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September 11, 1987

U.S. EPA, REGION V  
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CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Valdas Adamkus, Regional Administrator  
United States Environmental Protection  
Agency, Region V  
230 S. Dearborn  
Chicago, IL 60604

Re: Metamora Landfill Superfund Site

Dear Mr. Adamkus:

Please find enclosed one copy of each of the following:

1. Petition To the Administrator, Region V,  
To Reopen the Original Record of Decision  
for the Metamora Landfill (Signed On  
September 30, 1986) and To Initiate a New  
Remedy Selection Process;
2. Memorandum in Support of the Petition;  
and
3. Exhibits to the Memorandum in Support of  
the Petition.

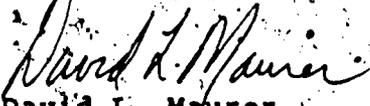
We respectfully request a meeting with the involved U.S.  
Environmental Protection Agency staff and Michigan Department of  
Natural Resources staff as soon as both agencies have reviewed  
the aforementioned documents.

PEPPER, HAMILTON & SCHEETZ

Valdas Adamkus,  
Regional Administrator  
September 11, 1987  
Page 2

Thank you for your attention to this matter. We look forward to hearing from you in the near future.

Very truly yours,

  
David L. Maurer  
on behalf of Chrysler  
Motors Corporation

DLS/LSS/df1  
Enclosures

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MDNR Environmental Quality Analyst VI  
Beth Mursch,  
MDNR Geologist VII



PETITION



1. Significant new information is available concerning the site:

- (A) the results of the Michigan Department of Natural Resources ("MDNR") test pit excavations performed last winter as reflected in MDNR Progress Report #9 and in an independent evaluation indicate that there are significantly fewer drums buried at the site than originally believed by EPA to be buried at the site;
- (B) MDNR's Progress Report #9 and independent information indicates that offsite incineration capacity is not available;
- (C) E.C. Jordan's geophysical investigations indicate that there is no plume of contamination migrating from the site and there is a continuous 150 foot thick relatively impermeable till layer beneath the site; and *not conclusive?*
- (D) the Petitioner's risk assessment demonstrates that there is no present risk and the future risk presented by the site without any remedy is at worst remote and low in an absolute sense. This future risk is lower than the risk levels ordinarily considered by EPA as unworthy of regulatory action and lower than levels provided in EPA's guidance for determining cleanup levels.

2. The initial Decision is inconsistent with law and is arbitrary and capricious. The major flaws in the Record include EPA's:

- (A) failure to consider risk as required by the NCP;
- (B) failure to compare the risks of the remedial alternatives as required by the NCP;
- (C) determination that State permits are required before implementation of an onsite remedy, contrary to the plain language of the NCP;

- (D) failure to make the required findings concerning excavation and offsite disposal;
- (E) exclusion of containment remedies from the alternatives considered during the remedy selection process;
- (F) failure to consider costs as required by CERCLA, the NCP and EPA guidance; i.e., a \$41.5 million remedy was chosen over several other alternatives which are equally or more protective of human health and the environment, but less expensive;
- (G) failure to obtain adequate data before selecting a remedy; and
- (H) failure to adequately identify PRPs and provide for PRP participation in formation of the administrative record.

3. The administrative record and Record of Decision do not follow general principles of administrative law, in that they:

- (A) contain an inadequate level of detail, i.e., insufficient information to make an "informed" decision and allow judicial review of the Record;
- (B) do not describe the technical rationale for each conclusion reached;
- (C) do not indicate which technical reports, articles, or public comments were relied upon by EPA in its Decision;
- (D) do not provide an explanation of the weight that EPA placed on each factor in the NCP and CERCLA, as amended by SARA;
- (E) do not indicate when professional judgment was relied upon, nor do they identify whose professional judgment was relied upon; and
- (F) do not report information or opinions that do not support the selected remedy, and do not explain the reasons for rejecting such adverse information or opinions.

WHEREFORE, Petitioner respectfully prays, for the reasons set forth herein and more fully developed in the attached Memorandum, that EPA reopen the Record and:

1. Recognize its duty to consider and evaluate new information;
2. Supplement the Record fully;
3. Initiate a new remedy selection process;
4. Initiate a thorough and expeditious investigation to identify additional PRPs;
5. Provide for timely and meaningful participation of the potentially responsible parties in developing the new Record; and
6. Assure that the supplemented Record is consistent with CERCLA, as amended by SARA, the NCP and other applicable law. In particular, EPA must:
  - (A) obtain and include all data necessary to make a meaningful decision, including performance of a Remedial Investigation and Feasibility Study;
  - (B) consider all reasonable alternatives, including containment remedies; and
  - (C) evaluate all appropriate factors, including the risks, costs and feasibility of implementing each alternative [particularly excavation and incineration]; and
  - (D) comply with general principles of administrative law.

Respectfully submitted,

by:

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September 11, 1987

MEMORANDUM

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION V

IN THE MATTER OF: )

Metamora Landfill, )  
Metamora, Michigan )

Proceeding Under the Comprehensive )  
Environmental Response, Compensation )  
and Liability Act of 1980, as amended, )  
42 U.S.C. §§ 9601-9657 (1987) )

Docket No. \_\_\_\_\_

MEMORANDUM IN SUPPORT OF THE PETITION TO THE  
ADMINISTRATOR, REGION V, RE: REOPENING THE  
ORIGINAL RECORD OF DECISION FOR THE METAMORA  
LANDFILL (SIGNED ON SEPTEMBER 30, 1986) AND  
INITIATING A NEW REMEDY SELECTION PROCESS

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EXHIBITS

- 1 The Record of Decision On The Metamora Landfill; Summary of Alternatives; and Responsiveness Summary
- 2 MDNR Progress Report #9
- 3 Letter to MDNR Freedom of Information Officer (April 7, 1987); Letter to S. Phillips re: FOIA Request on the Metamora Landfill Site (May 5, 1987) and Letter from S. Phillips re: FOIA Request (May 20, 1987)
- 4 Report of Dr. Lawrence Halfen
- 5 Memorandum of Dr. L. Halfen re: April 30, 1987 meeting with Seth Phillips (undated)
- 6 Michigan Environmental Law Journal Article re: Comparison of the Requirements of the NCP and Superfund Amendments and Reauthorization Act of 1986
- 7 Kelley v. Chemcentral of Grand Rapids, No. 80-30139 (Mich. App. Ct., May 3, 1984)
- 8 R. Kimbrough, M.D. and M. Simonds, Compensation of Victims Exposed to Environmental Pollutants, Brief Communication, 41 Archives of Env't Health 185, 187 (May/June 1986)
- 9 Memorandum from S. Phillips, MDNR, to A. Hogarth, MDNR, re: Metamora Landfill Operable Unit Remedial Design (March 9, 1987) and Memorandum from S. Phillips, MDNR, to Metamora Landfill Design F.6, re: Issues on Operable Unit Design and Record of Decision (February 27, 1987)
- 10 Letter from R. Hathaway, E.C. Jordan, to S. Phillips, MDNR, re: Metamora Landfill Drum Removal Operable Unit (February 3, 1987)
- 11 Letter from R. Hathaway, E.C. Jordan, to S. Phillips, re: Available Capacity at Commercial Incineration Facilities (March 1, 1987).
- 12 Memorandum from B. Herceg, MDNR, to S. Phillips, MDNR, re: Incineration Capacity at Selected Facilities (March 9, 1987).
- 13 Letter from S. Phillips, MDNR, to J. Atwell, E.C. Jordan (September 16, 1985)



Petition to Reopen is filed pursuant to Section 113(j) of SARA.<sup>1</sup>

The Petition To Reopen requests that EPA reopen the Metamora Landfill Site Record<sup>2</sup> and re-initiate the process of selecting a remedy for the Metamora Landfill. The Record must be reopened because the Michigan Department of Natural Resources ("MDNR") Progress Report #9 re: The Metamora Landfill Site

1. 42 U.S.C.A. § 9613 (1987). The ROD in this matter was signed September 30, 1986, prior to the enactment of the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499 (Oct. 17, 1986) ("SARA"). SARA added Section 113 and various other provisions. Section 4 of SARA states that, except as otherwise provided, the amendments "shall take effect on the enactment of this Act." Section 121(b) of SARA, however, provides that the "requirements of section 121 of CERCLA [discussed *infra*] shall not apply to any remedial action for which the Record of Decision . . . was signed . . . before the date of enactment." This section also provides that "[a]ny ROD signed before enactment of this Act and reopened after the enactment of this Act to modify or supplement the selection of remedy shall be subject to the requirements of section 121 of CERCLA." *Id.* (emphasis added). Section 121, therefore, would be applied when the Metamora Landfill Record is reopened. Also, since the other provisions of SARA, such as Section 113, became immediately effective as of October 17, 1986, those provisions would be applicable to any supplementation or reopening of a Record. Section 113(k)(2)(C) of SARA, 42 U.S.C.A. § 9613(k)(2)(C), provides that until EPA issues regulations concerning the development of an administrative record, "the administrative record shall consist of all items developed and received pursuant to current procedures for selection of the response action, including procedures for the participation of interested parties and the public."

2. For the purpose of this Memorandum In Support of the Petition to Reopen, the selection of the excavation and offsite incineration alternative will be referred to as the "Decision". This Decision is recorded in an EPA document entitled the "Record of Decision" or "ROD". The ROD is usually a two (2) to four (4) page document and does not include all of the information in the record. The administrative record in the Metamora Landfill matter will be referred to as the "Record." It will include all information which was relied upon by EPA in making its Decision.

(Exhibit 1) and other new information indicate that conditions at the site are substantially different than were assumed when EPA selected excavation and offsite incineration. Furthermore, EPA's Decision was inconsistent with the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"),<sup>3</sup> the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP")<sup>4</sup> and general principles of administrative law.

Petitioner specifically requests that EPA perform a Remedial Investigation and Feasibility Study ("RI/FS") as expeditiously as practicable, and upon its completion select a remedy for the site as a whole consistent with CERCLA, as amended by SARA, and the NCP.<sup>5</sup>

## II. Significant New Findings

There are five significant new findings which require the reopening of the Record:

- there are less than one tenth the number of drums than originally estimated;
- there is insufficient offsite incineration capacity to implement the originally selected remedy;

3. 42 U.S.C.A. §§ 9601-9657 (1987).

4. 40 C.F.R. Part 300.

5. The Petition does not directly challenge the substance of EPA's Decision (although the Decision is erroneous in the Petitioner's view), nor does it seek to prescribe what remedy EPA should select for the Metamora Landfill. The issues raised by this Petition are whether the new information now available requires EPA to supplement its Record, and whether the Decision process was conducted as required by law.

- there is a continuous 150 foot thick clay-rich till layer underneath the site which acts as a barrier to contaminant migration from the upper surficial aquifer to the underlying Marshall Sandstone;
- there is no contaminant plume in the upper aquifer; and
- the present risk presented by the site is zero and, even without remedies, the future risk is remote and low in an absolute sense. The future risk is, at worst, lower than the risk levels ordinarily considered not worthy of regulatory action and lower than levels provided in EPA guidance.<sup>6</sup>

MDNR excavated "preliminary" test pits at the landfill in December 1986. Approximately 200 drums were excavated at that time and their contents sampled. On April 16, 1987, MDNR issued Progress Report #9,<sup>7</sup> detailing these efforts. This Progress Report and an independent analysis indicate that there are significantly fewer drums than EPA originally believed existed.<sup>8</sup>

MDNR personnel have indicated, however, that no formal calculation has been performed.<sup>9</sup> An independent analysis performed by E.C. Jordan indicates that, even using reasonable worst

6. This new information is discussed in detail in Section V(C)(2), infra, and Exhibit 4.

7. Exhibit 2.

8. MDNR "now believes that far fewer drums exist in these areas, perhaps 6,000-7,500 drums." Id. at 2. EPA originally assumed there were 25,000 drums buried in areas 1 and 4.

9. The letter from Seth Phillips, MDNR, to Thomas Wilczak, at 2 (May 20, 1987) [hereinafter "MDNR Letter"] (Exhibit 3).

case assumptions, at most, 5,000 drums could be present at the site. Furthermore, a more reasonable worst case estimate indicates 3,000 drums were sent to the site.<sup>10</sup>

MDNR has also investigated the availability of offsite incineration since the ROD was signed. This investigation concluded that:

1. Current hazardous waste incineration capacity nationwide "is limited."<sup>11</sup> "[I]f existing capacity must be utilized, it could take as long as ten years to complete incineration of the excavated wastes;"<sup>12</sup>
2. The appropriate and effective technologies other than incineration "are not readily available" and that development of other treatment approaches would be "a long, difficult task at best;"<sup>13</sup> and

10. Exhibit 4, at §3.1.6.

11. "Capacity at existing incinerators for solid waste material is very small. . . . the actual time required for incineration of these wastes could range from five to ten years or longer." Memorandum from S. Phillips, MDNR, to A. Hogarth, MDNR, re: Metamora Landfill Operable Unit Remedial Design at 1-2 (March 9, 1987) [hereinafter "Memo to Hogarth"]; Memorandum from S. Phillips, MDNR, to Metamora Landfill Design File (February 27, 1987) [hereinafter "Memo to File"] (Exhibit 9); Letter from R. Hathaway, E.C. Jordan, to S. Phillips, re: Metamora Landfill Drum Removal Operable Unit (February 3, 1987) (Exhibit 10); Letter from R. Hathaway, E.C. Jordan, to S. Phillips, MDNR, re: Available Capacity at Commercial Incineration Facilities (March 2, 1987) (Exhibit 11); Memorandum from B. Herceg, MDNR, to S. Phillips, MDNR, re: Incineration Capacity at Selected Facilities (March 9, 1987) (Exhibit 12).

12. Exhibit 2 at 2. Exhibit 4 to this Memorandum at §3.3, confirms that incineration capacity is scarce and will become more scarce. The costs of incineration, therefore, will increase substantially.

13. Exhibit 2, at 3.

3. Nevertheless, MDNR will proceed with the current design of an excavation and incineration remedy. It also will contract for a separate, simultaneous study to examine other remedial options.<sup>14</sup> That study is intended to provide information to "permit a decision to be made on an alternate approach if it becomes necessary."<sup>15</sup>

MDNR also noted that:

EPA has suggested that landfilling might be acceptable if the solids are first treated to stabilize or detoxify them and/or a thorough analysis done to show that the wastes to be landfilled will generate no contaminants or could not harm the environment if contaminants were lost from a failed landfill.<sup>16</sup>

In fact, the Record demonstrates that MDNR never stopped evaluating other remedial alternatives. On October 16, 1986, only sixteen days after the ROD was signed, MDNR received a draft report on onsite incineration.<sup>17</sup> On December 17, 1986, MDNR

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14. Id. MDNR anticipates that the cost of these studies will be considered part of its required ten (10) percent contribution to the costs of its excavation and off-site incineration remedy. Exhibit 2. These costs cannot be recovered nor considered part of the state contribution because they are unauthorized. There is no record of decision authorizing these studies. MDNR has not followed the NCP, particularly the public comment procedure.

15. Id.

16. Id.; see also, Section V(B)(3), infra.

17. Letter from J. Atwell, E.C. Jordan, to S. Phillips, MDNR, re: Metamora Landfill On-site Incineration (October 16, 1986) (forwarding the draft report).

received additional information concerning onsite incineration.<sup>18</sup> As early as February 27, 1987, MDNR staff recommended that the design of the excavation and offsite incineration remedy not be continued and MDNR "pursue a new approach, either landfilling of the solids or on-site incineration of them."<sup>19</sup> (emphasis supplied)

MDNR's consideration of different alternatives<sup>20</sup> has not been communicated to EPA in writing, although there have been verbal communications between MDNR and EPA.<sup>21</sup>

On October 9, and November 14, 1986, E.C. Jordan performed magnetometer, resistivity, and seismic refraction surveys at the Metamora Landfill.<sup>22</sup> The resistivity data

do not indicate the presence of a conductive contamination plume along the northern toe of the landfill. If a sufficiently conductive contamination plume exists in this area, it should have been possible to detect with the program which was implemented. The lack of a conductive contaminant plume is consistent with previous water quality data, and may

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18. Letter from R. Hathaway, E.C. Jordan, to S. Phillips, MDNR, re: Additional Information for On-Site Incineration (December 17, 1986).

19. Exhibit 9, Memo to file.

20. Exhibit 2 at 2-3.

21. Exhibit 3, Phillips letter, at p. 1.

22. Draft Technical Memorandum from R. Allen, E.C. Jordan, re: Geophysical Data at 1 (February 6, 1987) [hereinafter "Draft Tech. Memo"] (obtained pursuant to a Freedom of Information Act request.)

indicate that a contamination plume is not a factor of serious concern at the Metamora Landfill.<sup>23</sup> (emphasis supplied)

Additionally, the seismic survey indicates that

the till is continuous under the site and that the minimum thickness of this deposit is approximately 150 feet. . . . The [clay rich] till, because of its presumed hydraulic properties, serves as an aquiclude between the upper surficial aquifer and the underlying Marshall Sandstone, the major water-bearing aquifer for the region.<sup>24</sup>

This new information demonstrates that there has been no chemical migration from the site in the over thirty years since waste disposal began; significant migration in the future is unlikely; and EPA's chosen remedy is not practical. There may be, therefore, little reason for any remedy, much less a \$42 million remedy.

### III. The Record Must Be Reopened

#### A. Administrative Law Principles Applicable To Reopening The Record

Questions of when and how to supplement a record are subject to "[g]eneral principles of administrative law respecting such records."<sup>25</sup> A federal agency "has a continuing duty to gather and evaluate new information relevant to the environmental

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23. Id. at 6.

24. Id. at 7.

25. Conference Report on SARA, H.R. Rep. No. 962, 99th Cong., 2d Sess. at 224 (Oct. 3, 1986) [hereinafter "Conf. Rep."]. See also Section 113(j)(1) of CERCLA, as amended, 42 U.S.C. § 9613(j)(1).

impact of its actions."<sup>26</sup> This "does not mean, however, that supplementation is required whenever new information becomes available."<sup>27</sup>

"When new information comes to light," EPA is obligated to:

consider it, evaluate it, and make a reasoned determination whether it is of such significance as to require implementation of formal . . . filing procedures. Reasonableness [of the agency's decision] depends on such factors as the environmental significance of the new information, the probable accuracy of the information, the degree of care with which the

26. Warm Springs Dam Task Force et al. v. Gribble, 621 F.2d 1017, 1023 (9th Cir. 1980) (involving NEPA). EPA's position is that CERCLA actions are exempt from NEPA as long as the CERCLA process provides a "functional equivalent of a NEPA review". EPA, Guidance on Feasibility Studies Under CERCLA, [hereinafter "FS Guidance"] (June 1985), at 4-9. EPA ensures that the CERCLA process is a functional equivalent of a NEPA review by requiring that the Record contain a "full and adequate consideration of environmental issues and alternatives" and that the public is "afforded an opportunity to participate in evaluating environmental factors and alternatives before a final decision is made." Id. See Environmental Defense Fund, Inc. et al. v. Environmental Protection Agency, 489 F.2d 1247, 1257 (D.C. Cir. 1973) (EPA must substantially follow NEPA's requirements, e.g., consider all reasonable alternatives). The NEPA case law, therefore, is applicable to CERCLA record review. The purpose of many CERCLA and NEPA procedures, such as public comment, are generally consistent. There are no substantive requirements of CERCLA or NEPA which are inconsistent or incompatible in this case. EPA's view that NEPA is preempted ignores the Supreme Court's holding that NEPA and other statutes must be construed together where possible. Flint Ridge Development Co. v. Scenic River Ass'n of Okla., 426 U.S. 776, 96 S. Ct. 2430, 49 L.Ed.2d 305 (1976). Rather than interpret CERCLA as preempting NEPA, the two statutes should be interpreted in pari materia.

27. Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1024 (9th Cir. 1980); see also 40 C.F.R. § 1502.9(c)(1), the NEPA regulations.

agency considered the information and evaluated its impact, and the degree to which the agency supported its decision not to supplement with a statement of explanation or additional data.<sup>28</sup>

The question is whether the record describes the environmental setting and alternatives well enough to allow the agency to make an "informed decision."<sup>29</sup> Public comment, including comment from potentially responsible parties ("PRPs"), guards against "objective errors or excessive bias."<sup>30</sup>

When the Metamora Landfill Record is reopened, therefore, EPA must follow the procedural requirements of CERCLA, NEPA, and the NCP.

**B. EPA's Criteria For Reopening The Record**

The Summary of Alternatives attached to the Metamora Landfill ROD explicitly states that the "possibility exists that at the time of the implementation of the selected alternative, the cost of waste disposal will change the recommended (cost-effective) alternative. If such a situation arises, this ROD may

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28. Warm Springs Dam Task Force v. Gribble, 621 F.2d at 1024 (9th Cir. 1980).

29. Id.; Association Concerned About Tomorrow, Inc. v. Dole, 610 F. Supp. 1101, 1113 (N.D. Tex 1985) (interpreting NEPA) Commonwealth of Massachusetts v. Watt, 716 F.2d 946 (1st Cir. 1983) (requiring a supplement to the environmental impact statement where the estimated amount of oil expected offshore decreased by 97 percent, even though the environmental impact was likely to be less). In one case, a fifty-percent increase in large traffic was held sufficient to require a supplemental decision document. Environmental Defense Fund v. Marsh, 651 F.2d 983 (5th Cir. 1981).

30. I-219 Why? Association v. Burns, 372 F. Supp. 223, 257-58 (D. Conn. 1974) (interpreting NEPA).

'be amended.'" Also, it stated that a new ROD "shall be prepared . . . if test pit excavation information warrants re-evaluation of this Record of Decision." MDNR also acknowledged that EPA would be required to modify the "current ROD" if there was insufficient offsite incineration capacity.<sup>31</sup>

EPA's agency-wide draft guidance also states that a "ROD should be reviewed again in those situations where there is dramatically new information that has come to light since the ROD was signed."<sup>32</sup>

C. Application Of Administrative Law Principles  
And EPA's Criteria To The Site

Each of the conditions precedent for reopening the Record (specified in general administrative law and cited by MDNR) has been met, i.e., the environmental setting is completely changed and EPA's selected remedy has been demonstrated to be neither necessary nor practical.

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31. Exhibit 9, at 2.

32. Draft Memorandum from J. Winston Porter, Assistant Administrator, to Regional Administrators, Re: Interim Guidance for Encouraging Selection of Treatment/Destruction Technologies at 4 (July 25, 1986) [hereinafter "Guidance on Selection of Destruction Technologies"]. This draft memorandum was attached to a Memorandum from T. Sheckells, Chief, Remedial Analysis Branch, Office of Emergency Response, to Addressees Re: Request for Review of Draft Interim Policy for Encouraging Selection of Treatment/Destruction Technologies (July 28, 1986) [hereinafter "Request for Review"]. These memoranda were provided in response to a Freedom of Information Act request for any written EPA policy on permanent destruction remedies. The cover memorandum states the purpose of the attached memorandum is to "clarify" the existing NCP language and assist the Regions in "analyzing and justifying the selection of treatment technologies that will provide greater effectiveness and reliability, but at a greater cost than non-treatment alternatives."

For example, the amount of wastes at the site is from seven to twenty percent of the originally estimated volume, by E.C. Jordan's and Petitioner's estimates. The existing conditions demonstrate no migration has occurred and such migration is unlikely. The risks presented by the site, therefore, are insignificant. For these reasons alone, the benefits of excavation and offsite incineration would be significantly reduced.

The viability and practicality of offsite incineration also has been seriously questioned by the State, by EPA's CERCLA contractor, and by the Petitioner's independent review.<sup>33</sup> This remedy, therefore, will not be practicable or its costs will increase substantially.<sup>34</sup>

MDNR's actions, such as its initiation of studies to evaluate alternatives to excavation and offsite incineration and its opposition to the selected remedy, have been prompted by the discovery of new information and constitute a de facto reopening of the Record.<sup>35</sup>

In sum, this new information may change the remedial decision, and, at least, necessitates a reopening of the Record.

In this situation, this new information is of even greater importance because the original Decision, standing alone,

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33. Id.

34. Id.

35. See Exhibits 2, 3 (the Phillips Letter) and 5.

was fatally flawed.<sup>36</sup> Existing information indicates disagreements between EPA and MDNR.<sup>37</sup> EPA, in fact, may have prejudged the issues.<sup>38</sup> The reopening of the Record and new remedy selection process must be performed in conformance with CERCLA, NEPA, and NCP requirements.

#### IV. Standard Of Review

##### A. General

The question of what standard of judicial review would apply to a review of a pre-SARA cleanup decision, such as the Metamora Landfill Decision, is not a settled matter of law. Some courts have held that a trial de novo is necessary.<sup>39</sup> One court noted that the meager due process rights afforded PRPs, e.g., the

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36. See infra Section IV. Even if new information were not available, the Record should be reopened because the Decision and Record are not in compliance with law and are arbitrary and capricious.

37. Exhibit 9. The important purpose of making the remedial selection process subject to public comment is well articulated in the law and regulations and is not served when there are fundamental inter-agency disputes.

38. Exhibit 9, at 2-3; see Section V(C)(1), infra.

39. This issue is discussed in C. DiLeva, Record Review Under SARA, 14 Chem. Waste Lit. Rptr. 234 (July 1987). [hereinafter "DiLeva Art"]. The leading cases are United States v. Hardage, 25 Env't Rep. (BNA) 1343 (W.D. Okla. Dec. 11, 1986) reh'g denied (Order and Opinion April 9, 1987); States v. Ottati & Goss, No. 80-225-L (D.N.H. Nov. 14, 1986) petition for mandamus dismissed, No. 87-1003 (1st Cir. Feb. 4, 1987); United States v. Conservation Chemical Co., Special Master Report and Recommendation, No. 82-0983-W-5, 1 Tx. L. Rep. 1,300 (D.C. Mo. Apr. 17, 1987), adopted in United States v. Conservation Chemical Co., 14 Chem. Waste Lit. Rep. 129 (W.D. Mo. Apr. 28, 1987) (Civ. Act. No. 82-0983-CV-W-5); United States v. Nicolet, No. 85-3060 (E.D. Pa. May 11, 1983) (motion for reconsideration filed June 5, 1987).

opportunity to provide written comments and attend a public meeting, are less than the procedural safeguards provided to those claimants appealing the termination of their disability benefits.<sup>40</sup>

SARA states that:

In any judicial action under this Act, judicial review of any issues concerning the adequacy of any response action taken, or ordered by the President shall be limited to the administrative record. Otherwise applicable principles of administrative law shall govern whether any supplemental materials may be considered by the court.<sup>41</sup>

The standard of review in SARA for determining the correctness of any chosen response action is:

the court shall uphold the President's decision in selecting the response action unless the objecting party can demonstrate, on the administrative record, that the decision was arbitrary and

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40. United States v. Hardage, 25 Env't. Rep. 1343, (W.D. Okla. Dec. 11, 1986) (Civ. Act. No. 86-1401-W), reconsideration denied 26 Env't. Rep. 1053, 1059-60 (W.D. Okla., Apr. 9, 1987). The Court discussed Mathews v. Eldridge, 424 U.S. 319, 96 S.Ct. 893, 47 L.Ed.2d 18 (1976), a case where the Supreme Court held that the constitutional due process rights of someone who was having his disability payments terminated did not require an evidentiary hearing prior to termination.

41. Section 113(j)(1) of SARA, 42 U.S.C.A. § 9613(j)(1). The functions of the President discussed in CERCLA have been delegated to EPA. Although EPA has argued that judicial review of CERCLA actions prior to SARA is on the record, this issue has not been definitively addressed by the courts. Nothing in this Petition To Reopen should be construed as waiving any right to challenge EPA's interpretation of the standard of review and any EPA attempt to apply SARA retroactively, either administratively or in court.

capricious, or otherwise not in accordance with law.<sup>42</sup>

Additionally, EPA is entitled to recover only "the response costs or damages that are not inconsistent with the national contingency plan, and . . . such other relief as is consistent with the National Contingency Plan."<sup>43</sup>

This issue, however, need not be resolved in the Metamora Landfill matter at this time. This Memorandum and accompanying Exhibits demonstrate that the Metamora Landfill Record is fatally flawed because it is not in accordance with law<sup>44</sup> and is also arbitrary and capricious. The following will

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42. Section 113(j)(2) of SARA, 42 U.S.C.A. § 9613(j)(2); Judicial review of decisions concerning matters other than the adequacy of the response action is not governed by Section 113 of SARA. These other agency actions are reviewable pursuant to traditional principles of administrative law. Conf. Rep., supra note 25 at 224; see also, A. Light, When EPA Makes A Superfund Mistake: Judicial Review Problems Under SARA, Env't Law Rptr.; News & Analysis, 17 Env't. L. Rptr. (Env't. L. Inst.) 10148, 10153 (May 1987) [hereinafter "Judicial Review"]. For example, the federal government has acknowledged that discovery is available to uncover the details of the CERCLA process. See United States' Supplemental Reply Memorandum In Opposition to Occidental Chemical Corporation's Motion to Compel Production of Documents Withheld by New York on the Basis of Deliberative Privilege, United States v. Occidental Chemical Corp., No. 79-99C (W.D.N.Y. filed Dec. 10, 1985), cited in Judicial Review, supra, 17 Env't L. Rptr. (Env't. L. Inst.) at 10,153 n.80.

43. Section 113(j)(3) of SARA, 42 U.S.C.A. § 9613(j)(3). Obviously, any response costs which are incurred contrary to the statute would not be recoverable.

44. The arbitrary and capricious standard does not apply when there is law to apply. A court will simply determine whether EPA's action complied with the procedural requirements of the Record. Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 418, 91 S. Ct. 814, 28 L.Ed.2d 136 (1971):

briefly outline general administrative review standards and the "law" which applies in this matter.

**B. Arbitrary And Capricious**

Generally, judicial review of an administrative decision<sup>45</sup> does "not shield . . . [the agency] action from a thorough, probing, in-depth Review."<sup>46</sup> The court must review the administrative record that was before the agency at the time the agency made the decision, not a record made afterward.<sup>47</sup>

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45. Conf. Rep., supra, note 25, at 224, notes that general principles of administrative law apply to a review of a CERCLA record.

46. Citizens to Preserve Overton Park, Inc. v. Volpe, at 415. See note 26, supra, for a discussion of why National Environmental Policy Act case law is particularly applicable to CERCLA actions.

47. Citizens to Preserve Overton Park, Inc. v. Volpe, at 420. A court may also look outside the record to determine whether the agency took into consideration all relevant factors, including internal agency memorandum, guidance and manuals. Tenneco Oil Co. v. Department of Energy, 475 F. Supp. 299, 317 (D. Del. 1979). An agency must also follow its own interpretation of statutes, its regulations, its guidance and its policy. Watkins v. Blinzinger, 789 F.2d 474, 481 (7th Cir. 1986) (an agency's handbooks and regulations, not the efforts of lawyers to summarize them after an adversarial relationship has occurred, create agency policy). An agency's regulations "are usually given the force and effect of statutory law." 3 Sutherland Statutory Construction § 65.05, at 254 (Sands 4th ed., 1986); see Service v. Dulles, 354 U.S. 363, 372, 388 (1957). The Council on Environmental Quality's ("CEQ") interpretation of its NEPA regulations "is binding on . . . agencies . . . unless it is shown that the interpretation conflicts with the language of legislative intent of NEPA or the teachings of the Supreme Court." Sierra Club v. Sigler, 695 F.2d 957, 972 (5th Cir. 1983). See Andrus v. Sierra Club, 442 U.S. 347, 356-58, 99 S. Ct. 2335, 2340, 60 L.Ed.2d 943 (1979).

The normal presumption of regularity accorded agency decisions may be overcome if there is no accompanying explanation of the reasons underlying an agency's decision.<sup>48</sup> A record must indicate, in detail, the reasons for accepting certain alternatives and rejecting others.<sup>49</sup> For example, a decision is arbitrary and capricious" if an agency "failed to consider an important aspect of the problem,"<sup>50</sup> or if the decision is "based on a substantially flawed" record.<sup>51</sup>

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48. RSR Corp. v. EPA, 588 F. Supp. 1251, 1254 (N.D. Tex. 1984) (holding EPA's decision was arbitrary and capricious).

49. National Wildlife Fed. v. Andrus, 440 F. Supp. 1245, 1254 (D.D.C. 1977); Asarco, Inc. v. EPA, 616 F.2d 1153, 1162 (9th Cir. 1980). For example, an Agency must compare the effects of alternatives. 40 C.F.R. § 1502.14 (1986). An agency's consideration of alternatives cannot consist of the mere admission that some impact may occur. Asarco, 616 F.2d at 1162. The agency must supply at least the level of detail which is required by the applicable statute and regulations and which is necessary to make an informed decision. National Wildlife Fed. v. Andrus, 440 F. Supp. 1245, 1253 (D.D.C. 1977). One commentator noted that "[a]t a minimum, due process requires that the defendants be informed of the issues and factual material on which the government relies so that there is real opportunity to correct any inaccuracies." DiLeva Art., supra note 39, at 238.

50. RSR Corp. v. EPA, 588 F. Supp. 1251, 1255 (N.D. Tex. 1984).

51. North Slope Borough et al. v. Andrus, 486 F. Supp. 332, 363 (D.D.C. 1980).

C. Applicable Provisions Of Law -- CERCLA And  
The NCP

1. General Factors Considered In Selecting  
A CERCLA Remedy

Once the Record is reopened, EPA must comply with CERCLA, as amended by SARA, and the NCP.<sup>52</sup> EPA must reconsider all alternatives, not just whether incineration should occur onsite or offsite.<sup>53</sup>

A remedy is defined in the NCP as:

those responses to releases that are consistent with permanent remedy to prevent or minimize the release of hazardous substances or pollutants or contaminants so that they do not migrate to cause substantial danger to present or future public health or welfare of the environment [see CERCLA Section 101(24)]<sup>54</sup> (emphasis added).

In selecting a remedy, EPA must consider:

- a. alternatives which do not attain, meet, and exceed, Federal and State ARARs;<sup>55</sup>
- b. alternatives which give a preference to "[r]emedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances, pollutants,

52. Section 121(b) of SARA, Pub. L. No. 99-499; see note 1, supra.

53. See 40 C.F.R. § 300.68(f), for a description of alternatives.

54. 40 C.F.R. § 300.68(a).

55. 40 C.F.R. § 300.68(f)(1). Section 121(d)(2)(A) of SARA, 42 U.S.C.A. § 9621(d)(2)(A), requires that EPA apply state ARARs in certain situations.

- and contaminants is a principal element";<sup>56</sup>
- c. the short and long-term potential adverse health effects;<sup>57</sup>
- d. the feasibility of alternatives;<sup>58</sup>
- e. the "significant adverse effects" and "environmental benefits" of each alternative.<sup>59</sup> CERCLA, as amended by SARA, specifically requires the consideration of the potential risks associated with excavation and transportation of wastes and contaminated soil.<sup>60</sup> EPA may select a remedy that does not even meet ARARs if all of the alternatives will result in significant adverse environmental impacts.<sup>61</sup> If a particular alternative presents greater risks than the other alternatives, it must be excluded from further consideration;<sup>62</sup>
- f. the long-term uncertainties associated with "land disposal" and the "goals,

56. Section 121(b)(1) of SARA, 42 U.S.C.A. § 9621(b)(1). See Exhibit 9, for a more extensive discussion of what constitutes a "permanent" remedy.

57. Section 121(b)(1)(D) of SARA, 42 U.S.C.A. § 9621(b)(1)(D).

58. 40 C.F.R. § 300.68(g)(2). See Section 121(d)(4)(C) of SARA, 42 U.S.C.A. § 9621(d)(4)(C). Even an alternative which does not attain ARARs can be selected, if it is not technically practical to implement a remedy which would attain ARARs. 40 C.F.R. § 300.68(i)(5)(iii).

59. 40 C.F.R. § 300.68(g)(3). See Sections 121(b)(1)(D) and 121(d)(2)(B) of SARA, 42 U.S.C.A. §§ 9621(b)(1)(D) and 9621(d)(2)(B).

60. Section 121(b)(1) of SARA, 42 U.S.C.A. § 9621(b)(1).

61. 40 C.F.R. § 300.68(i)(5)(iii).

62. 40 C.F.R. § 300.68(g)(3).

objectives, and requirements of the Solid Waste Disposal Act";<sup>63</sup>

- g. the persistence, toxicity, mobility and propensity to bioaccumulate of the chemicals involved;<sup>64</sup>
- h. the costs. This includes assuring that the remedy is cost-effective,<sup>65</sup> considering long term maintenance costs<sup>66</sup> and the potential for future remedial action costs,<sup>67</sup> if the remedy in question were to fail; and
- i. the degree of support for the alternative by parties interested in the site.<sup>68</sup>

EPA may also select an alternative that does not meet

ARARs when:

- a. the alternative is "not the final remedy," but will become part of a more comprehensive remedy;<sup>69</sup>
- b. the remedial action is the performance equivalent to the ARARs;<sup>70</sup>
- c. the State has not consistently applied (or demonstrated the intention to consistently apply) a State ARAR in similar

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63. Section 121(b)(1)(A and B) of SARA, 42 U.S.C.A. §§ 9621(b)(1) (A and B).

64. Section 121(b)(1)(C) of SARA, 42 U.S.C.A. §§ 9621(b)(1)(C).

65. Section 121(b)(1) of SARA, 42 U.S.C.A. § 9621(b)(1).

66. Section 121(b)(1)(E) of SARA, 42 U.S.C.A. § 9621(b)(1)(E).

67. Section 121(b)(1)(F) of SARA, 42 U.S.C.A. § 9621(b)(1)(F).

68. Section 121(b)(2) of SARA, 42 U.S.C.A. § 9621(b)(2).

69. 40 C.F.R. § 300.68(i)(5)(i).

70. Section 121(d)(4)(D) of SARA, 42 U.S.C.A. § 9621(d)(4)(D).

circumstances at other sites within the State;<sup>71</sup> or

- d. the need for protection of public health and welfare and the environment at the site is outweighed by the need for action at other sites which may present a threat to public health or welfare or the environment, considering the total amount of money in the Fund.<sup>72</sup>

EPA must consider and weigh these various factors and select a remedy that protects public health and the environment and is cost-effective.<sup>73</sup>

## 2. "Permanent" Remedies

Several important questions that must be addressed in EPA's reopened Record are: what is a permanent remedy; is a permanent remedy always required by SARA; and is it appropriate to select a containment remedy for the Metamora Landfill?

Containment is a legally permissible remedy. The pre-SARA CERCLA "did not prohibit containment as a means of dealing with inactive landfills."<sup>74</sup> The "words of the statute clearly

71. Section 121(d)(4)(E) of SARA, 42 U.S.C.A. § 9621(d)(4)(E).

72. 40 C.F.R. § 300.68(i)(5)(ii). Fund balancing is not a consideration in determining the extent of the remedy when the response is performed by the PRPs. 40 C.F.R. § 300.68(i)(5)(ii). In the Metamora Landfill situation, however, EPA is funding the cleanup, not the PRPs, therefore, this provision does apply.

73. Section 121(a) of SARA, 42 U.S.C.A. § 9621(a).

74. United States v. Hooker Chemicals & Plastics Corp. ("S" Area Landfill), 607 F. Supp. 1052, 1068 (W.D.N.Y.), aff'd, 776 F.2d 410 (2d Cir. 1985). This decision predated the passage of SARA. This decision relies upon the definition of remedial action, however, which remains unchanged in CERCLA.

indicate that a reliable program of confining chemicals to their present location is sufficient to satisfy the requirements of the law."<sup>75</sup> In at least one case, a court rejected EPA's request for an order requiring excavation of a site.<sup>76</sup>

SARA does not require a permanent remedy in every case.<sup>77</sup> SARA expresses a preference for such a remedy, but only when it is cost-effective.<sup>78</sup> While SARA does change the emphasis of the CERCLA program, it does not require a mindless and radical re-direction of the existing CERCLA program.<sup>79</sup> In the "real world" decision-making required by SARA, one must balance the facts that: (a) there is limited incineration capacity; (b) the cost of incineration is substantial; (c) the benefit of incineration

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75. Id. at 1069.

76. United States v. Vertac Chemical Corp., 588 F. Supp. 1294, 1297 (E.D. Ark. 1984).

77. For example, EPA should not select an alternative that complies with ARARs if compliance would result in a greater risk or if the alternative is technically impractical. Section 121(d)(4)(B and C) of SARA, 42 U.S.C. §§ 9621(d)(4)(B and C).

78. The statute states that the remedy needs comply with the NCP only "to the extent practicable." See Section 121(a) of SARA. The statute also explicitly provides for the situation where the remedy is not permanent and simply requires that EPA explain its choice. See Section 121(b)(1) of SARA. The requirement that a remedy be cost-effective is not qualified. See Section 121(a) of SARA. See also Conf. Rep., supra note 25, at 245-246.

79. See Exhibit 6, for a fuller discussion of the support for this reasoning.

of some wastes, particularly soils, is limited; and (d) there are not unlimited resources.

The word "permanent" is not defined in SARA or in its legislative history. The ultimate selection of a "permanent" remedy involves balancing a number of different considerations.

The plain language of the statute and the legislative history of SARA support the view that remedies which substantially immobilize chemicals or collect and destroy chemicals should be considered "permanent" remedies.<sup>80</sup> A permanent remedy, therefore, does not require total destruction of all contaminants. The significant reduction of contaminants can relate to part of the remedy, e.g., collected liquids. The statutory preference does not require the complete elimination of the volume, toxicity, or mobility of all contaminants, but simply seeks a significant reduction of the risk to a health-protective level in the most cost-effective manner.

A containment remedy, therefore, is consistent with a "permanent" remedy.

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80. For example, the statute refers to remedial actions which have as a principal element treatment that in whole or part "permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances, pollutants, and contaminants." Section 121(b) of SARA, 42 U.S.C.A. § 9621(b). At some sites, EPA has accepted a remedy that provides for containment. United States v. Pepper's Steel and Alloys, Inc., Civ. Act. No. 83-1717, 85-0571-CIV-SPELLMAN (filed Feb. 11, 1987) (requiring solidification of PCB-laden soil with a concrete type substance).

### 3. Consideration Of Risks

EPA must "indicate the extent to which the release or threat of release may pose a threat to public health or welfare or the environment." It must also consider the "extent to which Federal environmental and public health requirements are applicable or relevant, and appropriate to the specific site, and the extent to which other Federal criteria, advisories, guidance and State standards are to be used in developing the remedy."<sup>81</sup>

EPA must assess "the extent to which the alternative is expected to effectively prevent, mitigate, or minimize threats to, and provide adequate protection of public health and welfare and the environment."<sup>82</sup>

The NCP states that:

The appropriate extent of the remedy shall be determined by the lead agency's selection of a cost-effective remedial alternative that effectively mitigates and minimizes threats to and provides adequate protection of public health and welfare and the environment. Except as provided in § 300.68(i)(5), this will require the selection of a remedy that attains or exceeds . . . [applicable and

81. 40 C.F.R. § 300.68(e)(1). Congress affirmed this approach by including the ARAR process in Section 121 of SARA 42 U.S.C.A. § 9621. Congress added that CERCLA response actions meet State ARARs, i.e., "any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent than" a Federal ARAR. Section 121(d)(2)(A)(ii) of SARA, 42 U.S.C.A. § 9621(d)(2)(A)(ii). See Section 121(d) of SARA 42 U.S.C.A. § 9621(d) generally for limitations on the use of state ARARs.

82. 40 C.F.R. § 300.68(h)(2)(iv).

relevant and appropriate requirements (ARARs) that have been identified for the specific site. (Emphasis added.)<sup>83</sup>

Where there are no ARARs, "the analysis shall, as appropriate, evaluate the risks of the various exposure levels projected or remaining after implementation of the alternative under consideration."<sup>84</sup>

[R]isk assessment may be based on data from advisories, State standards, or other Federal requirements considered during the feasibility study, or may require a review of other scientific information concerning the threat posed by the substances in question. Chapter 5 of EPA's "Guidance of Feasibility Studies Under CERCLA" (April 1985) describes EPA's approach to risk assessment.<sup>85</sup>

EPA is also required by CERCLA to compare risks of the alternatives to ensure that the risks of implementing a remedy do not outweigh its benefits. The NCP even provides that an alternative which does not meet ARARs may be chosen if a remedy would pose greater risks.<sup>86</sup>

Congress recognized this concern when it amended CERCLA to require EPA to consider "the potential threat to human health

83. 40 C.F.R. § 300.68(i)(1).

84. 40 C.F.R. § 300.68(h)(2)(iv). See EPA National Oil and Hazardous Substances Contingency Plan, Final Rule, 50 Fed. Reg. 47,912, 47,922 (Nov. 20, 1985) [hereinafter "NCP Preamble"].

85. Id. This guidance is a prior version of the FS Guidance, supra note 26, and is identical in content for the purposes of this Petition.

86. 40 C.F.R. §§ 300.68(i)(5)(iii), 300.68(g)(3).

and the environment associated with excavation, transportation, and redispal, or containment."<sup>87</sup>

#### 4. Consideration of Costs

Consideration of costs is a central factor in selecting CERCLA remedies. The NCP specifically requires the "selection of a cost-effective remedial alternative that effectively mitigates and minimizes threats to and provides adequate protection of public health and welfare and the environment."<sup>88</sup>

EPA's guidance requires that the Record:

provide clear, detailed justification for selection of the more expensive remedy by demonstrating that the treatment/destruction alternative is a cost-effective remedy.<sup>89</sup>

The NCP specifically lists costs first among the factors to be considered in selecting among remedies which adequately protect public health and the environment. As EPA's Administrator noted recently, even CERCLA as amended by SARA "does not direct EPA to eliminate all risks."<sup>90</sup>

Cost is also considered when determining whether the alternative is not "technically practical to implement at the

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87. Section 121(b)(1)(G) of SARA, 42 U.S.C.A. § 9621(b)(1)(G).

88. 40 C.F.R. § 300.68(i)(1).

89. Guidance on Selection of Destruction Technologies, supra note 32, at 1.

90. Letter from L. Thomas, EPA Administrator, to Honorable James J. Florio, at 4 (May 21, 1987) [hereinafter "EPA Letter"].

specific site".<sup>91</sup> EPA's

primary consideration in determining whether a particular alternative is practical is whether the option is logical and reliable in the long term. Cost may play a role in making this determination.<sup>92</sup>

Cost also is important in deciding whether CERCLA's Fund balancing test applies (i.e., whether "the need for protection of public health and welfare and the environment" at the site "is outweighed by the need for action at other sites that may present a threat to public health or welfare or the environment, considering the amount of money available in the Fund").<sup>93</sup>

There is no mathematically precise formula for balancing cost with the other factors. EPA has provided some guidance. For example,

if all remedies examined are equally feasible, reliable, and provide the same level of protection, the lead agency will select the least expensive remedy. . . . The lead agency will not always select the most protective option, regardless of costs.<sup>94</sup> (Emphasis in original.)

The NCP also notes that:

[a]n alternative that far exceeds the costs of other alternatives evaluated and that does not provide substantially greater public health or environmental protection or technical reliability shall

91. 40 C.F.R. § 300.68(i)(5)(iii).

92. NCP Preamble, supra note 84, at 47,920.

93. 40 C.F.R. § 300.68(i)(5)(ii).

94. NCP Preamble, supra note 84, at 47,921.

usually be excluded from further consideration.<sup>95</sup> (Emphasis added.)

EPA guidance interprets this to mean that:

[a]lternatives should be eliminated if they are deemed much more expensive (an order of magnitude or more) and offer similar or smaller environmental and public health benefits but no greater reliability than competing alternatives.<sup>96</sup>

EPA draft guidance also states that

where the leachate migration potential from contaminated soils or mixed waste is small, and/or the toxicity of the leachate is low, land disposal will be the cost-effective, highly reliable management alternative.<sup>97</sup>

#### 5. Consideration Of The Public Preference

Section 121(b)(2) of SARA, together with NEPA, incorporates into the remedy selection process the requirement to solicit public comment and attempt to be responsive to public and PRP concerns.<sup>98</sup> It is not surprising that most public comments advocate more stringent controls. Nothing in SARA or its legislative history, however, indicates that Congress intended that EPA abdicate its responsibility to make informed

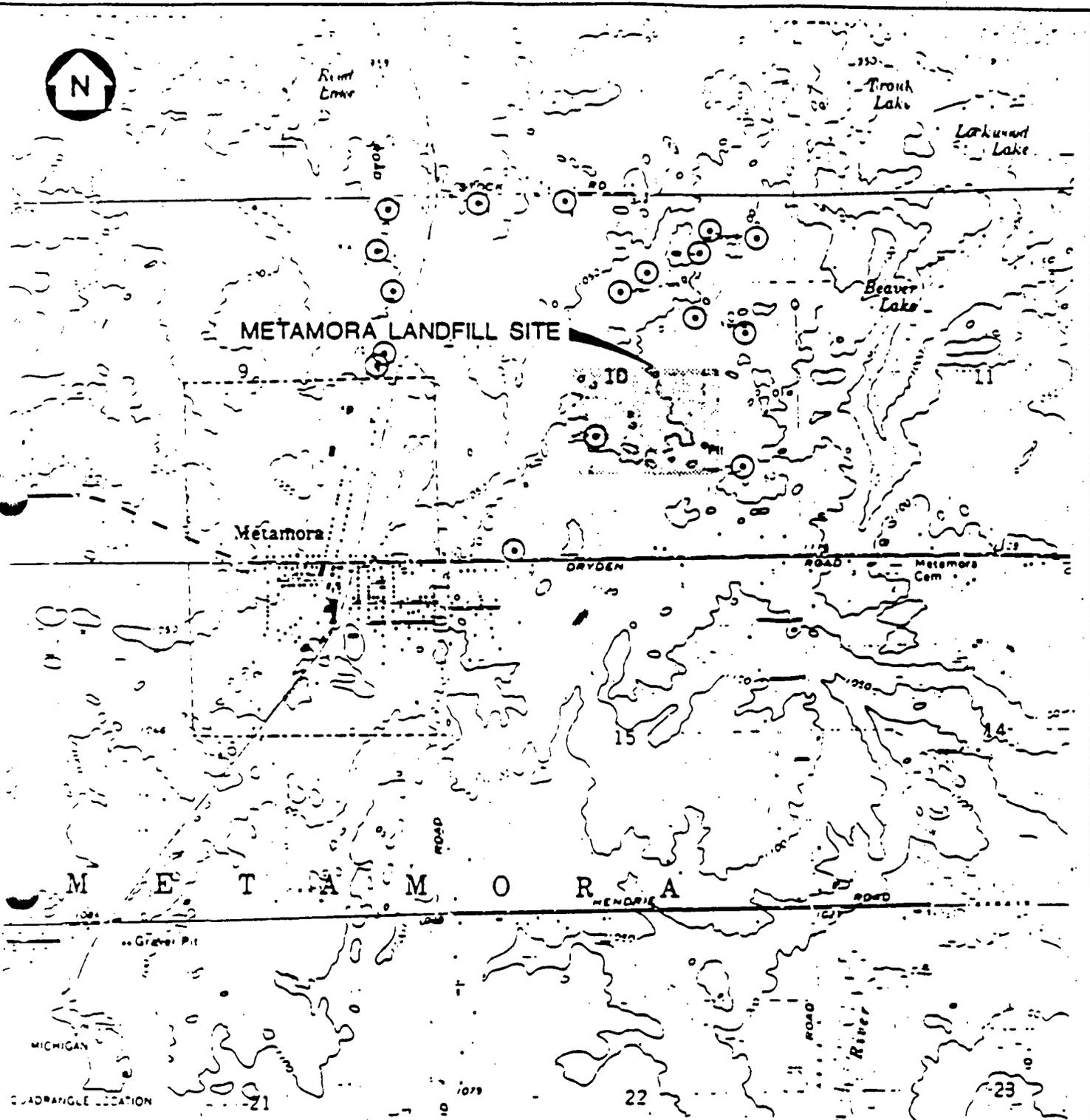
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95. 40 C.F.R. § 300.68(g)(1).

96. FS Guidance, supra note 26, at 2-23.

97. Draft Memorandum from Henry Longest, II, Director, Office of Emergency and Remedial Response, to Waste Management Directors, Regional Counsels, Re: Interim Criteria for Selecting Alternative Technologies at 11 (Feb. 6, 1986) [hereinafter "Interim Criteria"]. This memorandum was provided in response to a FOIA request for all written EPA policy documents concerning the selection of permanent remedies.

98. See supra note 26 and Section IV(C)(6), infra.

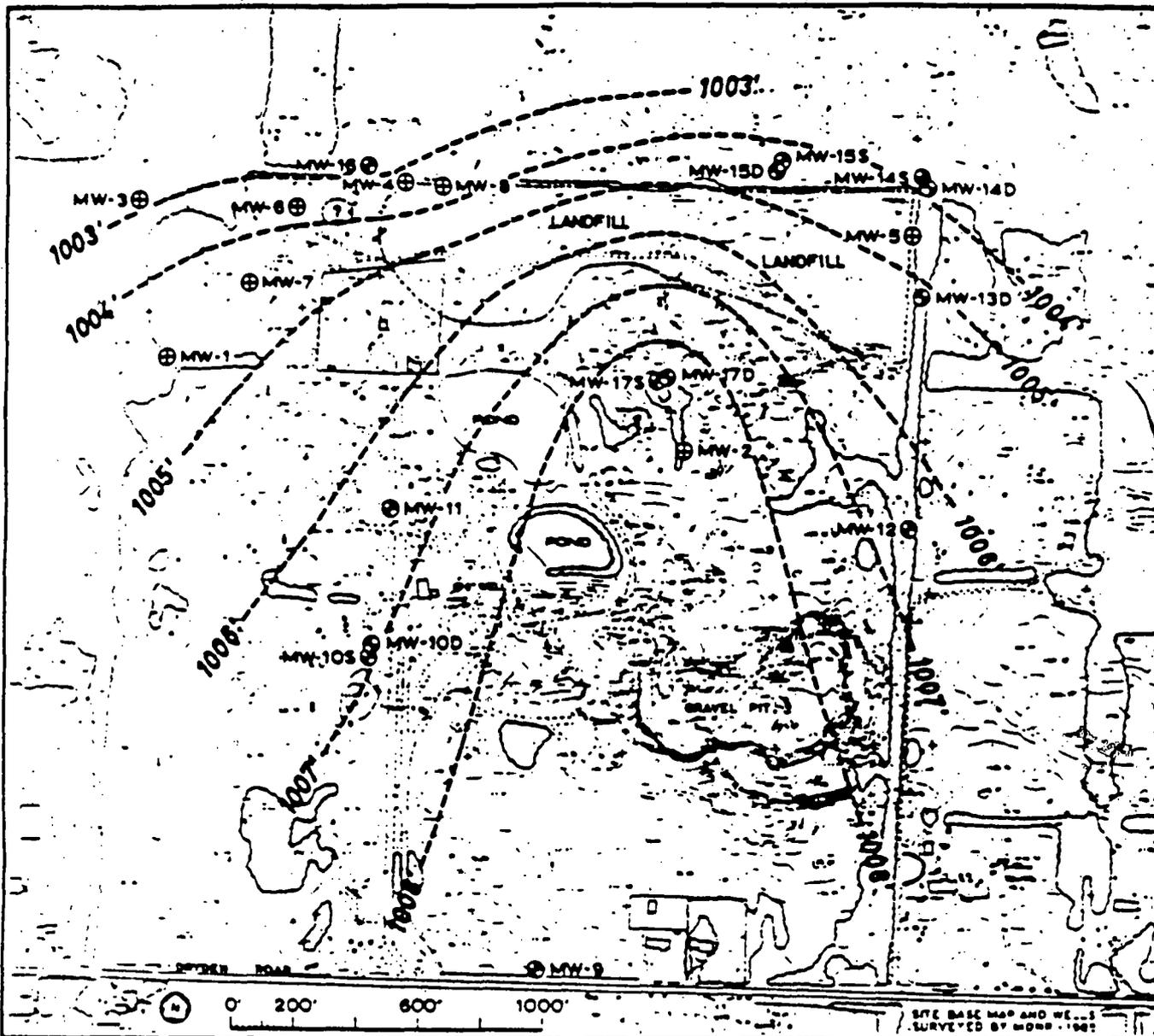


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○ APPROXIMATE LOCATIONS OF NEAREST  
 DOMESTIC WATER SUPPLY WELLS

FIGURE 1  
 SITE LOCATION MAP



- ② MAGNETIC ANOMALIES
- ⊕ PREVIOUSLY-EXISTING SITE WELLS
- ⊙ "SHALLOW" WELLS, THIS INVESTIGATION
- ⊙ "DEEP" (SOIL) WELLS, THIS INVESTIGATION
- 1003'- INFERRED ELEVATION OF THE WATER TABLE 09-16-85 - MSL DATUM

**FIGURE 2 - SITE AREA**  
**INTERPRETIVE WATER TABLE ELEVATION**  
**SURFICIAL AQUIFER**

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remedial decisions and merely adopt the most "popular" remedy. It makes no more sense to "vote" on the method of cleaning up a waste site than to vote on how a surgeon should perform delicate surgery.

Congress did not intend by including this provision that EPA ignore or give less weight to the other factors in SARA, particularly costs. EPA cannot select a remedy which is not cost-effective simply because the state or some member of the public demands it.

Excavation and destruction is often the choice of state officials or local residents because it "eliminates" the problem and it is conceptually very simple. Any public or state sentiment at Metamora in favor of excavation, however, could not have taken into account the risks of excavation. Excavation does present risks, but at Metamora EPA's Record fails to assess those risks.

EPA also should not ignore the concerns of the community members who live near the incinerator where the Metamora Landfill wastes would be shipped. It is likely that the enthusiasm for excavation and incineration of the wastes will be considerably less among those citizens.<sup>99</sup>

In sum, EPA must balance the needs of all the public, not just the state officials or those citizens who live in the

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99. For example, see the history of the United States v. Westinghouse Electric Corp., Civ. Act. Nos. I P 83-9-C and I P 81-448-C (S.D. Ind.) consent decree. See Public Interest Group's Opposition To Cleanup Called 'Specious,'; Sanctions Requested by City, Tx. L. Rptr. 436 (Sept. 24, 1986).

immediate vicinity of the landfill. The public concerns must then be weighed with other required factors.

#### 6. Record Requirements

EPA must "establish an administrative record upon which the President shall base the selection of a response action."<sup>100</sup> This administrative record must "be available to the public."<sup>101</sup> EPA also must "provide for the participation of interested persons, including potentially responsible parties, in the development of the administrative record on which the President will base the selection of remedial actions and on which judicial review of remedial actions will be based"<sup>102</sup> (emphasis added).

This participation must include, at a minimum:

1. notice of the plan and alternatives considered;<sup>103</sup>

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100. Section 113(k)(1) of SARA, 42 U.S.C.A. § 9613(k)(1). See 40 C.F.R. § 300.68; Memorandum from J. McGraw, Acting Assistant Administrator, to Regional Administrators, Re: Preparation of Decision Documents for Approving Fund-Financed and Potentiality Responsible Party Remedial Actions Under CERCLA (Feb. 27, 1985) [hereinafter "ROD Policy"].

101. Section 113(k)(1) of SARA; 42 U.S.C.A. § 9613(k)(1). See 40 C.F.R. § 300.67(d) (requiring a 21-day public comment period on CERCLA feasibility studies).

102. Section 113(k)(2)(B) of SARA, 42 U.S.C.A. § 9613(k)(2)(B). see also Conf. Rep., supra note 25, at 224. Specifically, "[g]eneral principles of administrative law respecting such records are not affected by this provision." Id.

103. Section 113(k)(2)(B)(i) of SARA, 42 U.S.C.A. § 9613(k)(2)(B)(i). See 40 C.F.R. § 300.67(d) and generally EPA, Draft Community Relations in Superfund: A Handbook, at pp. 1-1, 2, 2-4 (OSWER Directive No. 9230.0-3A, March 1986) [hereinafter "CRSH"] (the present handbook is the latest version of the interim handbook issued in September 1983).

2. a "reasonable opportunity to comment and provide information regarding the plan";<sup>104</sup>
3. an "opportunity for a public meeting";<sup>105</sup>
4. a response to each significant comment, criticism, and "new data submitted in written or oral presentations";<sup>106</sup> and
5. "a statement of the basis and purpose of the selected action."<sup>107</sup>

CERCLA, as amended, provides that the administrative record include all information received as part of the public process.<sup>108</sup>

**V. The Record Is Inconsistent With The Facts, CERCLA, EPA Regulation And EPA Policy**

**A. Introduction**

EPA's Decision to select excavation and offsite incineration as the remedy for the Metamora Landfill was not made in

104. Section 113(k)(2)(B)(ii) of SARA, 42 U.S.C.A. § 9613(k)(2)(B)(ii). See 40 C.F.R. § 300.67(d) and CRSH, supra note 103, at pp. 1.1 and 7-33.

105. Section 113(k)(2)(B)(iii) of SARA, 42 U.S.C.A. § 9613(k)(2)(B)(iii). See 40 C.F.R. § 300.67(d) and CRSH, supra note 103, at pp. 7-16, 17, and 7-34 through 7-36.

106. Section 113(k)(2)(B)(iv) of SARA, 42 U.S.C.A. § 9613(k)(2)(B)(iv). See 40 C.F.R. § 300.67(e) and CRSH, supra note 103, at 2-7 through 2-9, 4-6 through 4-8, and 4-37.

107. Section 113(k)(2)(B)(v) of SARA, 42 U.S.C.A. § 9613(k)(2)(B)(v). See 40 C.F.R. § 300.68; ROD Policy, supra note 100.

108. Section 113(k)(2)(B) of SARA, 42 U.S.C.A. § 9613(k)(2)(B). See ROD Policy, supra note 100.

accordance with law and is arbitrary and capricious. The Record is so conclusory and vague that it provides no basis for the original EPA Decision, or for subsequent judicial review. Furthermore, the Record provides no meaningful opportunity for the Petitioner to comment on the selection of the remedy.

For example, the existing Record:

1. states that EPA based its rejection of onsite remedial alternatives on a desire to avoid the delay which would be caused by seeking MDNR permits. The NCP explicitly requires no such permits;
2. lacks consideration of the present threat to public health from the site or a comparison of the risks of the alternatives;
3. fails to make findings required by CERCLA;
4. fails to evaluate, in a meaningful manner, the other remedial alternatives, particularly containment alternatives;
5. fails to adequately consider reasonable alternatives and cost effectiveness; and
6. provides inadequate information upon which to base any remedial decision.

The costs of implementing this fatally flawed Decision, therefore, cannot be recovered by EPA. EPA must reopen and supplement the Record in the Metamora Landfill matter to cure these defects. EPA then should implement a new remedy selection process in conformance with the NCP.

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The following review of the background facts, activities at the site, and details of the EPA Decision provides the basis for an examination of the flaws in the Record.<sup>109</sup>

B. Background

1. Facts

The Metamora Landfill site is located one-half mile northwest of the village of Metamora in Metamora Township, Lapeer County, Michigan (see Figure 1). The site is approximately 80 acres. The overburden in the area consists of approximately 250 to 300 feet of varying amounts of unconsolidated silt, sands, gravel, boulders, and glacial tills, including a continuous 150 foot layer of relatively impermeable till underneath the site.

The limited existing data suggests that the groundwater moves slightly downward and laterally from the south-central portion of the site toward the north, northwest, and northeast (see Figure 2).<sup>110</sup>

The surrounding land is primarily agricultural. There is a hunting club and property owned by the Boy Scouts adjacent to or nearby the site. Additionally, there are residential homes

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109. A failure to cite a flaw in this Memorandum should not be considered a waiver of any right to raise any defense or challenge at some later time.

110. This summary of the hydrogeological facts is short in large measure because of the inadequacy of existing information. Until an adequate Remedial Investigation ("RI") is completed, the information concerning the site will remain inadequate. See Exhibit 4.

in the area. The nearest downgradient home is 1,500 feet from the site.

Approximately 50 acres of the site were used as a landfill. Five areas (areas 1 through 5) were identified in the Phased Feasibility Study ("PFS") as locations of historic waste disposal.<sup>111</sup> Interviews with the site owners and operators indicate that certain of these areas were used at different times (see Exhibit 4).

The site was primarily used as a municipal and commercial landfill. A small number of drums containing chemicals have been uncovered at the landfill.

The following activities have occurred at the site:

- From 1955 to 1966: The site was operated as municipal dump initially in concert with Metamora Township.<sup>112</sup>
- 1966: The site received a Solid Waste Disposal license to receive general refuse, sanitary wastes and commercial wastes, including white goods, such as old refrigerators and washing machines;
- 1980: MDNR denied an application for expansion to receive solid wastes pursuant to Michigan Act 641;
- 1981: The site owner initiated a site investigation in order to obtain a permit for waste disposal;
- 1981-present: A series of state and federal investigations have occurred at the site:
  - September 1982: MDNR performed a limited excavation at the site and discovered buried drums containing

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111. E.C. Jordan, Phased Feasibility Study for the Metamora Landfill, in Metamora Township (Aug. 1986) [hereinafter "PFS"].

112. Exhibit 4, at §2.1.

organic chemicals;

-- March - August 1985: A site investigation was performed by E.C. Jordan;

-- August 1986: E.C. Jordan completed the PFS; and

-- December 1986: A MDNR contractor performed additional excavation test pitting and took samples for analysis;

- September 30, 1986: EPA issued the ROD selecting excavation and offsite incineration of the drums disposed of at the site and the surrounding soil at a cost of approximately \$41.5 million; and
- April 16, 1987: MDNR Progress Report #9 was issued describing, inter alia, the results of its December, 1986 investigations.
- Present: The preliminary work for the RI/FS to determine what, if any, additional groundwater or surface soil remedies are necessary at the site has begun.

Information gathered by, EPA and MDNR indicates that chemical wastes may have been disposed of at the site. The PFS estimated that up to 35,000 drums could be present at the site, with 20,000 to 25,000 drums in areas 1 and 4.<sup>113</sup> These estimates were based on the results of a magnetometer survey and gross, worst-case assumptions concerning the density of drums per square yard.

Records from the site and interviews with the site owner and operators, however, indicate that approximately 100 tons per year of "white goods" (refrigerators, stoves, automobile parts,

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113. PFS, supra note 111, at 27, but Exhibit 4 at \$2.0 and \$11, supra.

and other metallic commercial wastes) were disposed of at the landfill.<sup>114</sup> These "white goods" and other metallic rubble make it highly unlikely that all of the positive magnetometer readings indicate the presence of drums (much less drums filled with chemicals).<sup>115</sup> The interviews further indicate that little or no drummed waste was disposed of in areas 2, 3 and 5 of the landfill.<sup>116</sup>

A number of chemicals, including toluene, benzene, ethylbenzene, xylenes, C-58 (octochlorocyclopentene), and PCBs, have been reported by EPA to be present in drums, but only trace levels have been found in the groundwater, even approximately twenty years after disposal began (see Figure 3 and Table 1).

## 2. Aggravation Of Site Conditions By MDNR Activities

To paraphrase the Hippocratic oath in this context, the first rule of waste site remediation is to do no harm. Unfortunately, MDNR's own records indicate that actions taken during the test pitting have made the site conditions worse.

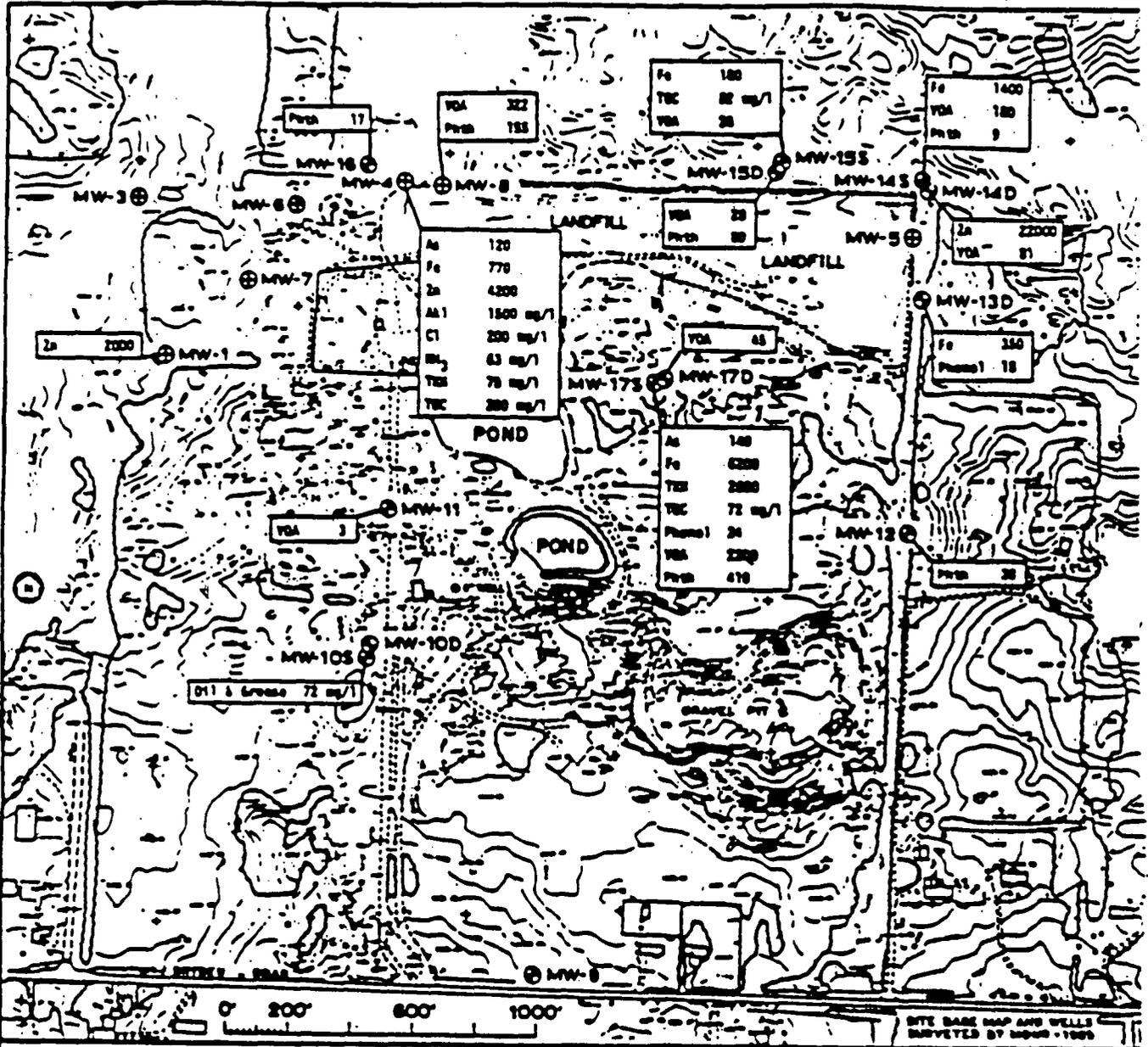
Nearly 13 years after the last waste disposal, data shows that there is no contaminant plume and only trace levels of chemicals in a few groundwater wells. The risks presented by the site are minimal. Excavation, however, by its very nature, is

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114. Exhibit 4, at §2.0.

115. Id.

116. Id.



**LEGEND**

- ▬ Areas
- ▬ 100'
- ▬ 200'
- ▬ 400'
- ▬ 800'
- ▬ 1600'
- ▬ 3200'
- ▬ 6400'
- ▬ 12800'
- ▬ 25600'
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- ▬ 74106937111064289806248010987612942222223667160320000'
- ▬ 14821387422212857861249602197525884444447334320640000'
- ▬ 29642774844425715722499203995051768888814668641280000'
- ▬ 5928554968885143144499607990010337777772933282560000'
- ▬ 118571099377702862889992159800206755555558466565120000'
- ▬ 23714219

intrusive and disruptive.<sup>117</sup> As a result of MDNR's test pit excavation, drums have been ruptured and their contents spilled on the ground.<sup>118</sup>

Contrary to good hazardous waste management practice, MDNR did not provide for cleanup of such spills.<sup>119</sup> Instead, the contractor's field notes indicate that spilled chemicals were pushed back into the excavated pit and covered over with soil.<sup>120</sup>

Wastes, previously contained, are now in direct contact with soil and exposed to rainwater infiltration. Such contact could substantially increase the generation of contaminated groundwater.<sup>121</sup>

Additionally, as indicated by a series of photographs taken at the site,<sup>122</sup> the drums which have been removed from the ground and stored in so-called containment areas are leaking. In one case, water has pooled in the containment area, thereby generating leachate or presenting a likelihood that leachate will be generated. The conditions at these containment areas have existed for over six (6) months.<sup>123</sup>

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117. See broader discussion in Section V(D)(3) and Exhibits 4 and 7.

118. Exhibit 4, at §5.0; see also photographs Id. at Attachment IV.

119. Id.

120. See Exhibits 4 and 5. Exhibit 4 includes copies of the relevant portions of field notes and the photographs.

121. Id.

122. Exhibit 4, at Attachment IV.

123. Id.

Such conditions should never have been created and should be remedied to avoid further deterioration of conditions at the site. Additionally, EPA and MDNR, not the PRPs, are liable for these aggravated conditions.<sup>124</sup>

3. Summary Of The Phased Feasibility Study  
And ROD

The PFS evaluated these alternatives:

	<u>Cost</u>
◦ No action;	\$ 432,000
◦ Excavation and Land Disposal Onsite;	\$ 5,600,000
◦ Excavation and Land Disposal Offsite;	\$11,500,000
◦ Excavation and Incineration Offsite; and	\$41,500,000
◦ Excavation and Incineration/Land Disposal Offsite	\$12,000,000

The PFS recommended excavation and offsite incineration, ostensibly because excavation and onsite disposal would be "uncertain due to anticipated difficulty in obtaining the necessary Michigan Act 64 Construction Permits" and because the selected alternative is only slightly more expensive than the next option, yet provides for destruction and volume reduction for a portion of the waste.<sup>125</sup>

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124. See United States Fidelity & Guar. Co. v. United States, 638 F. Supp. 1068, 1084 (M.D. Pa. 1986) (holding EPA 60% liable for damages from the release of acid fumes during a cleanup because EPA's contractor breached its duty by not taking into account wind conditions).

125. PFS, supra note 111, at p. 3.

On September 30, 1986, the Regional Administrator signed the ROD selecting excavation and offsite incineration as the remedy for the site (at a cost of approximately \$41.5 million). A Summary of Alternatives, accompanying the ROD, indicated that one of the major rationales for rejecting an onsite remedy was the need to comply with state permit requirements.<sup>126</sup> The only onsite containment alternative considered was construction of a Subtitle C RCRA facility.<sup>127</sup>

C. The Record Does Not Consider Risk As Required By CERCLA, The NCP and EPA Policy

1. The Record

A review of the Record indicates that EPA failed to assess risks as required by the NCP. The lack of a risk assessment is particularly disturbing because EPA originally insisted that the PFS include an evaluation of the risk posed to potential receptors.<sup>128</sup> MDNR, however, opposed this course of action<sup>129</sup> and apparently EPA acceded to their demand not to evaluate risk.

No formal or informal risk assessment, therefore, exists in the Record. Risk or threat to public health is barely

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126. Exhibit 1, Summary of Alternatives, at 5.

127. Id. at 8. The cost estimates provided also assumed without justification that 20% of the chemical wastes and soil would have concentrations of PCBs in excess of 50 ppm and, therefore, would require more expensive treatment. Id. at Table 9.

128. Letter from S. Phillips, MDNR, to J. Atwell, E.C. Jordan (September 16, 1985) (Exhibit 13).

129. Id.

mentioned in the Record and when it is, many of the statements are factually wrong or misrepresent the NCP, EPA policy, and/or the general risk management practice of EPA and other federal agencies.

The two (2) page ROD does not even mention the words "risk" or "threat to public health." It states in conclusory fashion that "offsite transport and destruction of excavated waste is . . . necessary to protect public health, welfare or the environment . . . ."

The Summary of Alternatives is equally uninformative. EPA's sole reference to risk assessment is in the following conclusory statements:

Benzene, 1,2-dichloroethane, and trichloroethane, and trichloroethylene, which are known or suspected human carcinogens, have been detected in on-site monitoring well samples in concentrations that exceed the  $1 \times 10^{-6}$  acceptable risk level established by U.S. EPA.<sup>130</sup>

EPA also expressed a concern that chemicals in the excavated wastes "might migrate into the ground water" and "if the site were used in the future, and the fill covering the drums were exposed, the drums and their contents could present an inhalation and direct contact hazard."<sup>131</sup>

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130. Exhibit 1, the ROD at 3-4.

131. Id.

The mere presence of a known or suspected carcinogen does not present an unacceptable risk. A more detailed analysis of the fate of the chemicals, i.e., the effects of biodegradation, adsorption, and diffusion, is important to understanding the risk presented by the site and is required by EPA guidance.<sup>132</sup>

The Record contains no analysis or consideration of these factors. EPA's Summary of Alternatives simply compares the highest concentrations in any well. EPA guidance concerning the performance of exposure and risk assessments requires the use of 70-year average concentrations at the point of exposure, not the highest level in a contaminated well.

The Summary of Alternatives also states that there is a " $1 \times 10^{-6}$  acceptable risk level established by EPA." This is incorrect. EPA policy allows consideration of alternatives in the  $10^{-4}$  to  $10^{-7}$  risk range.<sup>133</sup> EPA uses MCLs,<sup>134</sup> which often correspond to a risk level higher than the  $10^{-6}$  level, and has accepted risks of  $10^{-5}$  or higher in many regulatory programs.

In sum, the Record does not adequately assess the risks presented by the Metamora Landfill and misrepresents agency

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132. See this Section C(2)(f). Even a scientist employed by the EPA contractors working on the Metamora Landfill site recognizes these principles. See J. Dragun, et al., Groundwater Contamination - Part 1, Transport and Transformation of Organic Chemicals, Chem. Engin. 65, 67 (Nov. 26, 1984) [hereinafter "Dragun Art."]. ("it is most important that those reactions be quantified in order to . . . properly assess the health hazards associated with the problem . . .").

133. EPA Letter, supra note 90, at 3-4. EPA, Superfund Program; Interim Guidance on Compliance with Other Applicable or Relevant and Appropriate Requirements, Notice of Guidance, 52 Fed. Reg. 32, 496 (August 27, 1987).

134. Id.

policy on acceptable risk.<sup>135</sup> EPA's Decision to select excavation and offsite incineration, therefore, is not in accordance with law.

2. EPA's Characterization of the Hazard Presented By The Site Is Not Accurate

a. Purpose

An essential factor in any CERCLA cleanup decision is an assessment of the level of hazard or risk presented by a site.<sup>136</sup> The PFS, however, contains no analysis of risk and no attempt to evaluate the residual risk from any of the remedial alternatives evaluated.<sup>137</sup> The Petitioner, therefore, has prepared a preliminary general assessment of the risk ("Assessment").

This Assessment indicates that using the worst-case government risk assessment methodology, the risk presented by the

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135. EPA has performed a risk assessment at other sites, i.e., see NUS Corporation, Risk Assessment and Phased Feasibility Study of Alternatives -- Spiegelberg Site Paint Sludge Disposal Area Livingston County, Michigan D-33-10-5-11 at 3-20 (September 1976) [hereinafter "Spiegelberg Risk Assessment and PFS"].

136. Also see Section IV(C) supra, for a general description of the requirements of CERCLA.

137. The stated purposes of the PFS were "to evaluate the potential risk at the site, evaluate the need to address that risk prior to final site remediation, and to evaluate appropriate remedial alternatives to reduce the potential risks posed by the site." PFS, supra note 111, at 1 and 4. There is only a perfunctory four page table in the PFS (PFS, supra note 111, at 30-34) that lists such items as the TLV, carcinogenicity, water solubility and odor thresholds for a handful of chemicals. This information does not fulfill the requirements of EPA's Superfund Public Health Evaluation Manual (October 1986) [hereinafter "Superfund PHEM"] or EPA's enforcement Endangerment Assessment guidance.

Metamora Landfill, even without remedies, is: low in an absolute sense; lower than the risk levels ordinarily considered not worthy of regulatory action; and lower than levels provided in EPA guidance.

This Assessment of hazard or risk is a worst-case, upper-bound analysis. It follows EPA policy and guidance, where applicable.<sup>138</sup> It is intended to provide a qualitative sense of: (a) the magnitude of the existing and future risk presented by the site; (b) the risk that might be presented if a reasonable containment alternative is implemented; and (c) the factors which control the risk.<sup>139</sup> This Assessment, therefore, should not be considered a rigorous risk assessment of the type that EPA must perform in its Feasibility Study.

b. Description of the Relevant Information

EPA has acknowledged, albeit in a conclusory manner, that dermal exposure to soil or inhalation exposure is "not a

138. 40 C.F.R. § 300.68. FS Guidance, supra note 26; Superfund PHEM, supra note 137; EPA, Guidelines for Carcinogen Risk Assessment, 51 Fed. Reg. 33,992 [hereinafter "EPA Risk Guidelines"] (Sept. 24, 1986) and EPA, Guidelines for Estimating Exposures, 51 Fed. Reg. 34,042 [hereinafter "Exposure Guidelines"] (Sept. 24, 1986). See infra text and accompanying notes 145 to 156, for a more detailed description. Prior to the issuance of the final manual the draft of this manual was utilized. See Draft, Superfund Health Assessment Manual (ICF, Inc. May 22, 1985). This draft was essentially the same as the final manual.

139. The present risk is discussed in this Section and the residual risk after containment is discussed in Section V, infra.

threat" at this time; therefore, these exposure pathways will not be evaluated further.<sup>140</sup>

At the Metamora Landfill site, most of the 13 groundwater wells sampled to-date and the resistivity survey indicate no contamination.<sup>141</sup> The most significantly affected well location is well 17, which has 24 parts per billion ("ppb") of phenolics, 79 ppb of methylene chloride, 660 ppb of toluene, and 1,500 ppb of ethyl benzene (well 17S). All other wells have concentrations that are much lower or have no detectable levels of chemicals.

"[B]ased on the most recent monitoring well samples, contaminants had not migrated a significant distance from their original locations."<sup>142</sup> If contaminants have not migrated substantial distances in the approximately 33 years since waste disposal began or in the 12 to 13 years since liquid disposal ceased,<sup>143</sup> it is likely that contaminants are not migrating at all.<sup>144</sup>

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140. Exhibit 1, Summary of Alternatives, at 4.

141. Most of the data at the site is below the detection limit. The presence of a large number of nondetects in groundwater samples from a limited geographic area provides some level of assurance that the "true" concentrations are probably not just below the detection limit and may not be present at all. Exhibit 4 contains a preliminary risk evaluation analysis using such worst-case assumptions. This evaluation indicates that the worst-case upper-bound lifetime risk is not significant. See infra, subsection (e).

142. Exhibit 1, Summary of Alternatives, at 4; see also Draft Tech Memo, supra note 22, at 6.

143. Exhibit 4, at §2.0.

144. Exhibit 4, at §2.4.

c. Methodology

In general, where there is sufficient data, this Assessment will use "realistic assessments based on the best data available."<sup>145</sup> "As required by EPA guidance, the exposure point will be the "geographic point of highest individual exposure for a given release source/transport medium combination (i.e., the geographic location where human inhabitants are exposed to the highest predicted chemical concentrations)" (see Figure 4).<sup>146</sup> The point of nearest exposure to the groundwater from the Metamora Landfill is the nearest drinking water well (see Figure 1).<sup>147</sup>

EPA acknowledges that groundwater is the only significant route of potential exposure. The Assessment, therefore, only evaluates the long-term risk from ingestion of water from the nearest downgradient drinking water well (approximately 1,500 feet to the north).

EPA recommends two general approaches to such an exposure assessment:

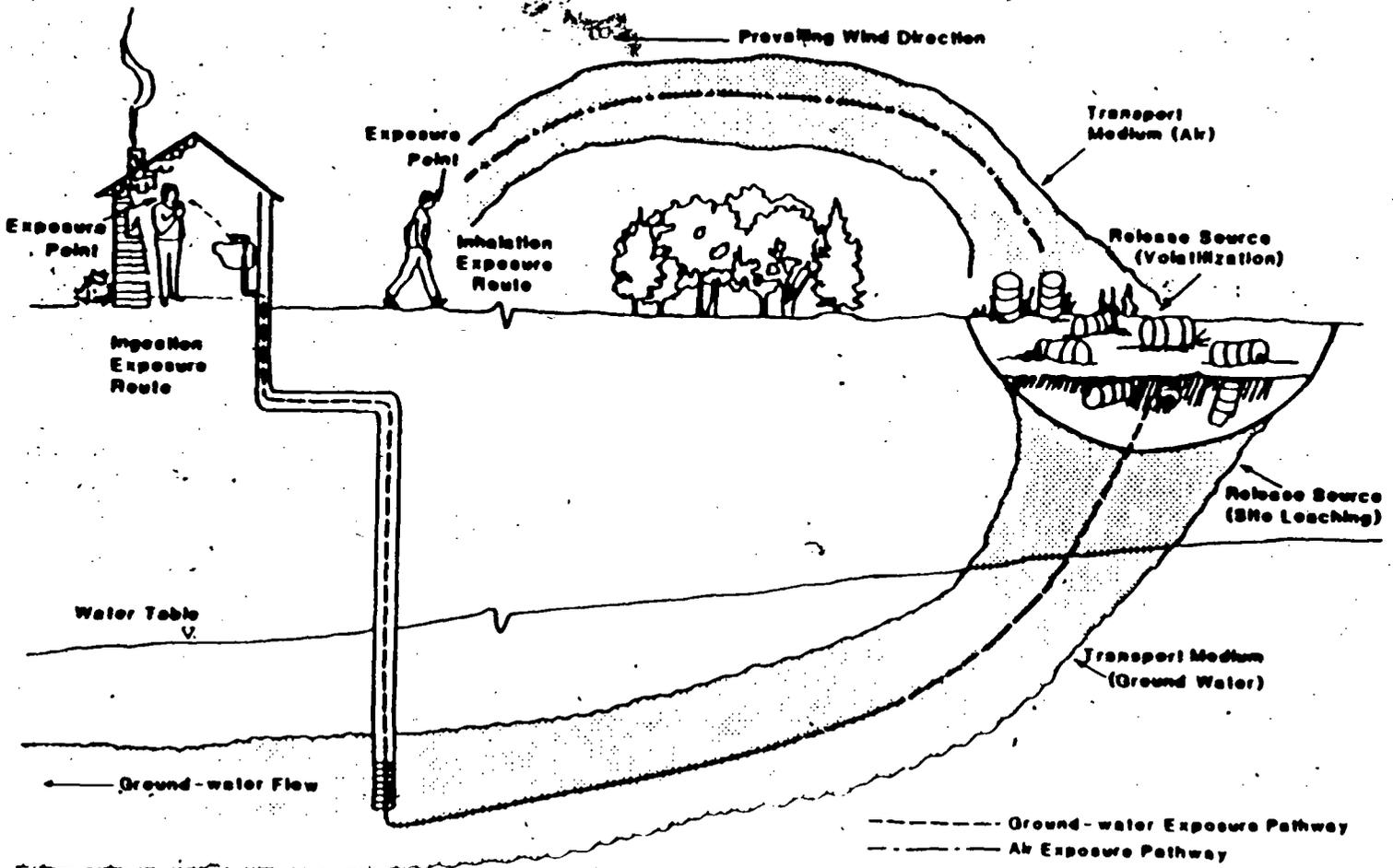
One is to use a conservative (not necessarily "worst case") approach in making the assumptions necessary for a particular estimation method. The consequence of making conservative assumptions is that risks may be substantially overstated but will not be understated in the

145. Exposure Guidelines, supra note 138, at 34,053.

146. Superfund PHEM, supra note 137, at 29. Figure 3 in this Memorandum is from id. at p. 30. For example, see Spiegelberg Risk Assessment and PFS, supra note 135, at 3-20.

147. Exhibit 1, Summary of Alternatives, at 3-4.

EXHIBIT 4 ILLUSTRATION OF EXPOSURE PATHWAYS



final analysis. All assumptions and the basis for each should be recorded.

A second, and generally preferred, approach is to calculate and present both best estimates and conservative upper-bound estimates for all exposure point chemical concentrations. If this approach is followed and both sets of concentration estimates are carried through the entire public health evaluation (ultimately resulting in two sets of risk estimates), the results will provide not only an estimate of the risk magnitude but a good indication of the overall uncertainty of the analysis.<sup>148</sup>  
(Emphasis added.)

EPA considers "systematically the extent of chemical fate and transport in each environmental medium" in order to "account for the behavior of all released chemicals."<sup>149</sup>

In general,

after a substance is released, it first moves vertically down through the unsaturated soil zone to the ground water. Then, after initial mixing in the ground water, the substance travels horizontally because of the advective flow of the ground water underlying the site. The primary processes that affect the fate and transport of contaminants in these two zones are advection (including infiltration and leaching from the surface) dispersion, sorption (including reversible adsorption, ion exchange, complexation, and precipitation), and degradation. As a released substance flows away from the source area, these processes act to reduce its concentration.<sup>150</sup>  
(Emphasis added.)

148. Superfund PHEM, supra note 137, at 38.

149. Id. at 39.

150. Id. at 41.

These processes are also recognized as important by scientists in the field. For example, Dr. James Dragun, one of the experts that E.C. Jordan (EPA's CERCLA contractor) presumably would use at this site, has noted:

the concentration of the contaminant in groundwater can be reduced by physical, chemical or biological reactions, such as:

- Adsorption onto soil surfaces.
- Volatilization from the soil.
- Biodegradation.
- Chemical degradation.

... it is most important that these reactions be quantified in order to (a) properly assess the health hazards associated with the problem and (b) select a cost-effective remedial action.<sup>151</sup>

EPA also requires that one use "70-year time weighted average" concentrations for the purpose of estimating individual lifetime risks at Superfund sites.<sup>152</sup>

This Assessment makes several unrealistic and worst-case exposure assumptions in order to provide a qualitative evaluation of the upper-bound, future risks in a preliminary and expeditious fashion.<sup>153</sup> A representative overburden groundwater concentration

151. Dragun Article, supra note 132, at 67.

152. Superfund PHEM, supra note 137, at 41.

153. These assumptions are made solely for the purposes of this Petition to Reopen and Memorandum In Support. They provide strong evidence that there is no meaningful hazard at this site. These assumptions, however, would be inappropriate to use in a risk assessment.

beneath the site was compared to applicable and relevant and appropriate requirements ("ARARs") or a risk-based concentration in Table 1.<sup>154</sup>

d. Selection of ARARs and Risk Factors

This Assessment compares the average concentration of chemicals directly beneath the site to EPA's maximum contaminant levels<sup>155</sup> and EPA water quality criteria. For those chemicals without MCLs, the concentration that corresponds to the  $10^{-5}$  upper-bound lifetime carcinogenic risk level, as calculated by EPA in its water quality criteria, is used to provide a rough risk comparison. This comparison does not necessarily take into account site specific factors or the latest scientific information which could decrease the risk.<sup>156</sup>

e. Results of the Assessment

There can be no risk without exposure. The data clearly demonstrate, and EPA agrees, that "[n]o contaminants have as yet

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154. ARARs is a regulatory term-of-art. It is defined more fully in Section VI. See Memorandum from J. Winston Porter, Assistant Administrator for Solid Waste and Emergency Response, to Regional Administrators, et al., re: Interim Guidance on Superfund Selection of Remedy (Dec. 24, 1986) [hereinafter "Interim Guid. Re: Remedy"].

155. See Superfund PHEM, supra note 137, at 91. See also EPA Letter, supra note 90, at 4. See also discussion in Section V(D), infra, for a more comprehensive description of EPA policy.

156. There is also a possibility that more recent scientific information might increase the assessed risk. Risk assessment methodology, however, contains many conservative assumptions in order to compensate for this type of uncertainty.

been detected in downgradient residential water samples.<sup>157</sup> The present risk from the site, therefore, is zero.

The chemicals have not migrated in the overburden aquifer from areas near the disposed municipal refuse in the approximately 33 years since refuse disposal began. There are at least 150 feet of clay beneath the site.

The nearest drinking water wells are screened in the Marshall Sandstone bedrock, which is beneath the overburden aquifer. Not only does no present route of migration exist, but the existing data indicates that none is likely in the future.

Furthermore, the overburden aquifer is not likely to be used as a drinking water source, because it produces insufficient quantities of water. Even if one examines the level of contamination in the overburden aquifer, however, this groundwater presents no significant risk. In the unlikely event that someone used the overburden aquifer for drinking water, any future risk can be qualitatively evaluated by comparing the measured concentrations in a representative downgradient well on site with EPA's ARARs or a risk based value (Table 1).<sup>158</sup>

This general risk evaluation indicates that the Landfill presents no significant risks, even if no remedy were implemented. The concentration of chemicals in the downgradient overburden wells on the Landfill site is below the MCLs, i.e., it can be used for drinking water (Table 1). Additionally, where there

157. Exhibit 1, Summary of Alternatives, at 4.

158. Exhibit 4, at §§4.0, 4.3.

are no ARARs, the concentration of chemicals in the representative downgradient overburden groundwater is less than the  $10^{-5}$  upperbound lifetime risk level, (i.e., assuming someone drank two liters of this water every day for 70 years).

In most cases, even the highest concentration in any overburden well is lower than the MCL, or a  $10^{-5}$  upper bound risk level or the reference dose. In a few isolated wells in the refuse disposal area, the highest water concentration is greater than the ARAR, or the concentration that corresponds to the  $10^{-5}$  upper bound lifetime risk level or the reference dose. These wells, however, are located in pockets where refuse was disposed of and do not represent a plume of chemicals. It is unrealistic, inappropriate and contrary to EPA's policy (PHEM at p.29) to compare health-based standards to groundwater concentrations in the refuse area itself because this would assume someone is drinking this water.

In general, the inherently low risk of the groundwater within the refuse, coupled with the low potential for migration, indicates that the future risk from this landfill is extremely low or zero. Furthermore, this risk evaluation substantially overestimates the risks because it:

- ° utilizes groundwater wells on the site rather than wells at the nearest points of exposure;
- ° ignores the lack of hydrogeologic connection between the surficial aquifer and the aquifer used for drinking water wells;
- ° assumes that no remedy will be installed at any time; and

disregards completely several processes which serve to retard the movement of chemicals in groundwater, e.g., dilution, adsorption and biodegradation. These processes act to reduce the plume's concentration. [EPA Superfund guidance, as well as good science, would require that these processes be considered (See PHEM at p.41).]

f. Uncertainties and Risk Management Factors in the Risk Assessment Process

(i) Uncertainties in Risk Assessment Methodology

To place this qualitative risk assessment into an appropriate context, one must understand the nature and limitations of risk estimates.

[The] estimation of cancer risks to humans at low levels of exposure is uncertain. At best, the linear extrapolation model used here provides a rough but plausible estimate of the upper limit of risk; i.e., it is not likely that the true risk would be much more than the estimated risk, but it could very well be considerably lower. The risk estimates . . . should not be regarded as an accurate representation of the true cancer risks even when exposures are accurately defined (emphasis added).<sup>159</sup>

"[A]lmost nothing is known about the true shape of the dose response curve at low environmental levels."<sup>160</sup> Prominent scientists have noted that "[t]here is little sound scientific

159. EPA, Health Assessment Document for Polychlorinated Dibenzo-p-dioxins, at 11-115 (EPA-600/8/84-014f, Aug. 1985) [hereinafter "PCDD Assessment"]. See also EPA Risk Guidelines, supra note 138, at 33,998; Superfund PHEM, supra note 137, at 80.

160. PCDD Assessment, supra note 159, at 11-113.

basis for" EPA's "[e]xtrapolation from the results of rodent cancer tests done at high doses to effects on humans to low doses . . . ."161

In fact, EPA's new Regional Director for Health and Risk Capability,<sup>162</sup> a widely respected researcher formerly with the Centers for Disease Control, has written that:

[a]lthough it is theoretically possible that any amount of a chemical may cause some effect, in practice it must be recognized that at very low concentrations, many competing elements come into play and the contribution of individual chemicals to adverse health effects may be of no consequence.<sup>163</sup> (emphasis added.)

In sum, the results of a risk assessment are not a measure of the "real" cancer risk, but a "plausible upper limit to the risk [calculated for regulatory purposes] that is consistent

161. B. Ames, et al., Ranking Possible Carcinogenic Hazards, 236 Sci. 271 (Apr. 17, 1987) [hereinafter "Ames Article"].

162. Dr. Renate Kimbrough. See Env't Policy Alert at 22 (June 3, 1987). Dr. Kimbrough will advise the EPA Regional Office on risk assessment and risk management issues.

163. R. Kimbrough, M.D., and M. Simonds, Compensation of Victims Exposed to Environmental Pollutants, Brief Communication, 41 Archives of Env'tl Health 185, 187 (May/June 1986) (Exhibit 8). Also see Ames Article, supra note 161, at 271, 277. A Report by a group of academics representing ten major disciplines of biology, engineering and medicine, concluded that "[t]o date epidemiological studies have shown very little evidence of a hazard to human health resulting from exposures to chemical disposal sites." Health Aspects of the Disposal of Waste Chemicals, (Universities Associated for Research and Education in Pathology, Bethesda, MD, 1985).

with some proposed mechanisms of carcinogenesis . . . . The true value of the risk is unknown, and may be as low as zero."<sup>164</sup>

(ii) Uncertainties in the Exposure Assessment

There is, again, no present risk. The risk comparison<sup>165</sup> in Petitioner's Assessment substantially overestimates the future risk because it: (a) uses the groundwater concentration directly underneath the site, rather than the concentrations at the nearest drinking water well; (b) ignores the 150 feet or more of clay between the overburden aquifer and the Marshall Sandstone aquifer (that is used for drinking water down-gradient of the Landfill);<sup>166</sup> (c) assumes that no remedy will be implemented; and (d) ignores degradation, adsorption, and other factors which will decrease the concentration of chemicals in the groundwater if they migrate at all.<sup>167</sup> Furthermore, if in situ containment measures such as a cap and/or purge wells, were implemented, the already miniscule risk would be substantially reduced or eliminated.<sup>168</sup>

164. EPA Risk Guidelines, supra note 138, at 33,998.

165. How one estimates a 70-year average concentration in this case depends upon what risk is being assessed. Different concentrations would be appropriate to assess the present risk, the risks from the no action alternative, the risk from one or more containment alternatives, or the residual risk which will remain after excavation.

166. Exhibit 4, at §§2.2, 2.4, §4.3.

167. Id. Actual concentrations at drinking water wells would be substantially lower than concentrations beneath the site, if migration occurred at all.

168. Exhibit 4, at §4.3.1. Such a purge well system would also eventually clean up the groundwater beneath the site.

(iii) Risk Management - Selecting an Acceptable Residual Risk Level

The risk assessment process does not conclude with the production of a risk level, no matter how qualified that number may be. Risk assessment, as performed by EPA, is composed of two parts: (1) the risk assessment, *per se* (i.e., the estimation of a risk level); and (2) the risk management decision.

Risk management "combines the risk assessment [the scientific input] with the directives of the regulatory legislation, together with socioeconomic, technical, political, and other considerations, to reach a decision as to whether or how much to control future exposure to the suspected toxic agents [substances]."169

"EPA believes that the appropriate inquiry is to what extent the risk posed by a pollutant should be minimized so that the residual risk is reasonable for society to accept,"170 i.e., to "protect against significant or unreasonable public health risks."171 EPA regulatory actions, therefore, "do not necessarily eliminate all public health risks but minimize those risks without causing unreasonable social or economic impacts."172 CERCLA, as amended by SARA, "does not direct EPA to eliminate

169. EPA Risk Guidelines, *supra* note 138, at 33,993.

170. EPA, National Emission Standards for Hazardous Air Pollutants; Coke Oven Emissions From Wet-Coal Charged Byproduct Coke Over Batteries, Proposed Rule and Notice of Public Hearing, 52 Fed. Reg. 13,586, 13,594 (Apr. 23, 1987) [hereinafter "Proposed Coke Oven Regs."].

171. Id. at 13,586.

172. Id.

all risk."<sup>173</sup>

EPA's remedial approach is that "groundwater should be protected differentially based on characteristics of vulnerability, use and value."<sup>174</sup> For CERCLA purposes, the risk management levels are determined by comparison to ARARs,<sup>175</sup> if they are available. EPA regularly uses MCLs as ARARs where they have been proposed or promulgated.<sup>176</sup>

If ARARs are not available, a site-by-site selection of an acceptable risk level is made based on EPA guidance.<sup>177</sup> EPA's CERCLA policy is that

the target total individual carcinogenic risk resulting from exposures at a Superfund site may range anywhere between  $10^{-4}$  to  $10^{-7}$ . Thus, remedial measures being considered should be able to reduce total potential carcinogenic risks to individuals to levels within this range.<sup>178</sup>

173. EPA Letter, supra note 90, at 4.

174. Interim Guid. Re: Remedy, supra note 154, at 9.

175. ARARs are often risk-based.

176. Id.

177. Superfund PHEM, supra note 137, at 86, 91. FS Guidance, supra note 26, at 5-19, 5-20; see infra text and accompanying note 179.

178. Superfund PHEM supra note 137, at 91, 93; see also FS Guidance, supra note 26, at 5-19, 5-20; EPA, Hazardous Waste Management System; Land Disposal Restrictions, Proposed Rule, 51 Fed. Reg. 1,602, 1,628 (Jan. 14, 1986) [hereinafter Land Disposal Restrictions]. EPA's Administrator recently affirmed this view, i.e., "a risk range of  $10^{-4}$  to  $10^{-7}$  individual lifetime risk for carcinogens provides adequate protection of human health and provides a sound basis for determining when requirements are relevant and appropriate." EPA Letter, supra note 90, at 4. As indicated in subsection C(1), supra, EPA's Record incorrectly states EPA's policy on this point. Exhibit 1, Summary of Alternatives, at 4.

This position is consistent with the regulatory practice of other federal agencies. Virtually all EPA and other federal regulations only require action to reduce risks when the lifetime upper-bound cancer risk is in the range of  $10^{-4}$  to  $10^{-7}$  level.<sup>179</sup> EPA often uses the  $10^{-5}$  cancer risk level as an acceptable risk management level, even when large populations are exposed to such risk.<sup>180</sup> In this situation, at worst a relatively small population may be exposed in the future.

Also, this policy is consistent with Michigan judicial decisions in this area. At least one State court has held that a defendant could shut down all or part of a groundwater purge well system when the discharge of contaminated groundwater resulted in

179. Land Disposal Restrictions, *supra* note 178, at 1,628-29; EPA, Burning of Hazardous Waste in Boilers and Industrial Furnaces, Proposed Rule, 52 Fed. Reg. 16,982, 17,036-37 (proposed to be codified in 40 C.F.R. § 266.34-4) [hereinafter "Proposed Furnace Regs."]; C. Travis, S. Richter, E. Crouch, R. Wilson, & E. Klema, Cancer Risk Management: A Review of 132 Federal Regulatory Decisions, 21 Environ. Sci. Technol. 415 (1987) [hereinafter "Risk Review"]; and J. Rodricks, and S. Brett, Determination of Significant Risk in the Regulation of Chemical Carcinogens, 1 Tx. L. Rptr. 1,337 (April 29, 1987) [hereinafter "Significant Risks"].

180. Proposed Coke Oven Regs., *supra* note 170, at 13,594 in Table 1. According to the risk assessment supporting this regulation, after implementation of the regulation, 200 or less people would be exposed to greater than  $10^{-2}$  cancer risk level, 10,000 people would be exposed to greater than  $10^{-3}$  cancer risk level, 270,000 people would be exposed to greater than  $10^{-4}$  cancer risk level, 4,400,000 people would be exposed to greater than  $10^{-5}$  cancer risk level, and 33,000,000 people would be exposed to greater than  $10^{-6}$  cancer risk level. The proposed regulations regulating boilers and furnaces explicitly uses a  $10^{-5}$  risk level as an acceptable level. Proposed Furnace Regs., *supra* note 179, at 17,004. ("risks from carcinogenic organic emissions would not be considered significant if the aggregate risk did not exceed  $1 \times 10^{-5}$  . . . . EPA believes that this level of risk is reasonable for this purpose given the conservatism of the analysis and the comparable risk likely to be posed by burning only fossil fuels") (emphasis supplied).

a surface water concentration corresponding to a  $10^{-5}$  lifetime cancer risk level.<sup>181</sup>

The risk level chosen for comparison purposes in Table 1 is  $10^{-5}$ . A  $10^{-5}$  risk level is a reasonable risk management level in an absolute sense and is similar to the risk levels used for MCLs.<sup>182</sup>

EPA's suggestion that health is threatened by the Metamora Landfill site is not supported by the Record and is conclusively refuted by the Assessment provided herein by the Petitioner. Nothing in the Record supports the draconian and inordinately expensive remedial measures now being contemplated for this site. In fact, one can reasonably argue that no remedy is necessary for this site.<sup>183</sup>

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181. Kelley v. Chemcentral/Grand Rapids, No. 30139 (Mich. App. May 3, 1984) (Exhibit 7). Also the MDNR Rule 57 Advisory Committee Report recommended using the  $1 \times 10^{-5}$  risk level in setting water quality standards. See Exhibit 4, Attachment V. This report was never formally adopted, but it is used as guidance by MDNR.

182. See e.g., Risk Review, supra note 179, at 416-417 (risks of chloroform and trihalomethanes in drinking water are  $0.9 \times 10^{-5}$  and  $4 \times 10^{-5}$ , respectively.) Also EPA's proposed MCL for benzene is 5 ppb, approximately the  $10^{-5}$  cancer risk level according to EPA. Compare Superfund PHEM, supra note 137, p. 46 with p. 54, Risk Review, supra note 179 at 418, and Significant Risks, supra note 179, at 1,338, 1,340.

183. For example, at another site, NUS concluded that risk levels of up to  $4 \times 10^{-6}$  did "not appear to constitute an exposure pathway of consequence." Spiegelberg Risk Assessment and PES, supra note 135, at 3-47. If some reasonable containment measures are necessary at this site, the risk would be driven further toward zero. Exhibit 4, at §§4.3.0, 4.4.1. Containment measures would address the potential threat from the landfill in the future.

Chemical	Groundwater Concentrations* (ppb)	Number of Well Locations with Detectable Levels	Table 1: Risk Comparison Representative Concentration in down-gradient groundwater well (well 11) (ppb)	Superfund PHEM*** (10 <sup>-5</sup> or ADI) (ppb)	EPA Proposed or Final MCL (ppb)
Methylene Chloride	N.D.-79+++	(5)	3.3	(1.9)	N.A.
1,1-Dichloroethane	N.D.-95	(3)	N.D.	Insf. data	N.A.
1,2-Dichloroethane	N.D.-46	(2)	N.D.	/	5 <sup>+</sup>
Toluene	N.D.-660	(1)	N.D.		2,000 <sup>++</sup>
Benzene	N.D.-23	(2)	N.D.		5 <sup>+</sup>
Ethyl Benzene	N.D.-1,500	(1)	N.D.		680 <sup>++</sup>
Phenol	N.D.			3,500	N.A.
Trichloroethylene	N.D.-13	(1)	N.D.		5 <sup>+</sup>
Trichlorofluoromethane	N.D.-200	(3)	N.D.	N.A.	N.A.
1,1,1-Trichloroethane	N.D.-12	(3)	N.D.		200 <sup>+</sup>
Diethylphthalate	N.D.-10	(2)	N.D.	434,000	N.A.
Diethylphthalate	N.D.-410	(1)	N.D.	N.A.	N.A.
Bis (2-ethylhexyl)phthalate	N.D.-240	(2)	N.D.	21,000	N.A.
Di-n-butylphthalate	N.D.-38	(2)	N.D.	44,000	N.A.

N.A.: Not Available

\* Table 2 from Exhibit 1, Summary of Alternatives. Although Exhibit 1 lists Trans-1,2-Dichloroethane at N.D. to 360 ppb, no such chemical can exist. This entry, therefore, must be an error.

\*\* From Exhibit 4. This average concentration is a worst-case concentration and does not represent the likely future exposure levels.

\*\*\* As required by EPA guidance, EPA maximum contaminated levels ("MCLs") are used if available. See EPA Letter, supra note 90, at 3 ("EPA believes that MCLs are generally adequate to protect public health . . . they represent the level of water quality that the Federal government believes is acceptable for over 200 million Americans to consume every day from public drinking water supplies." Where there is no MCL, EPA water quality criteria are compared. Superfund PHEM, supra note 137, at 46, 54. The EPA water quality criteria provide water concentration which correspond to a lifetime cancer risk level of 10<sup>-5</sup> to 10<sup>-7</sup> (for carcinogenic effects) or the acceptable daily intake ("ADI") (for noncarcinogenic effects). For the reasons cited in the text, the concentrations shown in Table 1 are upper-bound 10<sup>-5</sup> lifetime cancer risk level for carcinogens are shown for comparison purposes. This comparison overestimates the risk to the population around the Metamora Landfill because no one is drinking water with any chemicals from the site in it and, therefore, the present risk from the site is zero.

+ EPA, National Primary Drinking Water Regulations; Synthetic Organic Chemicals; Monitoring for Unregulated Contaminants, Final Rule, 52 Fed. Reg. 25,690, 25,694 (July 8, 1987).

++ Superfund PHEM, supra note 137, at 54. The reference dose or daily acceptable intake is used for chemicals with noncarcinogenic effects. See EPA Letter, supra note 90, at 4.

+++ Methylene Chloride is a common laboratory contaminant and may not be an actual field result.

D. The Record Fails To Compare The Risks From Implementing The Alternatives

1. Lack of Evaluation

EPA has not adequately evaluated the risks of the various remedial alternatives for the Metamora Landfill site as required by CERCLA and the NCP.<sup>184</sup> The Record contains no direct discussion of the risks of excavation, no discussion of the residual risks which would remain after the implementation of a reasonable containment remedy, and not even a cursory mention of the risks of transportation offsite.

2. Risks of Excavation

EPA considers excavation at hazardous waste sites on a case-by-case basis.<sup>185</sup> Few landfills, however, have been

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184. Section 121(b)(1)(G) of SARA, 42 U.S.C.A. § 9621(b)(1)(G).

185. NCP, 40 C.F.R. § 300.68(f)(2). EPA's Decision, however, appears to apply statutory standards of SARA, not the original CERCLA, to the selection of the remedial action for the Metamora Landfill. The pre-SARA CERCLA did "not have a technology-forcing effect. NCP Preamble, *supra* note 84, at 47,929. EPA's interpretation of the pre-SARA CERCLA is that permanent solutions should be "preferred" over other alternatives, "only to the extent that they are more cost-effective than other alternatives over the anticipated life of the response." *Id.* Excavation and incineration, therefore, is appropriate only when it is cost-effective and will not create a greater risk than containment.

EPA's position "that total destruction (non-disposal) options were to be the only options they would support" were clearly contrary to the previous statute and EPA policy. See Exhibit 3, MDNR Letter, at 2. EPA's alleged reliance on a statute not yet enacted (see *id.*) is not a valid basis for decision-making. By definition, a statute not yet enacted is not effective or controlling. A similar argument was made by the Province of Ontario in United States v. Hooker Chemicals & Plastics Corp. ("S" Area Landfill), 607 F. Supp. 1052, 1070 (W.D.N.Y. 1985). In that case, the Province argued that the Hazardous and Solid Waste

(Continued)

excavated. Many detailed evaluations of the excavation alternative have led to the conclusion by EPA and others that the risks often outweigh the benefits.<sup>186</sup> Most courts have rejected as unsafe excavation or excavation and incineration as solutions to complex hazardous waste problems.<sup>187</sup>

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Amendments of 1984, which state that "reliance on land disposal should be minimized," did invalidate a program designed to contain a hazardous waste landfill which was negotiated prior to the enactment of the statute. The court noted that the amendments applied to future disposal of chemicals, not past disposal. Similarly in the Metamora Landfill ROD, SARA should not have been applied to the remedial selection process. See *supra* note 1.

186. Response to Public Comments on Hyde Park Proposed Stipulation concerning Requisite Remedial Technology (except Section 12.0) at 3-3 (filed March 28, 1986) [hereinafter "Hyde Park Response"] in United States v. Hooker Chemicals and Plastics Corp., 25 Env't Rep. (BNA) 1014 (W.D.N.Y. Aug. 11, 1986) (Civ. Act. Nov. 79-989); Pepper's Steel, Fla., Record of Decision (March 1986).

187. United States v. Vertac Chemical Corp., 588 F. Supp. 1294, 1297 (E.D. Ark. 1984), 21 Env't Rep. (BNA) 1458 (containment in place presented less risks and was more cost-effective than excavation and redisposal in a RCRA permitted landfill); United States v. Hooker Chemicals & Plastics Corp., 540 F. Supp. 1067, 1079 (W.D.N.Y. 1982) (approving the Hyde Park consent decree which provided for containment and gradual removal of the mobile contents of the landfill against a challenge from local citizens which sought excavation and incineration of all wastes in the landfill); United States v. Hooker Chemicals & Plastics Corp., 607 F. Supp. 1052, 1067-70 (W.D.N.Y. 1985), (approving the "S" Area Landfill Consent Decree against a challenge from local citizen groups and the Province of Ontario which sought excavation and incineration of all wastes in the landfill), *aff'd*, 776 F.2d 410 (2d Cir. 1985); United States v. Hooker Chemicals Corp., 25 Env't Rep. (BNA) 1014 (W.D.N.Y. Aug. 11, 1986) (Civ. Act. No. 79-989), (approving a Stipulation specifying additional containment remedies determined necessary as a result of implementing the Hyde Park consent decree even though some citizen groups still sought excavation and incineration).

It is necessary to evaluate carefully the risks and benefits of excavation and incineration in each case. Excavation and incineration are: (a) inherently risky, i.e., the risk of implementing excavation at many sites strongly outweighs the residual risks after implementation of containment;<sup>188</sup> (b) extremely costly;<sup>189</sup> (c) time consuming<sup>190</sup> and (d) inefficient because it utilizes the nation's finite incineration capacity to detoxify relatively low level wastes.<sup>191</sup>

The process of excavation at this site requires disturbing soil and releasing chemicals into the air.<sup>192</sup> Additionally, excavation may rupture many of the drums during their removal. This rupturing of heretofore whole drums may result in

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188. Hyde Park Response, supra note 186; United States v. Hooker Chemicals and Plastics, 25 Env't Rep. (BNA) 1014, 1021 (W.D.N.Y. Aug. 11, 1986) (Civ. Act. No. 79-989); Pepper's Steel, Fla., Record of Decision (March 1986); Industri-plex Woburn, MA, Summary of Alternatives, at 94 (Sept. 30, 1986).

189. Even the best cost estimates, i.e., assuming incineration permits can be obtained expeditiously and there are no legal challenges, indicate that excavation and incineration of 500,000 cubic yards of soil and waste could cost from \$100 million to several billion dollars. Hyde Park Response, supra note 186, at 20.

190. The best estimates for the time it would take to excavate a large site is from 5 to 15 years. See Hyde Park Response, supra note 186; Pepper's Steel, Fla., Record of Decision (March 1986) (at least three years were estimated to implement excavation and incineration of approximately 40,000 cubic yards).

191. Exhibit 4 at §§3.3, 7.2.

192. Exhibit 4, at §7.1.

the release of chemicals into the ground.<sup>193</sup> This process could worsen the conditions at the site by serving as a source of groundwater contamination.

Excavation may also present significant risks resulting from:<sup>194</sup>

1. the exposure of wastes to greater rain-water infiltration during excavation which would increase the migration of chemicals from the site and, thereby, increase the risk from the site;
2. the volatilization of chemicals from the large volumes of water which would need to be collected and treated. This collection and treatment of water will also add substantially to the costs;
3. the creation of a conduit, which does not now exist, for chemicals to migrate to the groundwater, thereby worsening site conditions; and
4. the exposure of the workers to chemicals, during excavation.

The excavated material must be transported offsite. A number of additional risks, therefore, must be considered, including:

1. the risk of accidents and the resulting spillage during transportation (via truck or rail);<sup>195</sup>

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193. If a large number of drums are present at the site, excavation would result in spilling large quantities of chemicals into the ground. On the other hand, if there are not a large number of drums at the site (as indicated by recent information), then there is no risk presented by the site.

194. Id.

195. Id.

2. the risk resulting from chemicals tracked from the site by trucks leaving the site;<sup>196</sup>
3. the inhalation risks from vapors and dust particles at the reburial or incineration site;<sup>197</sup> and
4. the risks from redisp<sup>o</sup>sal.

The excavation performed by MDNR to date has demonstrated the adverse effects of excavation. The process of excavation has disturbed and ruptured previously whole drums, causing the chemicals inside those drums to seep into the ground.<sup>198</sup> During the excavation, MDNR personnel acknowledged that noticeable odors were prevalent.<sup>199</sup> EPA's Responsiveness Summary<sup>200</sup> acknowledged in its discussion of the health and safety precautions necessary during excavation that the potential for such risks exists at the Metamora Landfill. EPA, therefore, has conceded that there is some level of risk, albeit at an unquantified level. EPA's

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196. Id.

197. E.g., Pepper's Steel, Fla., Record of Decision (March 1986) ("The evaluation of . . . [incineration] concluded that 2-16% of the lead might be expected to escape into the atmosphere above highly populated areas."); Industri-plex, Woburn, MA, Summary of Alternatives, at 94 (Sept. 30, 1986) (where excavation was "rejected because . . . its adverse impacts to the environment and public welfare are unacceptable . . . the impacted public would include those along the waste transportation route and near the disposal facility as well as those near the site." See also Exhibit 4, at §7.2.

198. Id.

199. Id. and Exhibit 5.

200. Exhibit 1, Responsiveness Summary, at 4-5.

assertions that the health and safety plan can minimize these risks is not supported by any analysis.

The Office of Technology Assessment ("OTA"), an independent technical arm of Congress, has concluded that excavation and onsite treatment is "not effective for uncontainerized waste dispersed through a large area."<sup>201</sup>

The only practical choice in many cases is some type of containment. The simple truth is that there are no "quick" or "easy" solutions.

### 3. Risks Of The Containment Remedy

A containment remedy could eliminate any potential for public exposure by preventing migration of contaminated groundwater and minimizing migration of chemicals into the groundwater. It is quite possible that the risks of excavation at this site (with the concomitant dispersion of chemicals into the air) would present greater risks than containment.

It is, however, impossible to determine from this Record whether the risks of excavation exceed, or are less than, the risks from containment at the Metamora site (or to what degree the health and safety plan will mitigate those risks). EPA, therefore, could not have determined whether the alternatives considered would provide the same level of protection of the public health as containment.

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201. OTA, Technologies and Management Strategies for Hazardous Waste Control 210 (1983) [hereinafter "OTA Rep."].

Congress did not mandate excavation and incineration in SARA. Rather, SARA requires a reasoned and public decision-making process. EPA's Decision, therefore, is contrary to the law, and is unsupported by the required administrative record demonstrating an analysis of these issues.

**E. The Determination In The Record That State Law Applies For Onsite Remedies Is Contrary To CERCLA, The NCP And EPA Policy**

EPA's Summary of Alternatives states that a

key factor in the decision not to evaluate onsite incineration alternatives in detail was the additional time necessary to implement such a remedy. Due to the time needed to construct a facility, and the statutory requirements of Michigan Act 64 (Hazardous Waste Management Act), actual incineration of excavated waste under the onsite option would take an estimated 21 to 27 months longer than an offsite incineration alternative. Act 64 establishes a procedure whereby State technical standards are applied on a site-specific basis. This process is extremely lengthy and State technical standards are applied strictly. The process has seldom resulted in the construction of an incinerator onsite; incinerator construction has been authorized only once since 1979.<sup>202</sup>

The Record also includes a copy of a Letter from Seth Phillips, Project Manager, MDNR, to John Tanka, Region V, EPA (August 18, 1986) that further amplifies the reasons that

202. Exhibit 1, Summary of Alternatives, at 5. See also PFS supra note 111, at 39, 41-42, Table 6-1.

"obtaining a construction permit through this mechanism was nearly impossible."<sup>203</sup> The letter outlines general technical or substantive requirements.<sup>204</sup>

The letter emphasizes how the procedural provisions of the statute, and internal MDNR policies would preclude issuance of a permit. For example, the siting review board and its function is described in detail. The letter concludes that "denial [of a construction permit for an incinerator] is almost assured by structure [of the board] alone."<sup>205</sup>

The letter further states that, as a matter of policy, the state would not issue a permit to a PRP (i.e., the Metamora Landfill site owner in this situation).<sup>206</sup> Finally, the letter estimates a four (4) year timetable for permitting and implementation of an onsite incinerator and concludes that "this interim

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203. Exhibit 1, DNR Letter at 4.

204. Some editorial comments in the letter provide a discouraging assessment of the technical needs for a State permit. For example, the requirement for a "complete hydrogeological report" is described as possibly being "far more extensive than that required for an RI." Id. at 2. The basis for these statements is not provided.

205. Id. at 1.

206. Id. This statement makes no sense because the incinerator owner and operator would be EPA, not the site owner. For example, when EPA performed a trial burn of its research 2,3,7,8-tetrachlorodibenzo-p-dioxin ("TCDD") incinerator, EPA, not the property owner, Syntex, or other PRPs, was the permittee. Additionally, this "policy" would seem to preclude a PRP from ever performing a remedy onsite.

action . . . needs to be implemented long before that."<sup>207</sup>

The technical merits of EPA and MDNR's rationale for not considering onsite disposal or onsite treatment expressed in this letter border on "bad faith."<sup>208</sup> The greatest problem with EPA's reliance on the state permitting process to exclude onsite remedial alternatives, however, is that it is contrary to EPA's regulations.

The NCP specifically provides that:

Federal, State, and local permits are not required for Fund-financed remedial action or remedial actions taken pursuant to Federal action under section 106 of CERCLA.<sup>209</sup> (Emphasis added.)

When EPA published the NCP, it stated:

that CERCLA response actions are not subject to State requirements for the same reason that CERCLA responses are not subject to Federal requirements. In enacting CERCLA, Congress has preempted

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207. Id. at 5. There is no basis provided for this urgency. As noted, supra, the Record also concludes that there is no need to implement groundwater remedies expeditiously because there is no present risk.

208. Except for Site Review Board review, construction of the incinerator and possibly Review of the operating license application (a total of 15.5 months), all the items mentioned in the letter would seem to be required for an offsite incinerator and, therefore, do not constitute evidence of a delay. There appears to be no need for such a hurried procedure given the minimal risk presented by the site. EPA's deliberate pace with regard to the RI/FS and implementation of the ROD provides further confirmation of the lack of need for hurried response.

209. 40 C.F.R. § 300.68(a)(3).

those requirements with respect to sections 104 and 106 response actions.<sup>210</sup>

The preamble to the NCP states that the reason for this position is that:

EPA believes the lead agency should not be bound by stricter State standards, nor should the Fund necessarily bear the additional cost of attaining stricter State standards. It would be unwise to oblige CERCLA cleanups to conform to 50 different and possibly conflicting sets of State standards; further, some States have not based standards on protection of health or the environment.

In all these cases, permitting requirements could add significant and unwarranted delay to the response.<sup>211</sup> (Emphasis added.)

EPA's interpretation has been upheld by courts.<sup>212</sup>

Congress also affirmed EPA's view, in part, by amending CERCLA to provide that:

210. NCP Preamble, supra note 84, at 47,923.

211. Id. at 47,923-24.

212. Jefferson County, Missouri v. United States, 644 F. Supp 178, 182 (E.D. Mo. 1986) 25 Env't Rep. 1029, 1032, 12 Chem. Waste Lit. Rptr. 904, 906 ("no permit is required for the challenged on site removal actions", where EPA had excavated contaminated soil and sought to move it from one contaminated site to another nearby contaminated site for temporary storage without a permit); Cf. United States v. Westinghouse Electric Corp.; Civ. Act. No. IP 83-9-C (D. Ind. Apr. 22, 1987) (where a court held that no federal permit was required for the design, construction, or use of an interim storage facility because of the requirements of the NCP), see State Prosecutor's Criminal Investigation May Result In Federal Court Contempt, Court Rules, Tx. L. Rptr 1,366, 1,367, 1,368 (May 6, 1987).

No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out, in compliance with this section.<sup>213</sup>

In sum, EPA's consideration of the need to comply with state law is contrary to the NCP, EPA policy, and SARA. For this reason alone, the EPA Decision is not in accordance with law and the Record should be reopened.

**F. Neither The ROD Nor The Record Make The Findings Required By CERCLA**

The original CERCLA statute<sup>214</sup> disfavored offsite treatment. The very definition of "remedial action," prior to SARA, did

not include offsite transport of hazardous substances, or the storage, treatment, destruction, or secure disposition offsite of such hazardous substances or contaminated materials unless the President determines that such actions (A) are more cost-effective than other remedial actions, (B) will create new capacity to manage, in compliance with subtitle C of the Solid Waste Disposal Act, hazardous substances in addition to those located at the affected facility, or (C) are necessary to protect public health or welfare or the environment from a present or potential risk which may be created by further exposure to the

213. Section 121(e) of SARA, 42 U.S.C.A. § 9621(e) (1986).

214. This is the statute governing the review of the Metámora Landfill ROD, not SARA, see note 1, supra.

continued presence of such substances or materials. (Emphasis added.)<sup>215</sup>

CERCLA explicitly requires the Record to contain three determinations in order to justify offsite treatment. The first of these determinations -- that the offsite alternative will increase offsite capacity -- is not even mentioned in the Record.

The second determination -- the necessity to protect public health -- is only summarily mentioned. EPA does not explicitly conclude in the Record that excavation and offsite incineration are necessary to protect public health.<sup>216</sup>

The third required determination is cost-effectiveness. The Record explicitly acknowledges that excavation and offsite incineration are more expensive than excavation and onsite incineration [by a factor of seven (7)] and more expensive than all of the alternatives considered. EPA, therefore, does not explain its conclusory statement that excavation and offsite incineration is more cost-effective than the other alternatives.<sup>217</sup>

On its face, EPA's Decision, therefore, is not in accordance with law.

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215. Section 101(24) of CERCLA, 42 U.S.C. § 9601(24); see also 40 C.F.R. § 300.70(c); and FS Guidance, supra note 26, at 2-18, 2-19.

216. See Exhibit 1.

217. See infra Subsection H and Exhibit 4 at §7.6.

G. EPA Impermissibly Precluded Consideration Of Reasonable Alternatives Such As Containment

1. Containment Must Be Considered

EPA must consider reasonable alternatives during the process of selecting a remedy at a CERCLA site. The only onsite remedial alternative considered is excavation and redispal in a landfill constructed in accordance with RCRA Subtitle C.<sup>218</sup> EPA, therefore, has impermissibly precluded consideration of reasonable onsite containment as a remedial alternative at this site.

Petitioner has sought copies of the Record (i.e., all documents relied upon by EPA in making its decision).<sup>219</sup> In response to a Freedom of Information Act ("FOIA") request, MDNR admitted that:

[t]here are no documents, etc. which outline EPA's directive to favor incineration over other cleanup options. The Phased Feasibility Study (PFS) discussed several options only two of which involved total waste destruction, offsite and onsite incineration. EPA made clear in several telephone discussions that total destruction (non-disposal) options were to be the only options they would support. This was due to language being proposed at that time in the reauthorization of the Superfund law requiring

218. See Exhibit 1, Summary of Alternatives, at pp. 8, 9, 10-11.

219. Exhibit 3: A copy of the FOIA requests and responses. Petitioner has received various documents, some of which are marked draft. None of these documents supports excavation and incineration of the Metamora Landfill.

remedy selections to favor such options.  
This language was subsequently adopted<sup>220</sup>  
(emphasis added).

Although there are no documents between EPA and MDNR discussing EPA's preference for incineration, there are internal MDNR memorandum and letters documenting not a policy, but an unsupported prejudice, against containment, e.g.,:

In current discussion with EPA they continue to oppose landfilling of the solids.<sup>221</sup>

EPA has always favored . . . [on-site incineration] to this cleanup. In the PFS, DNR opposed this position because of the many permit and siting issues which would delay implementation for several years. . . .

DNR staff have always felt landfilling of the solid wastes from this cleanup was the most appropriate course of action. Staff continues to believe that landfilling should be pursued if EPA can be convinced to accept such an approach . . . .<sup>222</sup>

The available information indicates that EPA improperly excluded containment remedial alternatives from consideration.

2. A New Landfill Is Not The Only Type Of Containment

Arguably, many of the technical standards in the RCRA regulations could be considered ARARs at a CERCLA site if the

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220. Id.

221. Exhibit 9, at 2-3.

222. Exhibit 9, at 3.

wastes were excavated and redispersed in a new onsite landfill.

The RCRA liner and similar technical standards, however, would not be ARARs for a containment plan because wastes would not be removed from the ground for reburial. Rather, EPA would be implementing a site-specific remedial program designed to contain, collect, and treat wastes from the site.

EPA either implicitly or explicitly has concluded that:

- (1) RCRA Subtitle C requirements are ARARs at this site;
- (2) those requirements apply literally and without any discretion; and/or
- (3) only a "permanent" remedy is permissible.

The Record also provides no support for the conclusion that the RCRA Subtitle C regulations are ARARs at the Metamora Landfill site. The ROD is a one and a half page conclusory statement providing little support for EPA's Decision. The Summary of Alternatives document, attached to the ROD, and the Phased Feasibility Study provide little additional insight.

The NCP does not hold that RCRA regulations are always ARARs and, even when EPA has determined that they are ARARs, their application to the facts of a site is flexible.<sup>223</sup> EPA must determine which RCRA requirements "are designed to apply to problems sufficiently similar to those problems encountered at

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223. NCP Preamble, *supra* note 84, at 47,918 ("RCRA requirements could be relevant" (emphasis added)). *Id.* at 47,923 (describing how the use of risk-based soil cleanup levels for soil contaminated with arsenic is consistent with RCRA post-closure requirements).

CERCLA sites."<sup>224</sup> The problem of cleaning up a landfill which may be leaking, the situation alleged at Metamora Landfill, is not the same as determining the design of a new landfill at the site of the Metamora Landfill, as assumed in the Record. Different RCRA technical requirements would be considered ARARs depending on the situation.

Nothing in SARA<sup>225</sup> or EPA policy requires that a containment remedy meet the literal requirements of a RCRA permitted landfill. The goal of RCRA is the same as CERCLA, "the long term protection of public health and welfare and the environment."<sup>226</sup> RCRA regulations were promulgated with the understanding that RCRA permitted landfills also may eventually leak.<sup>227</sup>

Both CERCLA and RCRA, therefore, contemplate the need to take action short of excavation, including a containment scheme

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224. Id. at 47,918

225. See infra Section III(B) and Exhibit 6.

226. NCP Preamble, supra note 84, at 47,918

227. EPA, Hazardous Waste Management System; Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and EPA Administered Permit Programs, Interim Final Rule, 47 Fed. Reg. 32,274, 32,286 (July 26, 1982) ("EPA has concluded that no useful purpose is served by announcing a regulatory strategy that professes to protect groundwater forever."); EPA, Advanced Notice of Proposed Rulemaking, Hazardous Waste Management System, 49 Fed. Reg. 5,854 (Feb. 15, 1984). RCRA contains corrective action requirements to remedy these leaks. Congress has endorsed this flexibility by incorporating EPA's ARARs into CERCLA and providing that EPA may select an alternative remedy which does not literally meet an ARAR, if it is the performance equivalent.

which is designed to protect public health.<sup>228</sup> In sum, actions other than slavishly meeting the technical landfill design requirements of RCRA will accomplish the common goal of CERCLA and RCRA, i.e., the protection of public health. Such actions, therefore, are permitted by EPA regulations.<sup>229</sup>

A reasonable containment program would minimize migration of chemicals into the groundwater and ensure protection of the public health at the Metamora Landfill.

3. Containment Is Consistent With EPA Policy And Preferable In Many Cases

Containment is consistent with CERCLA and EPA policy, and has been applied by EPA at other CERCLA sites.<sup>230</sup> Containment of wastes has been determined by EPA to be acceptable as

228. EPA Letter, supra note 90, at 3-4.

229. Congress has endorsed this flexibility by incorporating EPA's ARARs scheme into CERCLA and even providing that EPA may select an alternative remedy which does not literally meet ARARs, if it is the performance equivalent. Section 121(d)(4)(D) of SARA, 42 U.S.C.A. § 6921(d)(4)(D).

230. United States v. Hooker Chemicals & Plastics Corp. ("S" Area Landfill), 607 F. Supp. 1052 (W.D.N.Y. 1985) (approving a consent decree which required containment of a landfill against a challenge that CERCLA and RCRA required excavation and incineration of the entire contents of the landfill regardless of costs), aff'd, 776 F.2d 410 (2d Cir. 1985). See also United States v. Pepper's Steel and Alloys, Inc., Civ. Act. Nos. 83-1717; 85-0571-CIV-SPPELLMAN (filed Feb. 11, 1987); Pepper's Steel, Fla., Record of Decision (March 1986); and "Under RCRA, cleanup to background levels certainly satisfies this requirement [to remove decontaminant soils after closure]. EPA believes, however, that a site-specific limited risk assessment approach to determine acceptable levels of removal makes sense." NCP Preamble, supra note 84, at 47,923.

long as the residual discharge level is so low that it is protective of human health and the environment.<sup>231</sup>

It is contrary to law and arbitrary and capricious for EPA not to consider a containment alternative.<sup>232</sup>

H. The Record Did Not Consider Cost As Required By CERCLA And The NCP

EPA's Decision to select excavation and offsite incineration inadequately evaluated costs because the Record: (1) provides no explanation of the weight given to each factor; (2) excludes several equally protective alternatives, such as containment; (3) places paramount importance on implementing a "permanent" remedy to the exclusion of other alternatives; and (4) rejects excavation and onsite incineration although the costs of this alternative is approximately one seventh the cost of excavation and offsite incineration.

EPA's only rationale for selection of offsite excavation and incineration is:

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231. United States v. Hooker Chemicals & Plastics Corp., 25 Env't Rep. (BNA) 1014, 1023 (W.D.N.Y. 1986) (Civ. Act. No. 79-989) (where a residual lifetime risk of less than  $10^{-6}$  would be allowed); United States v. Chem Dyne Consent Decree, No. C-1-79-703 (S.D. Ohio 1984) (where residual groundwater contamination which is less than  $10^{-6}$  lifetime risk level will not be remedied); and Records of Decision, Reilly Tar Site (June 6, 1984) (where a residual risk level of less than  $10^{-6}$  is allowed); and Ottati and Goss (Jan. 16, 1987) (where a residual risk of  $10^{-5}$  is allowed).

232. The NCP contains several provisions which allow selection of a remedy that does not meet ARARs. See supra, Section IV(C)(1).

based on the factors discussed in the previous section, the recommended alternative for this operable unit is the excavation of areas one and four, and thermal destruction of all waste at a compliant RCRA off-site incinerator. Although it is the most expensive remedy (\$41.5 million), it is also the most protective of public health and the environment. The main sources of hazardous substances will be removed, and thermal destruction significantly reduces the volume, toxicity, and mobility of the liquid wastes. The volume, toxicity, and mobility of any inorganic solid wastes will be reduced to a lesser degree. Thermal destruction of these wastes will still leave a significant amount of ash for disposal, and most heavy metals, if present in the waste, will remain in the ash. However, high concentrations of heavy metals in the waste are not expected.

The recommended alternative is both cost-effective and consistent with a permanent remedy since the waste is being permanently removed from the site. It is also consistent with the Agency's May 6, 1985 offsite policy (Memorandum from Jack W. McGraw, Acting Assistant Administrator). In addition, the recommended alternative will be easily engineered and constructed, and readily accepted by the public. In light of the above factors, and U.S. EPA's trend toward the selection of permanent remedies, the additional cost of incinerating all of the waste for an additional \$29.5 million, rather than incinerating only liquids, is justified (emphasis added).<sup>233</sup>

The Responsiveness Summary also stated that:

A U.S. EPA policy decision which followed the release of the draft PFS has caused a

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233. Exhibit 1, Summary of Remedial Alternatives, at 11-12.

change in the cleanup alternative now being recommended. In an effort to move away from landfilling of wastes whenever possible, the directive from U.S. EPA headquarters was to favor another alternative evaluated in the PFS which involves incineration of all waste materials rather than a combination of landfilling and incineration. The estimated cost for this option is \$41 million. This policy decision was received prior to meetings MDNR and EPA staff held with the Citizen's Information Committee and the public meeting held during the public comment period. All commenters were aware of this modification in the report recommendations.<sup>234</sup>

The EPA failed to select the lowest cost remedial alternative from among the alternatives which protect public health and which are reliable, as required by the NCP.

Excavation and onsite incineration (at a cost of \$5.6 million) should provide essentially the same or more protection of the public health than excavation and offsite incineration. Onsite incineration is more protective because it avoids the risks involved in the transportation of large quantities of waste and soils.<sup>235</sup>

Additionally, a containment remedy could provide substantially the same or greater protection of public health and the environment as excavation and incineration at substantially

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234. Exhibit 1, Responsiveness Summary, at 2.

235. See Exhibit 4, at §7.2. Excavation also has not been implemented at many sites, if any, and certainly not on the scale which would be required at the Metamora Landfill. Id.

less cost.<sup>236</sup> The cost of excavation and offsite incineration at the Metamora Landfill is substantial, \$41.5 million, and greater than the typical costs of containment remedies.<sup>237</sup> Even these incredible costs, however, may underestimate the actual costs. A review of several recent evaluations of the costs of excavation and incineration or redispal of formerly buried hazardous wastes shows that the costs are substantial, from \$125 million to \$4 billion.<sup>238</sup> Because of increasing demand for

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236. There is no present risk and little future risk from the Metamora Landfill site. The minimal risk, if any, which may be present at the site could be virtually eliminated by implementation of reasonable containment measures. See supra Section V(C)(2).

237. Exhibit 1, Summary of Alternatives, at Table 12 with Exhibit 2, other EPA records of decision which consider containment remedies. E.g., Pepper's Steel Fla., Record of Decision (March 1986), estimated a cost of between \$2.6 and \$5.5 million to solidify and stabilize an estimated 48,000 cubic yards of soils); Burlington Northern, Mn., Record of Decision (June 1986) (estimated \$582,000 to land treat creosote wastes on site); Reilly Tar & Chemical Corp., MN, Record of Decision (May 1986) (estimated costs of between \$0.24 to \$1.4 million to contain and cleanup groundwater contamination in one aquifer). In fact, the costs of containment are likely to be an order of magnitude less than EPA's estimate of the costs of excavation and offsite incineration. Based on EPA's own guidance, therefore, excavation and incineration should have been eliminated from consideration during the screening process.

238. Hyde Park Response, supra note 186, at 2-4 (estimating \$125 to \$3,300 million to excavate and redispal or excavate and incinerate 1,380,000 to 2,000,000 tons of soil and wastes). Office of Technology and Assessment, Staff Memorandum, Review of Missouri Dioxin Task Force, Recommendation Concerning the Management of Contaminated Soil (Dec. 1983) (estimating \$185-\$285 million to excavate and incinerate 500,000 tons of soils); General Accounting Office, Selected Aspects of Cleanup Plan For Rocky Mountain Arsenal, at 11 (GAO/NSIAD-86-205, Aug. 1986) (estimating \$964 to \$4,200 million to excavate and redispal of or incinerate 16 million cubic yards of soil and wastes). See also Exhibit 4.

incineration and decreasing capacity, the cost of incineration is rising.<sup>239</sup>

EPA has concluded that excavation and incineration is not cost-effective at other sites, e.g., the costs of:

[i]ncineration of either 2,400 or 20,000 cubic yards of contaminated soils with solidification/stabilization of the remainder . . . are higher than solidification/stabilization [\$6.8 to \$8.9 million versus EPA's estimate of \$5.5 million] and the uncertainty of these costs is much greater.<sup>240</sup>

At another site, EPA concluded that it would be arbitrary and capricious to seek to impose the costs of excavation and incineration as opposed to the costs of containment. The court upheld EPA's determination.<sup>241</sup> Another court rejected EPA's proposal to excavate waste and contaminated soil and rebury it in a RCRA landfill, in part, because "the relative cost-effectiveness of the . . . [containment proposal] is far superior to any alternative proposal submitted on behalf of EPA."<sup>242</sup>

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239. Id.

240. Pepper's Steel, Fla., Record of Decision, at 26 (March 1986); Industri-plex, Woburn, MA., Summary of Alternatives, at 94 (Sept. 30, 1986) ("This alternative was rejected because it costs \$35.8 million . . . . The cost of this alternative is more than double that of alternative A-5 [another more limited excavation alternative] and on order of magnitude greater than that of the recommended remedial action," a containment alternative. Id.)

241. United States v. Hooker Chemicals & Plastics Corp., 25 Env't Rep. (BNA) 1014, 1023 (W.D.N.Y. 1986).

242. United States v. Vertac Chemical Corp., 588 F. Supp. 1294, 1297 (E.D. Ark. 1984).

An independent analysis performed by Congress' Office of Technology Assessment concluded that excavation and incineration was "not cost-effective for large amounts of low-level wastes."<sup>243</sup> The EPA official in charge of EPA's hazardous waste and CERCLA programs has commented that "[t]here is probably not enough money in the world to clean up all the [Superfund] sites permanently."<sup>244</sup>

The Record contains no meaningful analysis of the reason excavation and incineration were considered cost-effective at this site. If anything, this Record indicates incineration and excavation are not cost-effective. The Decision, therefore, is not consistent with the NCP and is contrary to numerous other EPA decisions.

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243. Exhibit 13; supra note 201, at 210. The extent to which containment would be effective is dependent on a number of factors. E.g., see, Dragun Article, supra note 132, at 67: "it is important that these reactions (e.g., biodegradation and adsorption) be quantified in order to . . . select a cost-effective remedial action."

244. High Cost of Permanent Superfund Cleanups To Result In Interim Actions, Porter Says, 1 Tx. L. Rptr 451 (Sept. 24, 1986). While it may be a reasonable national policy to destroy wastes when they are easily accessible on the surface, e.g., in drums on the surface or lagoons, it makes little sense to perform a risky excavation to remove low level wastes, such as contaminated soil, if the benefits are low or non-existent. Even a cursory review of the cost figures cited in this Petition To Reopen indicate that the \$8.5 billion in CERCLA would soon be exhausted if all sites on the National Priorities List were excavated and incinerated. Since excavation and incineration do not add significantly to the protection of public health, selecting this remedy is not only arbitrary and capricious, but violates the Fund balancing provisions of CERCLA. Section 121(d)(4)(f) of SARA, 42 U.S.C.A. § 9621(d)(4)(f).

I. There Is Insufficient Information Upon Which To Base A Rational Decision

The recent dramatic change in the understanding of the facts at this site illustrates that the information originally available was inadequate and unreliable as the basis for remedy selection. The lack of adequate information is further evidenced by the conclusory nature of the Decision and the failure of the existing Record to provide a scientific basis for the Decision.<sup>245</sup> To the extent data is available, it has not even been thoroughly analyzed in the manner required by CERCLA.<sup>246</sup>

The NCP does not provide for a "Phased Feasibility Study" process. Almost by its nature, separating one segment of the remedy at a site from consideration of a complete remedial plan (as is done by a phased feasibility study) will result in a failure to consider the problems at a site comprehensively in relation to each other. There may be sites where such a bifurcation makes sense technically, e.g., the removal of drums on the surface. At the Metamora Landfill site, however, the buried drums and control of the site are inextricably interrelated to any groundwater cleanup.

EPA must determine the rate of groundwater migration, the full extent of existing groundwater contamination, if any, the ability of the natural soils to retard migration, the risks of each alternative remedial action, and the cost, before a

245. See supra Section V.

246. See Section V and Exhibit 4.

remedy can be selected at the site.<sup>247</sup> Knowledge of these factors is necessary to gauge the effectiveness, risks of implementation and cost-effectiveness of the remedial alternatives and, ultimately, is needed to choose the remedy. No meaningful decision, therefore, can be made until the RI/FS is completed.<sup>248</sup>

This course of action is: (1) good science and sound engineering practice;<sup>249</sup> (2) required by CERCLA, as amended by SARA; (3) prudent, given the substantial changes in factual findings which have already occurred; and (4) cost-effective.

The "rush to judgment" evidenced in this Record, does not expedite cleanup of the site. Rather, it slows that progress, wastes substantial resources, and further aggravates conditions at the site.<sup>250</sup>

The Decision to select excavation and offsite incineration based on the existing Record, without a completed RI/FS, can only be characterized as a roll of the dice. It ignores the convincing rationale EPA ordinarily employs in the CERCLA process which requires an RI/FS prior to remedial action.

<sup>247</sup>. See Exhibit 4 at §6.0.

<sup>248</sup>. Id.

<sup>249</sup>. Id. at 6.0; also see Dragun Article, supra note 132 at 67 ("it is important that these reactions [e.g., biodegradation and adsorption] be quantified in order to (a) properly assess the health hazards associated with the problem and (b) select a cost-effective remedial action").

<sup>250</sup>. Exhibit 4, at §§5.0, 6.0, and see Section V(B)(2), supra.

## J. Summary

In sum, the prior remedial selection was: (a) based on erroneous interpretations of CERCLA,<sup>251</sup> (b) inconsistent with the NCP, and (c) arbitrary and capricious. Each individual flaw in the Record, in and of itself, is substantial enough for a court to determine that costs are not recoverable. Taken together, they represent an overwhelmingly defective decision-making process.

These flaws form a basis for EPA to reopen the Record, supplement the Record, and implement a new remedy selection process.

## VI. Agency Action Required By Law

### A. Introduction

When EPA reopens the Record, it must:

- Recalculate The HRS Score;<sup>252</sup>

251. The Record is also inconsistent with NEPA and not the functional equivalent of an environmental impact statement pursuant to NEPA.

252. As part of the process of reopening the Record, EPA should recalculate the HRS for the site to determine whether the conditions at this site warrant its placement on the National Priority List ("NPL"). If a site has been included on the NPL due to an error, EPA officials have stated that they would remove such a site from the NPL. Department of Housing and Urban Development - Independent Agencies Appropriations for 1988: Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, pt. 2, 100th Cong., 1st Sess., at 77, (1987) (Statement of Dr. J. Winston Porter, EPA Assistant Administrator for Solid Waste and Emergency Response). The Petitioner would urge that the Metamora Landfill be deleted from the NPL and the expenditures of all CERCLA funds cease if the recalculated HRS score is below the level which qualifies a site for inclusion in the NPL.

- Evaluate All Of The Factors Required By CERCLA, And The NCP;
- Ensure That The Record Is Adequate;
- Provide The PRPs A Timely And Meaningful Opportunity To Participate In Developing The New Record;
- Initiate A Thorough Investigation To Identify Additional PRPs

The rationale for many of these required actions has been described in detail herein and, therefore, will not be repeated here. The following will provide suggestions in areas not addressed previously or where special emphasis is needed.

**B. Actions Related To The Record**

**1. EPA Must Evaluate All Of The Factors Required By CERCLA And The NCP**

EPA's process of selecting a remedy for the Metamora Landfill must be consistent with CERCLA, as amended by SARA, NEPA and the NCP. This process necessarily involves the exercise of agency discretion. Discretion, however, is not license and does not allow the agency to make unfettered choices. EPA must comply with the law and cannot make unreasoned, arbitrary decisions.

The Petitioner does not presume that it can or should specify what remedy EPA should select during this process. In general, however, all of the areas where the Record is incorrect or inadequate must be addressed and corrected during EPA's new remedy selection process, as required by law.

**EPA Must Ensure That The Record Is Adequate**

Sound public health and environmental decision-making demand that decisions be well thought out and explicitly articulated in writing by administrative agencies. The Record for the Metamora Landfill site must provide PRPs, the public and, ultimately, a court sufficient information to review the basis for EPA's Decision.<sup>253</sup>

Unfortunately, EPA's decision-making process at this site has not met this standard. The reopening of the Record, however, will provide EPA an opportunity to address adequately all of the factors required by law and articulate its reasoning in considering those factors.

**C. EPA Must Provide For Timely and Meaningful Participation Of The PRPs In Developing The New Record**

EPA must include in its cooperative agreement with MDNR a provision requiring MDNR to provide sufficient information to

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253. EPA guidance on administrative records states that the record should include all raw data, preliminary assessments, site investigation reports, the Remedial Investigation and Feasibility Study ("RI/FS"), information from telephone logs, documentation of meetings where PRPs present information upon which EPA bases its decision, cost analysis documents, the action memorandum, health assessments, memoranda on major site-specific policy and legal interpretations, new technical information provided by the potentially responsible parties, EPA guidance documents, technical sources of information, any other factual information relating to the reasons why a particular action was selected, affidavits or other sworn statements of expert witnesses, comments and responses to comments, and any information which causes the agency to change its decision. See Memorandum from Gene Lucero, Director, Office of Waste Programs Enforcement, and Henry Longest, II, Director, Office of Emergency Response, to Addressees Re: Administrative Records for Decisions on Selection of CERCLA Response Actions (May 29, 1987). This memorandum states that the policy is effective immediately.

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September 11, 1987

U.S. EPA REGION V  
WASTE MANAGEMENT DIVISION  
OFFICE OF THE DIRECTOR

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Valdas Adamkus, Regional Administrator  
United States Environmental Protection  
Agency Region V  
230 S. Dearborn  
Chicago, IL 60604

Re: Metamora Landfill Superfund Site

Dear Mr. Adamkus:

Please find enclosed one copy of each of the following:

1. Petition To the Administrator, Region V,  
To Reopen the Original Record of Decision  
for the Metamora Landfill (Signed On  
September 30, 1986) and To Initiate a New  
Remedy Selection Process;
2. Memorandum in Support of the Petition;  
and
3. Exhibits to the Memorandum in Support of  
the Petition.

We respectfully request a meeting with the involved U.S.  
Environmental Protection Agency staff and Michigan Department of  
Natural Resources staff as soon as both agencies have reviewed  
the aforementioned documents.

PEPPER, HAMILTON & SCHEETZ

Valdas Adamkus,  
Regional Administrator  
September 11, 1987  
Page 2

Thank you for your attention to this matter. We look forward to hearing from you in the near future.

Very truly yours,

*David L. Maurer*  
David L. Maurer  
on behalf of Chrysler  
Motors Corporation

DLS/LSS/df1  
Enclosures

cc: Robert B. Schaefer, Esq.,  
USEPA V Regional Counsel  
Thomas Leverett Nelson, Esq.,  
USEPA V Assistant Regional Counsel

**[REDACTED]**  
John Tanaka,  
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Courtesy Copy:

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September 11, 1987

U.S. EPA, REGION V  
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# 549 5107634

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We respectfully request a meeting with the involved U.S. Environmental Protection Agency staff and Michigan Department of Natural Resources staff as soon as both agencies have reviewed the aforementioned documents.

O. ORC  
CC: RF  
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PEPPER, HAMILTON & SCHEETZ

Valdas Adamkus,  
Regional Administrator  
September 11, 1987  
Page 2

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USEPA V Assistant Regional Counsel  
Basil Constantelos,  
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SEP 30 1987

U. S. EPA REGION 5  
OFFICE OF REGIONAL ADMINISTRATOR

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

Re: Metamora Landfill Superfund Site

Dear Mr. Adamkus:

Enclosed please find a copy of Sea Ray Boats, Inc.'s Supplemental Petition in Support of Petition to Reopen Original Record of Decision for the Metamora Landfill and to Initiate a New Remedy Selection Process, and attached Exhibits.

In his letter of September 11, 1987, Mr. Maurer, attorney for Chrysler Motors Corporation requested a meeting with pertinent U.S. E.P.A. staff and Michigan D.N.R. staff with regard to the pending Petition. We would like to participate in such a meeting, and respectfully request reasonable notice of the date, time and location of same.

Thank you for your cooperation in this matter.

Very truly yours,

BUTZEL LONG GUST KLEIN & VAN ZILE

*Jack D. Shumate*  
Jack D. Shumate

*Darlene M. Domanik*  
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Seth Phillips,  
MDNR Environmental Quality Analyst VI

the Petitioner and the public before studies are initiated and decisions made. EPA must also enforce such a provision if MDNR denies the Petitioner access to information or fails to provide such information in a timely manner.

EPA's enforcement confidential classification, which has been cited by MDNR and EPA to deny release of factual information, historically has not included factual information. Whatever EPA's past policies, SARA requires EPA to provide factual, investigative and remedial action information to PRPs.<sup>254</sup>

The failure to provide information in a timely manner has adversely affected the PRPs' ability to assess the reasonableness of the remedies, the adequacy of the data gathered, and the potential liability of other parties for conditions at the site.

EPA, therefore, must take action to assure that the Petitioner receives adequate information in a timely manner.

D. EPA Must Initiate A Thorough Investigation To Identify Additional PRPs<sup>255</sup>

EPA's failure to initiate a thorough search for PRPs can be a "significant impediment to the PRPs organizing themselves

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254. E.g., Section 104(e)(7)(F) of SARA, 42 U.S.C.A. § 9604(e)(7)(F), provides that factual information submitted by a company shall be made public.

255. EPA should grant our Petition to Reopen the Record. Substantially less than \$41.5 million would be needed at this site. Some of the \$41.5 million CERCLA could then be used to perform additional investigations to identify other PRPs at this site.

to present an offer of settlement."<sup>256</sup> SARA also requires EPA to "make reasonable efforts to identify and notify potential responsible parties as early as possible before selection of a response action."<sup>257</sup> The Metamora Landfill is a very large site; yet only a few viable PRPs have been identified to-date.

At this site, there is ample evidence that a significant number of viable PRPs remain uninvestigated. For example, at least one known PRP has listed its insurance policies and companies for EPA. The insurers of these PRPs should be notified and involved in the action.

Significantly, EPA has not yet interviewed the site owners or operators or the transporters who used the site. No systematic search for PRPs has occurred or is planned.

This lack of diligence subverts EPA policy. Current policy requires that:

PRP searches be initiated concurrent with the Expanded Site Investigation or National Priorities List (NPL) scoring quality assurance process. PRP searches are required to be completed not later than the year in which the site is pro-

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256. Memorandum from J. Winston Porter, Assistant Administrator, Office of Solid Waste and Emergency Response, and T. Adams, Assistant Administrator, Office of Enforcement and Compliance Monitoring, to Regional Administrators, Re: Interim Guidance Streamlining the CERCLA Settlement Decision Process, at 3 (Feb. 12, 1987).

257. Section 113(k)(2)(D) of SARA, 42 U.S.C.A. § 9613(k)(2)(D). This has been EPA's policy for some time. See Memorandum from G. Lucero, Director, Office of Waste Programs Enforcement, to Addressees, Re: Timely Initiation of Responsible Party Searches, Issuance of Notice Letters, and Release of Information (Oct. 9, 1985) ["Lucero PRP Search Memo"].

posed for the NPL. Contractor efforts should be supplemented by issuance of information request letters or the use of administrative subpoenas (a new provision of SARA) at the earliest possible time. It is imperative that these searches be comprehensive and of high quality.<sup>258</sup>

This failure is not only an impediment to cooperation between, among and from PRPs at this site, but it could, in this case, effectively deprive the named PRPs of any meaningful opportunity to consider performing the RI/FS or remedial actions. It certainly discourages meaningful comment on the Record.

The Petitioner, jointly with another PRP, has initiated its own investigation to determine the identity of other PRPs who may have contributed to the site. The Petitioner remains willing to cooperate with EPA in this effort. Petitioner, however, respectfully requests that EPA immediately initiate a thorough PRP search.

**E. The Petitioner Waives No Rights And Makes No Admissions**

The Petition has been filed:

- A. without acknowledging the constitutionality of Section 113 of CERCLA or any other provision of CERCLA;
- B. without waiving any rights to challenge administratively or in court the existing ROD, or any other action taken by EPA;
- C. without admitting liability;

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258. Id.

- D. without agreeing that remedial action is necessary or required by the NCP at the Metamora Landfill;
- E. without committing to propose a remedy, or negotiate or perform regarding the performance of any remedy selected by EPA pursuant to a reopened Record; and
- F. without waiving or compromising any other right or cause of action the Petitioner may have.

Respectfully submitted,

by:

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