for sampling and analyzing sediments and water quality in the upper and lower ponds at the Facility. Sediment samples shall be analyzed for the parameters specified in 40 Code of Federal Regulations (CFR) Section 261.24, except for the herbicide/pesticide parameter, using the Toxicity Characteristic Leaching Procedure. Water samples shall be analyzed using the methods specified in 40 CFR Part 136 for the parameters listed in OAC 3745-27-10, as effective March 1, 1990. Within fifteen (15) days of receiving the written approval of Ohio EPA, the Respondents shall implement the Work Plan. The Respondents shall also notify **Ohio** EPA prior to collecting sediment and water quality samples. The Respondents shall submit to Ohio EPA the results of the analysis ~~within~~ fifteen (15) days of receipt.
8. In the event Ohio EPA notifies the Respondents that the Groundwater Monitoring Program, the plan, the certification, the quality assurance/quality control report, the gas monitoring plan, or the Work Plan submitted to achieve compliance with Order Nos. 1, 2, 3, 5, 6, or 7 above are unsatisfactory in whole or in part, ~~within~~ *thirty* (30) days after receipt of such notification, the Respondents shall amend and submit to Ohio EPA a revised document or documents. The Respondents shall implement the revised Groundwater Monitoring Program and/or the revised Work Plan within fifteen (15) days after receiving written approval from Ohio EPA.
9. Beginning *thirty* (30) days after the effective date of these Orders, the Respondents shall submit monthly status reports to Ohio EPA, due on the 15th day of each month, which shall describe the closure activities completed during the previous month. **The** Respondents shall continue submitting status reports until the activities outlined in Order No. 1 are completed.
10. F.E. (Gene) and Eileen Haines shall make access available to their property on Route 3, McConnellsville, Ohio, where the Facility is located, as described ~~in~~ Finding No. 3 above, for **Ohio EPA** and its agents, and for the named Respondents and their agents, employees, contractors and essential personnel to perform the activities and fulfill the directives set forth in Order Nos. 1 to 9 of these Findings and Orders, and shall not interfere with the performance of closure, post-closure care, or other obligations of the other named Respondents under these Orders. The liability of F.E. (Gene) and Eileen Haines under these Orders shall be limited to the directives stated in this paragraph (Order No. 10) of Section V of these Orders.

I certify this to be in accordance with the above findings and orders.
officially by: Mary C. ...
Errata: ...

By: Mary C. ... Date 2-13-95

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11. Within two years after the effective date of these Orders, the Respondents shall complete a credit project by providing \$31,500 of in-kind services directed toward the cleanup of known open dump sites within Morgan County. The Respondents shall seek the assistance of the southeastern Ohio Joint Solid Waste Management District when selecting the sites that are subject to this requirement. Reports on the **status** of this credit project shall be included in the monthly **status** reports required by Order No. 9. Prior to beginning the credit project, the Respondents shall submit a written notification to Ohio EPA describing the credit project and shall obtain the written concurrence of Ohio EPA for the credit project. The Respondents shall submit documentation with the certification required by Section X of these Orders that the credit project **was** completed in the amount set forth in these Orders.

VI. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, **firm**, partnership or corporation, not a signatory to these Orders for any liability arising out of or relating to the operation of the Respondents' solid waste facility.

VII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. Nothing in these Orders shall be construed as waiving or compromising in any way the applicability or Ohio EPA's **right** to enforce any other statutes or regulations applicable to operation of the Respondents' solid waste facility. Ohio EPA reserves all rights and privileges except **as** specified herein.

VIII. NOTICE

All documents demonstrating compliance with these Orders and all other documents required pursuant to these Orders shall be submitted to Ohio EPA and addressed to:

Ohio Environmental Protection Agency
Division of Solid and Infectious Waste Management
Southeast District Office
2195 Front Street
Logan, OH 43138
Attn: Unit Supervisor, DSIWM

and

Ohio Environmental Protection Agency
Division of Solid and Infectious Waste Management
1800 WaterMark Dr.
P.O. Box 1049

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.

By: Mary Cassin Date 2-13-95

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Columbus, OH 43266-0149
Am: Enforcement Coordinator, DSIWIM

unless otherwise specified in these Orders, or to such persons and addresses as may be otherwise specified in writing by the Ohio EPA.

IX. RESERVATION OF RIGHTS

Nothing contained herein shall be construed to prevent Ohio EPA from seeking legal or equitable relief to enforce the terms of these Orders or from taking other administrative, legal or equitable action as deemed appropriate and necessary, including penalties against the Respondents for noncompliance with these Orders.

Nothing contained herein shall be construed to prevent Ohio EPA from exercising its lawful authority to require the Respondents to perform additional activities pursuant to ORC Chapters 3734 or any other applicable law in the future. Nothing herein shall restrict the right of the Respondents to raise any administrative, legal or equitable claim of defense with respect to such further actions which Ohio EPA may seek to require of the Respondents. Nothing in these Orders shall be construed to limit the authority of Ohio EPA to seek relief for violations not addressed in these Orders.

X. TERMINATION AND SATISFACTION

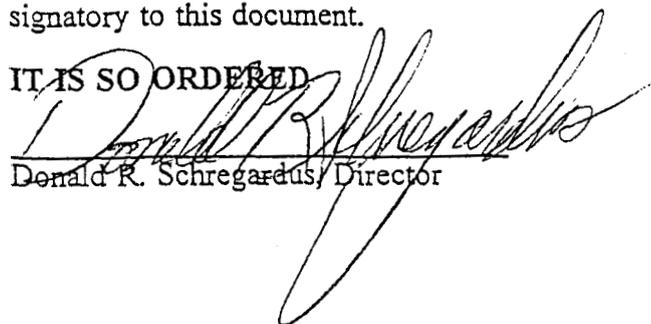
These Orders shall terminate when the Respondents certify in writing and demonstrate to the satisfaction of the Ohio EPA that all obligations under these Orders have been performed and the Ohio EPA approves in writing this certification.

This certification shall be signed by the responsible officials of the Respondents. The certification shall make the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate, and complete."

XI. SIGNATORIES

Each undersigned representative of a signatory to these Orders certifies that he or she is fully authorized to enter into the terms and conditions of these Orders and to legally bind such signatory to this document.

IT IS SO ORDERED


Donald R. Schregardus, Director

FEB 13 1995
Date

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.

By: Mary Cain Date 2-13-95

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XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation or liability, and in lieu of further enforcement action by Ohio EPA for only those matters addressed in these Orders, the Respondents agree that these Orders are lawful and reasonable, that the schedules provided for compliance here- & are reasonable and that the Respondents agree to comply with these Orders. Compliance with these Orders shall be a full accord and satisfaction for the Respondents' liability for the violations cited herein.

The Respondents hereby waive the right to appeal the issuance, terms and service of these Orders, and hereby waive any and all rights they might have to seek judicial review of said Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and the Respondents agree that in the event that these Orders are appealed by any other party to the Environmental Board of Review or any court, the Respondents retain the right to intervene and participate in such appeal. In such event, the Respondents shall continue to comply with these Orders notwithstanding such appeal and intervention unless said Orders are stayed, vacated, or modified.

IT IS SO AGREED:

By: [Signature] Date: 1/9/97
Morgan County Commissioner

By: _____ Date: _____
Morgan County Commissioner

By: [Signature] Date: 12-15-94
Morgan County Commissioner

By: [Signature] Date: 10/28/94
F.E. (Gene) Haines

By: [Signature] Date: 10/28/94
Eileen Haines

By: [Signature] Date: 12-19-94
William R. Miller

By: [Signature] Date: 2/2/95
Donald R. Schregardus, Director
Ohio Environmental Protection Agency

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ENTERED DIRECTOR'S JOURNAL

I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.

By: Mary Cavin Date 2-13-95



P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
644-3020
FAX (614)644-2329

George V. Voinovich
Governor
Donald R. Schregardus
Director

INTEROFFICE COMMUNIQUE

TO: All Solid Waste Engineers & Supervisors
FROM: Barb Bonds, Chief, DSIWM
SUBJECT: Measurable Criteria for Questionable Pre-1990 Landfill Caps
DATE: April 13, 1993

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STATE DIRECTOR'S JOURNAL

GENERAL BACKGROUND

The old solid waste rules [OAC 3745-27-09(F) effective 7/29/76] contain descriptive criteria for landfill cover material, but lack specific, measurable criteria for properties such as grain size, permeability, density, etc. The descriptive criteria make it difficult to objectively evaluate the quality of landfill caps constructed under the old rule.

PURPOSE

The purpose of this memo is to interpret the old rule to establish measurable criteria in the area of grain size for old cap material. It is necessary for OEPA to be consistent statewide when we require testing of old caps, and also be within the language of the old rule. We are limited to interpreting and elaborating on the language of the old rule. It would be unreasonable and unlawful for OEPA to establish criteria through this memo that could be construed to increase or decrease the standard of the old rule.

USAGE

The criteria in this memo should be used when the quality of an old cap [pre-4/1/90] is clearly questionable, and testing is necessary to determine if it satisfies the old rule. It should not be used as a document which initiates testing of all old caps at existing landfills.

DETAILED BACKGROUND & CRITERIA

OAC 3745-27-09(F)(3) [eff. 7/29/76] states:

A well compacted layer of final cover material shall be applied to all exposed surfaces of a cell upon reaching final elevation. The final cover material shall be applied in such amounts that all waste materials are covered to a depth of at least two feet. The completed area shall be seeded with such grasses or other vegetation as will form a complete and dense cover ...

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By: Mary Gavin Date 2-13-95

(F)(4) continues:

All cover material required by paragraphs (1) through (3) above shall consist of non-putrescible materials having low permeability to water, good compactibility, cohesiveness, and relatively uniform texture. Such cover material shall not contain stones, cobbles, boulders, or other large objects in such quantities as may interfere with its application and intended purposes. Suitable cover materials include, but may not be limited to, loam, sandy loam, silty loam, clay loam, silty clay, and sandy clay.

It is important to note the following points about the language:

1. (F)(3) requires two feet of final cover, but that two feet is also the vegetative layer. There is no separation of the barrier layer and the vegetative layer as we have in the current rules.
2. (F)(3) requires final cover to be well compacted, and (F)(4) states that the material have low permeability to water, good compactibility, and cohesiveness. These requirements clearly indicate compaction and low permeability.
3. (F)(4) contains the most objective criteria by listing suitable soil types from the **USDA** textural classification chart.
4. (F)(4) also states that cover material not contain stones, cobbles, and boulders in quantities that may interfere with its application and intended purpose. In modern liner construction, particles of these sizes are not acceptable, but the "quantity" phrase suggests that some amount of these particles is acceptable. If the rule writers had intended for no amount of these particles to be acceptable, they could have simply omitted the qualifying phrase.

The suitable **USDA** soil types provide the basis for interpreting the rule. The attached **USDA** chart shows that the soil types listed in the rule dictate the acceptable portions of sand, silt, and clay in each soil type. The sand, silt, and clay portions add up to 100% in the chart. Particles larger than sand are not accounted for in the chart - we will account for them below. When comparing grain size data of soil samples from an old cap, to use the chart, one must consider the material below the #10 sieve (gravel/sand cutoff) as 100% of the sample, and calculate the percentages of sand, silt, and clay based on the sieve and hydrometer data that is submitted, and the **USDA** scale.

Before we consider particles larger than sand, it is significant to note that although low permeability is desired, two things suggest that we cannot interpret the old rule language to require a cap that compares to today's standards:

- Because the cap is a dual-purpose barrier/vegetative layer, the soil must have adequate void spaces and acceptable particle sizes to support the required dense vegetation. I certify this to be a true and accurate copy of the official document as filed in the records of the Ohio Environmental Protection Agency.

By: Maura C. [Signature] Date: 1-19-95

- The list of acceptable soil types does not include CLAY, but it does include SANDY LOAM. A soil composed of 45% clay, 25% silt, and 30% sand is classified as a CLAY and would be ideal by today's cap barrier layer standards. But it doesn't make the old rule list. On the other hand, a soil composed of 5% clay, 30% silt, and 65% sand is classified as a SANDY LOAM, and it would not meet today's liner standards. However, it does make the old rule list. The logical conclusion is that while low permeability is desired, it is not as important in the old standards as it is today because the cap must also be capable of growing dense vegetation.

To interpret the acceptable amount of particles larger than sand, we must use the ideas in items 2 and 4 above. We must also consider that the current cap standards have grain size criteria for the larger particles, and since those criteria are specifically for a low permeability barrier layer, we can't specify criteria for the old rules that could be more restrictive than the current rules.

% Passing #10 sieve

The first key criteria is the acceptable minimum percentage of soil that must pass the #10 sieve for classification by the USDA chart. Considering the factors in the previous paragraph, that will be 70%. Less may result in a soil that would not meet the subjective criteria of item 2 above. More may result in a soil that could meet the new rule gradation requirements (see "1990 BAT" scale) with more than 90% passing the 3/4" sieve and 50% passing the #200 sieve, but not meet the newly created standard for the #10 sieve.

% Passing larger sieves/screens

Based on the subjective criteria in item 4, we'll establish a % passing criteria of 95% for the 3" seive, which is the gravel/cobble cutoff. This allows for a small amount of larger particles, consistent with the old rule, and it is not more stringent than the current rule.

For the 5% of material not passing the 3" seive, the phrase "interfere with its application" becomes the key factor. Today's standards require compaction in lifts, and the requirements for density, moisture content, and permeability testing necessitate careful compaction. Although the old rules don't require any of this, they do have the subjective standard of "well-compacted". It's reasonable to interpret that requirement to mean application in a minimum of 2 or 3 lifts (8" to 12" each). Consequently, particles in the stone and boulder size ranges (10" to 24", and > 24", respectively) can be prohibited because they would interfere with the material's application. That translates to 100% of the material passing a 10" screen. For cobbles (3" to 10"), we'll establish that only two large cobbles (>6") may exist in fifty cubic feet of sample material from an old cap (based on a test pit 5'x 5'x 2', see below).

Testing Requirements

If it is questionable that the material in an old cap (or portions of an old cap) will meet the above requirements, the following sampling frequencies should be used for testing.

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Per acre of cap:

- Excavate one test pit 5'x 5'x cap depth to test for maximum cobble and gravel requirements.
- Excavate three additional samples at least one cubic foot in volume from random areas. Composite these samples with another one cubic foot sample from the test pit, and sieve out the material above the #10 sieve. Sieve the remaining material to classify it using the USDA textural classification chart.

Summary of Particle Size Interpretation

The following summarizes the particle size criteria explained above and shown on the "1976 Caps" scale:

- 100% of the material must pass a 10" screen, with no more than two particles from a 50 cubic foot sample retained on a 6" screen.
- 95% of the material must pass a 3" sieve.
- 70% of the material must pass the #10 sieve.
- The material that passes the #10 sieve must be classified using the USDA textural classification chart (determine percentage of USDA sand, silt and clay and corresponding USDA soil type), and be a soil type listed in OAC Rule 3745-27-09(F)(4) [eff. 7/29/76], or an alternate acceptable soil type as allowed **by** that rule.

An example of an acceptable alternate soil type would be clay that grows acceptable vegetative cover. If the clay could not establish vegetation, the best remedy would be to add topsoil and leave the clay layer intact (provided that the lack of vegetation wasn't due to a methane problem). Of course, going back to the purpose and usage of this memo, I hope that we would not require testing of a cap that consisted of a true clay soil in the first place!

88/cik

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By: Mary Carvin Date 2-13-95

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FEB 13 1995

FIELD DIRECTOR'S JOURNAL

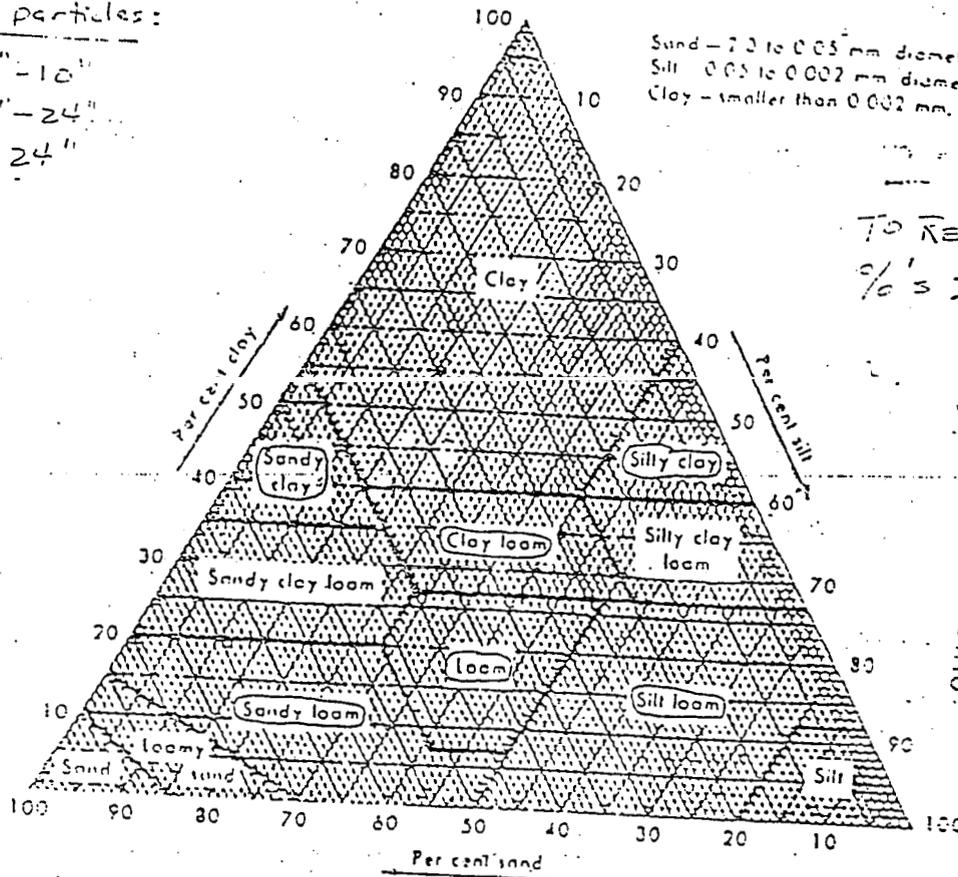
USDA classification
for larger particles:

pebble - 3" - 10"

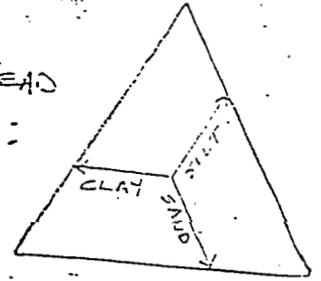
stone - 10" - 24"

boulder - > 24"

Sand - 2.0 to 0.075 mm diameter
Silt - 0.05 to 0.002 mm diameter
Clay - smaller than 0.002 mm diameter



TO READ
% 's :



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Figure 2. USDA textural classification chart.

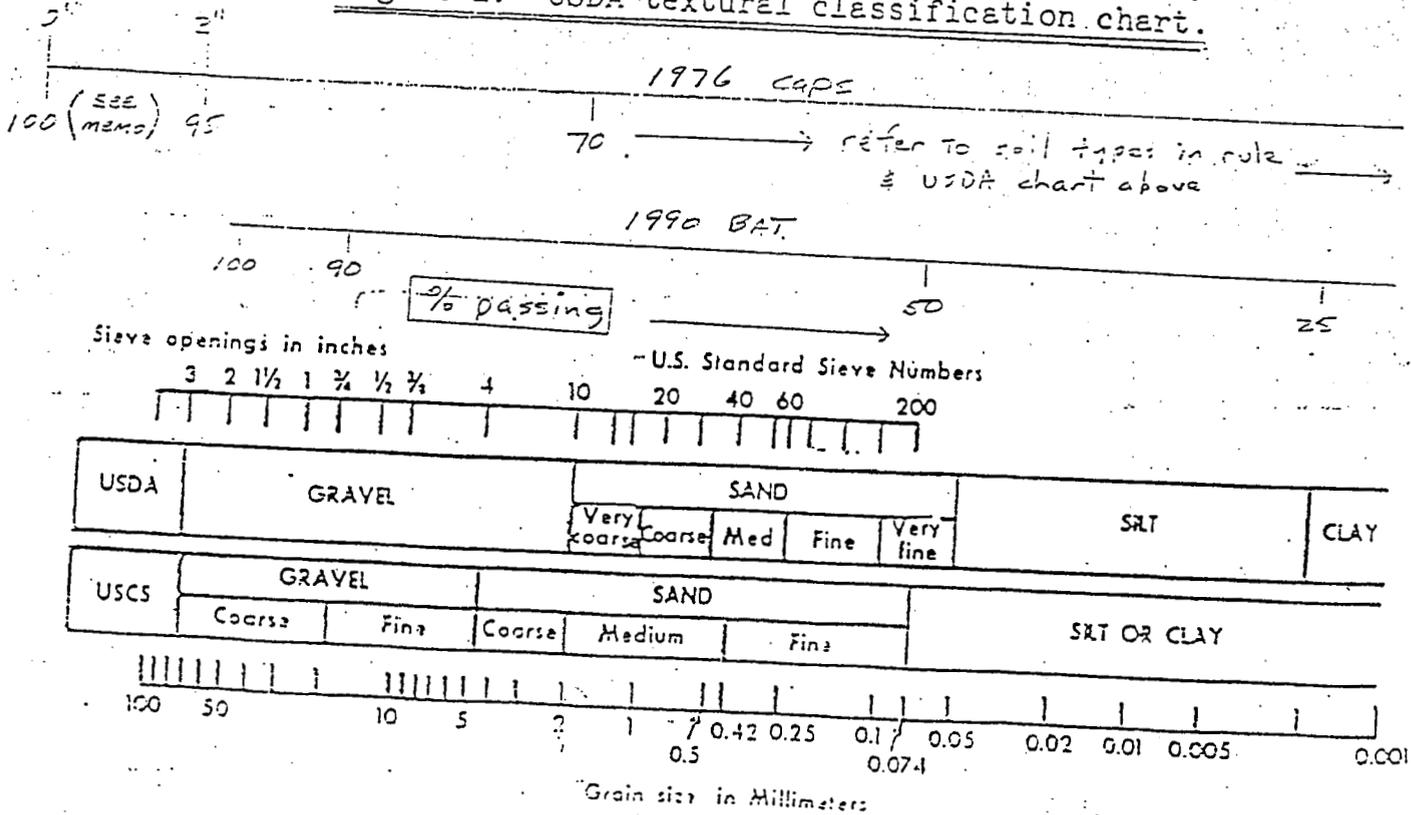


Figure 3. Comparison of USCS and USDA particle-size scales.

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Memo. Case No. 1-12-95



Attachment IV

State of Ohio Environmental Protection Agency

George V. Voinovich
Governor

P.O. Box 1049, 1800 WaterMark Dr
Columbus, Ohio 43266-0149
(614) 644-3020

Director

FAX (614) 644-2329

Donald R. Schregardus

INTEROFFICE COMMUNICATION

TO: Distribution
FROM: Barbara Miska, Chief, DSIWM

DATE: Junk 9, 1993

SUBJECT: Standards for Current Construction of a 1976 Cap System

OHIO E.P.A.
FEB 13 1995
DIRECTOR'S OFFICE

It is DSIWM's position that facilities which have failed to initiate or complete closure or which closed improperly are liable for compliance with current closure and post-closure regulations. However, settlement negotiations for specific enforcement cases have resulted in orders requiring the owner/operator of a previously, but improperly, closed solid waste landfill to complete installation of a final cap system meeting the requirements of OAC 3745-27-10 (or a modified version), as that rule was effective July 29, 1976 (1976 cap). Material specifications and construction and testing criteria for a 1976 cap are not nearly as detailed as those set forth in the 1990 best available technology (BAT) regulations (OAC 3745-27-11(G)).

A guidance document titled "Measurable Criteria for Questionable Pre-1990 Landfill Caps", dated April 13, 1993, establishes criteria to be used in testing a previously installed 1976 cap for compliance with applicable standards. However, the April 13, 1993 document does not address material, construction, and testing specifications for installation of a 1976 cap (or modified version) today. This document supplements the April 13, 1993 guidance to establish these installation criteria.

Material Specifications:

The soil material specifications for a 1976 cap are not dependent upon whether the cap is currently being constructed or is already existing and undergoing testing for compliance with the 1976 rules. Therefore, the same material specifications established in the April 13, 1993 guidance on testing a questionable cap will be used to determine the suitability of material for construction of a 1976 cap today. These specifications are:

- 100% of the material particles must pass a 10" screen, with no more than two (2) particles from a 50 cubic foot sample retained on a 5" screen;

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- 95% of the material particles must pass a 3" screen;
- 70% of the material particles must pass the #10 sieve;
- The material that passes the #10 sieve (sand, silt, and clay fractions) must be classified using the USDA textural classification chart, and be a soil type listed in OAC 3745-27-09(F)(4), as effective July 29, 1976, or an acceptable alternative soil type as allowed by that rule.

NOTE : The testing frequency established in the April 13, 1993 guidance for an existing cap (i.e., one test pit per acre) corresponds to one "sampling" for every approximately 3000 cubic yards of material; Therefore, a representative sample of the material intended for use in construction should be evaluated at a frequency not less than once for every 3000 cubic yards.

Evaluation of the representative samples should include all particle size determinations except those utilizing the 10" and 6" screens. Use of these larger screens is not necessary unless visual observation of the material results in concerns that the 10" and/or 6" particle size criteria will not be met. If screening for 10" and 6" particle sizes is deemed necessary, one representative sample of at least 50 cubic feet should be tested for each 3000 cubic yards of material intended for use to verify; that the large particle size criteria are met.

Construction Specifications:

The 1976 rules specify that the final cover layer must be well compacted and have low permeability to water, good compactability, and cohesiveness. Although these terms are not quantified in the 1976 rules, with this document we will establish compaction and permeability criteria for a newly constructed 1976 cap.

Common construction practice, whether for roadways, earthen dams, subgrades, etc., requires that earthen construction materials be well compacted to minimize the potential for failure due to settlement, loading, etc. Construction specifications typically include the requirement to compact the materials to at least 95% of the maximum Standard Proctor Density (ASTM D-698) or 90% of the maximum Modified Proctor Density (ASTM D-1557). These same compaction criteria are included in Ohio's BAT regulations for the recompacted soil liner and cap barrier layer and will be adopted as the compaction standard for construction of a 1976 cap. To achieve the required compaction rate, the material should be compacted using loose lifts, no greater than 8 inches thick prior to compaction.

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In order to quantify the term "low permeability to water", it is important to consider the dual purpose of the 1976 cap as both a barrier layer to infiltration and to provide nourishment and support for a healthy and dense vegetative cover. AS noted on Page 3 of the April 13, 1993 guidance, it would not be reasonable to expect the 1976 cap, with its dual purpose role, to have permeability criteria equivalent to the recompacted soil barrier layer in the 1990 BAT cap. The Subtitle D closure requirements (40 CFR Part 258.60), which became effective October 9, 1991, require the installation of an "infiltration layer" which has permeability no greater than 1×10^{-5} cm/sec. When consideration is given to the lack of any substantive or detailed construction or testing requirements in the 1976 regulations, it is unreasonable to believe that many, if any, pre-1990 final covers (1,976 caps) obtained field permeabilities in the range of 1×10^{-7} cm/sec. Most 1976 caps were likely much more permeable than 1×10^{-7} cm/sec. For these reasons, Ohio EPA will adopt 1×10^{-5} cm/sec as the maximum allowable field permeability for newly-constructed 1976 caps. This permeability criteria should not be applied to the testing of existing, but questionable, 1976 caps. Their compliance with the 1976 regulations should be judged solely on the testing protocol and criteria outlined in the April 13, 1993 guidance document.

Testing Specifications:

The criteria to judge the suitability of soils for use in constructing a 1976 cap are listed in the "Material Specifications" section, above. The suitability of the soils should be determined prior to their intended use in cap construction. The following tests should be performed on representative soil samples at least once for every 3000 cubic yards of material intended for use.

- The sample should be screened to remove any particles larger than 3 inches;
- sieve and hydrometer testing (ASTM D-422) for particle size gradation;
- moisture/density relationship using either Standard Proctor (ASTM D-698) or Modified Proctor (ASTM D-1557) method.

Results of this testing should be made available to the local Ohio EPA District Office at least seven days prior to its intended use in cap construction.

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By: Mary Cavin Date 2-13-95

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DISTRICT DIRECTOR'S RECEIPT

During construction **of** the cap, compaction must be monitored to ensure that the proper specifications are met. This can be accomplished by a number of methods, including nuclear densiometer (ASTM D-2922), sand cone (ASTM D-1556), and rubber balloon (ASTM **D-2167**). The nuclear densiometer test, if used, should be performed at least five times per acre per lift. The sand cone or rubber balloon methods should be performed at least three times per acre per lift. The sampling rate for other methods must be determined on an individual basis.

Upon completion of construction, the permeability of the cap must be determined. This can be accomplished through either field permeability testing (Boutwell two-stage permeameter, SDRI) or through laboratory testing **of** cap samples brought **to** the lab for analysis (Shelby tubes, soil blocks). The permeability requirements for each type of permeability determination are as follows:

- For field permeability tests (Boutwell, SDRI), the required permeability of the cap is 1×10^{-5} cm/sec.
- For laboratory permeability tests (Shelby tubes, soil blocks), the required permeability of the cap is 1×10^{-6} cm/sec.

Any penetrations into the cap layer resulting from either compaction or permeability testing should be repaired using bentonite or a bentonite/soil mixture.

BB/SH/clk

Distribution:

All DSIWM Engineers
All DSIWM Management

cc: Nancy Moore, DSIWM (for inclusion in guidance book)

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RECEIVED DIRECTOR'S JOURNAL

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By: Mary Carvin Date 2-13-95