

**The Goodyear Tire & Rubber Company**  
**Akron, Ohio 44316-0001**

Richard C. Laubacher  
Senior Environmental Engineer  
1144 East Market Street  
Akron, OH 44316-0001

November 14, 2000

Mr. William E. Muno, Director of Superfund Division  
United States Environmental Protection Agency (USEPA), Region 5  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590 SR6J

Subject: Petition to Change the Remedy for the Industrial Excess Landfill (IEL) Site,  
Uniontown, Ohio

Dear Mr. Muno:

The Responding Companies (The Goodyear Tire & Rubber Company, Bridgestone/Firestone, Inc., The BFGoodrich Company, and GenCorp) hereby submit the attached petition to the United States Environmental Protection Agency (USEPA) Superfund Division to change the remedy to be implemented at the IEL Site to the Biodiverse Phyto-Cap / Enhanced Natural Attenuation Remedy (Proposed Remedy). The Responding Companies request this change because:

- The Proposed Remedy is protective of human health and the environment and complies with Applicable or Relevant and Appropriate Requirements (ARARs);
- The Proposed Remedy is more consistent with the wishes of the community than the remedy described in the USEPA Records of Decision (2000, 1989) for the IEL Site;
- The Proposed Remedy allows more flexibility in future site-use decisions; the community has secured a Superfund Redevelopment grant to determine how the site may be beneficially reused; and
- The Proposed Remedy is a better alternative based on the National Contingency Plan (NCP) criteria for remedy selection under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or the Superfund Law).

This petition details the reasoning for the change to the Proposed Remedy and includes:

- A description of the Proposed Remedy;
- An analysis of how the Proposed Remedy meets remedial action objectives; and
- A comparative evaluation of the Proposed Remedy against the previously proposed remedy described by the 1989 Record of Decision (ROD) and the 2000 ROD.

This petition is also supported by the substantial groundwater data and previously-submitted information incorporated by reference in the petition. If you need a list of the previously-submitted information or copies of any of these documents, please contact me.

Please review the attached petition and determine whether you plan to issue a change to the remedy. In order to assist you in your efforts to evaluate this petition, we have provided an electronic version of the submittal in Microsoft Word format. If you have any questions concerning this matter, please contact me at (330) 796-2698.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Laubacher". The signature is fluid and cursive, with a large initial "R" and "L".

Richard Laubacher

IEL Project Manager, The Goodyear Tire & Rubber Company

cc. Larry Antonelli, OEPA-Northeast District  
T. Bent, Bridgestone/Firestone, Inc.  
G. Gifford, The BFGoodrich Company  
W. Gorenc, GenCorp  
Lou Tosi, Esq., Shumaker Loop & Kendrick  
Doug Haynam, Esq., Shumaker Loop & Kendrick  
T. Struttmann, Sharp and Associates, Inc. (SHARP)  
J. Towarnicky, SHARP  
T. Shalala, Clayton Environmental  
D. Herbert, Esq, Lake Township  
S. Ruley, Lake Township

**Petition to Change the Remedy for the Industrial Excess Landfill (IEL) Site to  
the Biodiverse Phyto-Cap / Enhanced Natural Attenuation Remedy  
October 31, 2000**

The Responding Companies (The Goodyear Tire & Rubber Company, Bridgestone/Firestone, Inc., The BFGoodrich Company, and GenCorp) petition the United States Environmental Protection Agency (USEPA) to change the remedy to be implemented at the IEL Site to the Biodiverse Phyto-Cap / Enhanced Natural Attenuation Remedy (Proposed Remedy) as detailed below. The Responding Companies request this change because the Proposed Remedy is protective of human health and the environment, complies with Applicable or Relevant and Appropriate Requirements (ARARs), and is more consistent with the wishes of the community than the remedy described in the USEPA Records of Decision (2000, 1989) for the IEL Site.

Community preferences were identified, in part, by a community survey where more than 93% of the respondents requested USEPA to reconsider its plan for a plastic cap and consider a wildlife habitat. Additional community input has been received via continuing communication with the Lake Township trustees.

In addition, the Proposed Remedy allows more flexibility in site future use decisions: the community has secured a Superfund Redevelopment grant to determine how the site may be beneficially reused in a manner that focuses on ecological reuse. Furthermore, as described in Section Three, the Proposed Remedy is a better alternative based on the National Contingency Plan (NCP) criteria for remedy selection under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or the Superfund Law).

This petition details the reasoning for the change to the Proposed Remedy and includes:

- A description of the Proposed Remedy (Section One);
- An analysis of how the Proposed Remedy meets remedial action objectives (Section Two); and
- A comparative evaluation of the Proposed Remedy against the previously proposed remedies described by the 1989 Record of Decision (ROD) and the 2000 ROD. This comparison details the differences among the remedies with respect to meeting the remedial action objectives and the NCP Criteria (Section Three).

**SECTION ONE**  
**THE BIODIVERSE PHYTO-CAP / ENHANCED NATURAL ATTENUATION REMEDY**  
**(PROPOSED REMEDY)**

The Responding Companies proposed the following remedy for the IEL Site during a September 6, 2000, meeting among USEPA, OhioEPA, The Responding Companies, and Lake Township representatives, held at the USEPA offices in Chicago, Illinois.

**1.1 Elements of the Proposed Remedy**

The Proposed Remedy has the following major elements:

- A Biodiverse Phyto-Cap designed to enhance the value of the site as greenspace and habitat;
- Groundwater treatment via monitored natural attenuation; this groundwater treatment will be enhanced by the phyto component of the remedy;
- A fence around the perimeter of the site;
- Deed restrictions on future use of the property that will include Lake Township as a participant in future site use decisions;
- Long-term monitoring of the groundwater quality, and
- Maintenance of the interim measure that supplied public water to residents west of the site.

**1.2 Additional Activities to be Performed**

Although not part of the remedy, the Responding Companies are committed to performing additional activities that have been requested by the Township, as follows:

- Short-term monitoring of groundwater in the vicinity of the site to confirm that off-site groundwater conditions remain protective of human health and the environment and natural attenuation is continuing to cause the groundwater conditions to improve beneath the site;
- Preparing a contingency plan (under joint development by Lake Township and the Responding Companies) that details the course of action to be undertaken should the groundwater monitoring show the need for additional action;
- Evaluating the methane generation at the landfill; based on this evaluation, the Responding Companies will determine whether the current system is adequate and/or necessary;
- Demolishing the vacant buildings along Cleveland Avenue and properly decommissioning any associated utilities; this activity includes disposing of the debris and investigation-derived wastes from the site;
- Addressing an area beneath the center of the landfill that has shown increasing concentrations of benzene.

### **1.3 Wildlife Habitat Considerations of Remedy Design**

The Proposed Remedy incorporates community preferences for quality greenspace and wildlife habitat by implementing the recommendations of the Wildlife Habitat Council (WHC) in the design of the biodiverse phyto-cap. The WHC report on the investigation (*Opportunities for Wildlife Habitat Enhancement at the Industrial Excess Landfill*) identified:

- A thriving and diverse ecosystem (wetlands, grassland, forest edge, and woodlands);
- Diverse wildlife (fox, deer, rabbits, hawks, northern orioles, frogs butterflies, turkeys, etc.);
- Diverse flora (locust, poplar, willow, sumac, phragmite, milkweed, green ash, apple, maple, wildflowers, etc.)

The current site ecological regimes are outlined in Figure 1. In addition, the WHC report also includes recommendations for habitat enhancement, as follows:

- Creating a nest monitoring program for bluebirds, tree swallows, and American kestrels throughout the property;
- Providing nectar sources by creating a wildflower meadow and hummingbird garden on the landfill and the surrounding area;
- Implementing a field border management program that includes a rotational mowing program, enhancing the hedgerow, and planting forested islands that will provide more diversified habitat types on the landfill;
- Promoting a balanced predator / prey relationship by building brush piles and placing raptor perch posts around the landfills;
- Providing a fox den to encourage survival of foxes on the landfill;
- Installing bat boxes to control mosquito populations; and
- Controlling invasive species that take over and keep native vegetation from growing.

These habitat enhancements can be largely accommodated with the biodiverse phyto-cap as incorporated into the Proposed Remedy.

### **1.4 Biodiverse Phyto-Cap**

The Biodiverse Phyto-Cap will be implemented by planting trees in selected upland areas as preliminarily identified in Figure 2. The tree plantings will be combined with shrub, wildflower, and other plantings to enhance the site habitat. Once complete, the Biodiverse Phyto-Cap will incorporate the ecological regimes detailed in Figure 3.

The plantings are not designed to minimize infiltration. The Proposed Remedy relies on infiltration of rainwater to provide nutrients (including oxygen) that support the natural attenuation processes. These plantings are also expected to enhance the natural attenuation processes by extending the rhizosphere to greater depths. Many natural attenuation processes occur more effectively in the rhizosphere.

## **1.5 Summary of the Proposed Remedy**

The Proposed Biodiverse Phyto-Cap / Enhanced Natural Attenuation Remedy elements combine to provide a remedy that effectively limits contact with the wastes. Direct contact with wastes is limited by the phyto-cap barrier, the fence, and the future use restrictions. Indirect contact with the waste (via a groundwater pathway) is limited by natural attenuation of constituents (as confirmed by monitoring) and through maintenance of the public water supply to downgradient residents. Thus, the Proposed Remedy is fully protective of human health and the environment and effectively meets other remedial objectives as described in Section Two.

## SECTION TWO

### HOW THE PROPOSED REMEDY MEETS REMEDIAL ACTION OBJECTIVES

The Responding Companies have identified general remedial action objectives for the site as:

- Protect human health and the environment;
- Implement a sustainable solution based on site-specific conditions that is protective now and into the future; and
- Incorporate community preferences within the framework of the remedy.

The Proposed Remedy meets these remedial action objectives as detailed below.

#### 2.1 Protective of Human Health and the Environment

The Proposed Remedy is currently protective of human health and the environment because there is no one currently exposed to hazardous substances from IEL (See page 57 of Responsiveness Summary included with the 2000 ROD). This viewpoint is shared by the Responding Companies, the USEPA, OhioEPA, and the Agency for Toxic Substances and Disease Registry (ATSDR; See Public Health Consultation presented March 30, 1999). The protectiveness of the existing conditions has also been demonstrated through a site-specific risk assessment performed by the Chemrisk division of McLaren Hart as updated by Dr. Brent Finley of Exponent Failure Analysis as described in the *Responding Companies Comments on the Proposed Plan, submitted April 9, 1999*.

The public health and welfare have been secured by restricting exposure to site constituents at levels of concern through the use of controls, as follows:

- Exposure to site constituents is restricted due to the in-place soil cover: the enhancements included with the Proposed Remedy will additionally limit exposure to site constituents;
- Exposure to site constituents is restricted because access to the landfill is controlled;
- Exposure to site constituents is restricted because the potential for off-site migration of volatile constituents is controlled using the Methane Venting System;
- Exposure to site constituents via a groundwater pathway is limited because natural attenuation is controlling the extent of groundwater constituents to the landfill footprint; and
- Exposure to site constituents via a groundwater pathway has been eliminated because down-gradient receptors have been supplied with public water.

Current site conditions are confirmed by data and comments submitted to USEPA. Those data are incorporated by reference herein. A list of those reports will be provided on request.

The protectiveness of the remedy under *future* conditions will be assured through a monitoring program that will assure continued limitations on exposure. Furthermore, as natural attenuation processes destroy site constituents of concern (COCs), the risks associated with off-site transport of COCs are concomitantly reduced.

## 2.2 Sustainable Solution Incorporating Site-Specific Conditions

The Proposed Remedy has additional benefits that accrue to its implementation. These include:

- **Faster Remediation:** The currently-operating natural attenuation processes will remediate the site constituents at a faster rate than any plan that incorporates an impermeable cap (as included in the remedy envisioned by the 1989 and 2000 RODs).
- **Sustainable Remediation:** The Biodiverse Phyto-Cap would improve the Proposed Remedy performance over time as the vegetation continues to grow. The Biodiverse Phyto-Cap would require far less maintenance to remain viable than an impermeable cap. Replacement of any impermeable cap might eventually be required. No replacement of the Biodiverse Phyto-Cap is expected to be needed.
- **Biodiverse Phyto-Cap Enhances Natural Attenuation Processes:** The natural attenuation processes are currently controlling migration of groundwater constituents effectively. These processes are expected to continue to remediate the site as long as there are no changes to the local environment. The local environment will be monitored for changes that affect the natural attenuation processes. The Proposed Remedy will enhance rather than interfere with the natural attenuation processes. The USEPA's own guidance (OSWER Directive 9200.4-17) recognizes that placing impermeable cover material over a landfill may interfere with natural attenuation processes. For additional discussion of the site-specific natural attenuation processes, please refer to the *Responding Companies Comments on the Proposed Plan submitted April 9, 1999*
- **More Options for Beneficial Reuse / Consistency with Community Wishes:** The community has expressed its preference for beneficial reuse of the site as ecological habitat / greenspace. An impermeable cap would limit the range of uses and would not be capable of providing quality greenspace or diverse habitat. See Section 2.3.

## 2.3 Community Preferences

The Uniontown, Ohio / Lake Township, Ohio community has indicated its tentative approval of the Proposed Remedy under the following conditions:

- The remedy remains fully protective of human health and the environment;
- The Responding Companies provide a long-term commitment to maintaining the protectiveness of the remedy that is demonstrated by groundwater monitoring and reinforced with a contingency plan;
- The community has control over future site uses; Lake Township has secured a Superfund Redevelopment grant to evaluate future uses for the site with a focus on ecological reuses.
- The Responding Companies address related site issues (demolition of Cleveland Avenue buildings, methane, benzene, etc.).



The community has also identified:

- “Greenspace” as an important community asset;
- A preference for a remedy that includes opportunities for wildlife habitat preservation and enhancement;
- Interest in other future site uses that are consistent with the site setting;
- Concern about the negative image of an impermeable cap and the risks associated with its construction; and
- Interest in a remedy that promotes a positive community image.

These community preferences / concerns have been expressed in community surveys, in private (and public) communications with Township leaders and other community residents.

As described above, the Proposed Remedy meets all site remedial action objectives. In addition, the Proposed Remedy is the best remedy for the site when competitively evaluated (using the NCP criteria) against the remedies contemplated by the 1989 ROD and the 2000 ROD issued by the USEPA as detailed in Section Three.

## SECTION THREE

### COMPARATIVE EVALUATION AGAINST NCP CRITERIA OF THE BIODIVERSE PHYTO-CAP / ENHANCED NATURAL ATTENUATION REMEDY AND THE REMEDIES CONTEMPLATED BY THE 1989 AND THE 2000 RECORDS OF DECISION (RODS) FOR THE INDUSTRIAL EXCESS LANDFILL (IEL) SITE

USEPA evaluates the feasibility of remedial alternatives at Superfund sites by comparing them nine criteria outlined in the National Contingency Plan (NCP). USEPA's revised proposed plan for IEL (as detailed in January 1999 and incorporated into the March 2000 ROD) included a comparative evaluation against NCP criteria but only compared the January 1999 proposed plan against the remedy proposed with the 1989 Record of Decision. This section of the Petition to reconsider the IEL remedy, extends the comparison to the Biodiverse Phyto-Cap / Enhanced Natural Attenuation Remedy (Proposed Remedy) advanced by the Responding Companies ((The Goodyear Tire & Rubber Company, Bridgestone/Firestone, Inc., The B.F. Goodrich Company, GenCorp).

The following comparative evaluation against the NCP criteria shows that the Responding Companies' Proposed Remedy best meets the NCP criteria and should be the remedy selected for the IEL site. In addition, this comparison also shows that the Proposed Remedy better meets the community interests for beneficial ecological reuse of the site.

The NCP requires that remedial alternatives be evaluated against nine evaluation criteria. This document summarizes the relative performance of the alternatives by highlighting the key differences among the alternatives in relation to these criteria. The nine evaluation criteria are categorized as: (1) Threshold Criteria; (2) Primary Balancing Criteria; and (3) Modifying Criteria, as follows.

#### THRESHOLD CRITERIA

1. **Overall protection of human health and the environment** addresses whether a remedy provides adequate protection of human health and the environment and describes how risks posed through each exposure pathway are eliminated, reduced, or controlled through treatment and engineering controls. The selected remedy must meet this criterion.
2. **Compliance with ARARs** addresses whether a remedy will meet federal and state environmental laws or justifies a waiver from such requirements. The selected remedy must meet this criterion or a waiver of the ARAR must be obtained.

## PRIMARY BALANCING CRITERIA

3. **Long-term effectiveness and permanence** refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.
4. **Reduction of toxicity, mobility, and volume** is a method of measuring the anticipated performance of the treatment technologies a remedy may employ.
5. **Short-term effectiveness** measures: (1) short-term risks to a community during implementation of an alternative; (2) potential effects on workers engaged in implementation of the remedy; (3) potential environmental effects of the remedial action and effectiveness of mitigative measures; and (4) time until protection is achieved.
6. **Implementability** is the technical and administrative feasibility of a remedy, including the availability of material and services needed to implement a particular option.
7. **Cost** includes estimated capital and operations & maintenance (O&M) costs, also expressed as net present worth cost.

## MODIFYING CRITERIA

8. **State Agency (Ohio EPA) acceptance** reflects aspects of the preferred alternative and other alternatives the Ohio EPA favors or objects to, and any specific comments regarding federal and state Applicable or Relevant and Appropriate Requirements (ARARs) or the proposed use of waivers.
9. **Community acceptance** summarizes the public's general response to the alternatives described in the proposed plan and in the Remedial Investigation and Feasibility Study (RI/FS) based on public comments received.

## REMEDIAL ACTION ALTERNATIVES PROPOSED FOR IEL

**Alternative 1: 1989 ROD.** This alternative includes:

1. The installation of a multi-layer RCRA Subtitle C compliant cap over the entire surface of the landfill with surface water drainage control/discharge;
2. An expansion of the existing methane gas venting system;
3. A groundwater pump and treat system;
4. A fence around the perimeter of the site;
5. Deed restrictions on future use of the property;
6. Monitoring of the cap, groundwater quality, and methane venting system; and
7. Maintenance of the interim measure that supplied public water to residents west of the site.

**Alternative 2: March 2000 ROD Plan:** This alternative includes:

1. The installation of a modified multi-layer RCRA Subtitle C compliant cap over the entire surface of the landfill with surface water drainage control/discharge;
2. An expansion of the existing methane gas venting system;
3. **Groundwater treatment via monitored natural attenuation;**
4. A fence around the perimeter of the site;
5. Deed restrictions on future use of the property;
6. Monitoring of the cap, groundwater quality, and methane venting system; and
7. Maintenance of the interim measure that supplied public water to residents west of the site.

**Alternative 3: The Biodiverse Phyto-Cap / Enhanced Natural Attenuation Remedy (Proposed Remedy).** This alternative includes:

1. **A Biodiverse Phyto-Cap designed to enhance the value of the site as greenspace and habitat;**
2. **Groundwater treatment via monitored natural attenuation** (groundwater treatment is expected to be enhanced by the phyto component of the remedy);
3. A fence around the perimeter of the site;
4. Deed restrictions on future use of the property;
5. Monitoring of the groundwater quality, and
6. Maintenance of the interim measure that supplied public water to residents west of the site.

## **COMPARISON OF ALTERNATIVES**

The primary differences between the three alternatives are that:

- Alternatives 1 and 2 would place an impermeable cap on the landfill. This cap would require a significant expansion of the methane venting system.
- Alternatives 2 and 3 would allow monitored natural attenuation to control migration of groundwater constituents. However, the impermeable cap of Alternative 2 has the potential for interfering with the natural attenuation processes while the Biodiverse Phyto-Cap is expected to foster (rather than interfere with) the natural attenuation processes.
- Alternative 3 allows the site to be used for higher-quality greenspace – incorporating more-diverse habitats than Alternatives 1 and 2.
- Alternative 3 is expected to become more effective over time as the site vegetation continues to grow, while Alternatives 1 and 2 are expected to deteriorate over time as infiltration through the impermeable cap increases.

The following evaluation of these alternatives against the NCP criteria will highlight the impacts of these specific differences.

## **1. Protection of Human Health and the Environment**

Alternative 3 is protective of human health and the environment. USEPA, Ohio EPA, and ATSDR agree that under current conditions there is no threat to human health or the environment. The Responding Companies' risk assessment for the site came to the same conclusion. In addition, the data collected over more than 13 years of groundwater monitoring show that the natural attenuation processes currently active at the site are destroying site constituents of concern at a rate that is improving the quality of the site groundwater and maintaining the quality of off-site groundwater in a manner that is **fully protective of human health and the environment**. These data and associated evaluations are incorporated by reference. A list of supporting documents or copies of individual documents will be provided upon request.

Alternatives 1 or 2 have the potential to interfere with the natural attenuation processes; and these interferences could threaten human health by allowing off-site migration through the groundwater of constituents at levels of concern. As more data are collected on natural attenuation of constituents, the negative consequences associated with impermeable caps are being elucidated.

Implementation of an impermeable cap (Alternatives 1 and 2) will require more active management of landfill gases to ensure that they do not migrate beyond landfill boundaries.

With the current situation being protective, and Alternatives 1 or 2 potentially interfering with the processes that are maintaining the protectiveness, plus the additional potential for methane management problems, Alternative 3 should be considered to better meet this criterion than Alternatives 1 and 2.

## **2. Compliance with ARARs**

All proposed remedies are compliant with ARARs.

The current vegetated soil cap of Alternative 3 meets the applicable Ohio EPA standard. This current cap is an **applicable** ARAR because it was accepted by the court and the Stark County Board of Health (the regulatory body responsible for these matters) during closure of the landfill as fulfilling the Ohio solid waste regulations.

## **3. Long-Term Effectiveness and Permanence**

Alternative 3 better meets this criterion because under Alternative 3, groundwater conditions are expected to continue to improve; in addition, as the vegetation grows, the rates of natural attenuation remedial processes are expected to increase. The biodiverse phyto cap will require much less maintenance to sustain (and even improve) its effectiveness. By comparison, an impermeable cap envisioned by Alternatives 1 and 2 will entomb the wastes without significant

reduction in toxicity. Should the *impermeable* cap develop leaks, constituents present in landfill leachate would be less effectively remediated by the slowed natural attenuation processes; as a result, the long-term effectiveness and permanence of Alternatives 1 and 2 would be compromised.

In addition, the biodiverse phyto-cap of Alternative 3 is also expected to eventually convert the wastes into soil. As this happens in the near-surface, the thickness of cover preventing contact with the site wastes will increase – increasing the effectiveness of the remedy.

#### **4. Reduction of Toxicity, Mobility, or Volume**

Alternative 3 better meets this criterion because under Alternative 3, groundwater conditions will continue to improve as natural attenuation processes destroy constituents of concern. These natural attenuation processes will continue to reduce the toxicity, mobility, and volume of the constituents of concern. The biodiverse phyto-cap of Alternative 3 is also expected to eventually convert the wastes into soil. Alternatives 1 and 2 will slow or stop the infiltration of water and nutrients to the subsurface; as a result, the natural attenuation processes that are destroying constituents of concern will also slow (or stop) and thus slow (or stop) the reduction of toxicity, mobility, and volume of wastes and site constituents of concern.

#### **5. Short-Term Effectiveness**

Alternative 3 better meets this criterion because under Alternative 3, there are few short-term risks to the community during implementation of the alternative. Alternative 3 avoids risks (associated with Alternatives 1 and 2) of increased short-term generation of landfill leachate as the result of the construction of an impermeable cap on IEL and the attendant risks to the effectiveness of the natural attenuation processes.

In addition, Alternative 3 will require fewer workers engaged in implementation of the alternative. Alternative 3 will not require thousands of truckloads of soil to be delivered to the site. Alternative 3 is protective of human health and the environment; and this effectiveness is already in place – it will not require years to construct and become effective like Alternatives 1 and 2.

#### **6. Implementability**

Alternative 3 is already successfully implemented and proven to be effective. Additional activities associated with the remedy (selected plantings, investigations, etc.) are designed to only enhance the current situation. Alternatives 1 and 2 will require significant construction and pose comparably significant implementation problems.

The effectiveness of the natural attenuation processes at continuing to maintain the groundwater quality once an impermeable cap is installed is in doubt. If the natural attenuation processes

deteriorate, additional groundwater pump-and-treat systems may be needed – further extending the potential implementability issues of Alternatives 1 and 2.

## **7. Cost**

Alternative 1: \$25,964,000 (1997 \$)

Alternative 2: \$13,665,709 (1997 \$)

Alternative 3: Approximately \$7,000,000 (1997 \$)

Alternative 3 is the least-cost remedy.

## **8. State Agency Acceptance**

The Ohio EPA has indicated that they consider the IEL site properly closed under Ohio law in 1980. In addition, the Ohio EPA has indicated that they will consider Alternative 3. Ohio EPA has accepted remedies similar to Alternative 3 at other landfills in Ohio.

## **9. Community Acceptance**

Alternative 3 incorporates community desires into the remedy. The community has expressed the following preferences that it wants incorporated into any remedy (as determined by a community survey and communication with Township Trustees):

- Protective remedy verified by groundwater monitoring;
- Long-term commitment by Responding Companies with contingency plans;
- Greenspace as an important community asset;
- Concern over the negative aspects of a plastic cap and the risks of construction of an impermeable cap;
- Maintenance / enhancement of a wildlife habitat;
- Local control over future land use;

Alternative 3 has significantly greater community acceptance than either Alternatives 1 or 2. Neither Alternative 1 or 2 would allow the maintenance or enhancement of the existing wildlife habitat. In addition, Alternative 3 allows many future land use decisions to be deferred and eventually conveyed to the Township. If the impermeable caps proposed by Alternatives 1 or 2 are implemented, the future land use decisions are already included in the decision to build the impermeable cap and the range of future land uses have been irreparably restricted.

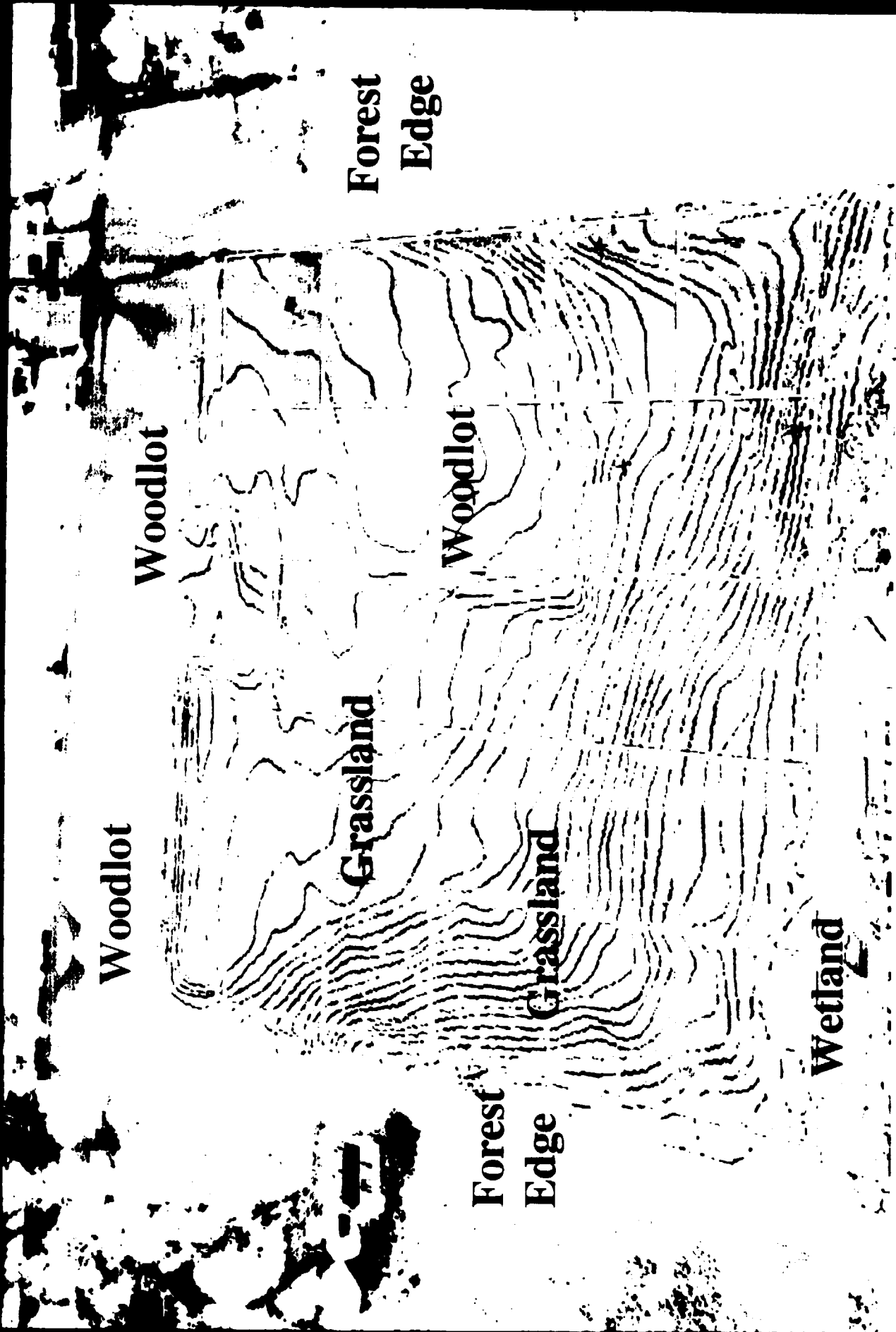
**SECTION THREE SUMMARY**

When evaluated against each of the nine NCP criteria, Alternative 3, (Biodiverse Phyto-Cap / Enhanced Natural Attenuation Remedy) is comparable or superior to either Alternatives 1 or 2 and should be considered the preferred remedial alternative for the Industrial Excess Landfill (IEL) site. A summary of the evaluation is provided below.

**SUMMARY OF THE  
COMPARATIVE EVALUATION OF PROPOSED REMEDIAL ALTERNATIVES FOR  
IEL AGAINST NCP CRITERIA**

<b>Criterion</b>	<b>Remedial Alternative 1 Cap + Pump/Treat USEPA 1989 ROD</b>	<b>Remedial Alternative 2 Impermeable Cap USEPA 2000 ROD</b>	<b>Remedial Alternative 3 Biodiverse Phyto-Cap / Enhanced Nat'l Atten'n</b>
1. Overall Protection of Human Health and the Environment	Potential Impacts on Nat'l attenuation Processes	Potential Impacts on Nat'l attenuation Processes	Protective; all elements in place since 1991; add'l elements will improve.
2. Compliance with ARARs	Complies w/ARARs	Complies w/ARARs	Complies w/ARARs;
3. Long-Term Effectiveness and Permanence	Cap may interfere w/ Natural Attenuation Effectiveness depends on cap maintenance	Cap may interfere w/ Natural Attenuation Effectiveness depends on cap maintenance	Effective and Permanent; effectiveness increases over time; no changes to current conditions envisioned or needed
4. Reduction of Toxicity, Mobility, or Volume	GW contaminants reduced by extraction/treatment Cap interferes with natural attenuation destructive processes	Cap interferes with natural attenuation destructive processes	Natural Attenuation reduces GW contaminants; More reduction than Alternatives 1 and 2
5. Short-Term Effectiveness	Not effective for at least one year; Significant construction risks	Not effective for at least one year; Significant construction risks	Already effective; already implemented; add'l elements will improve effectiveness
6. Implementability	Significant construction challenges requires thousands of truckloads Groundwater pump and treat systems are prone to malfunction	Significant construction challenges requires thousands of truckloads	Already Implemented; no implementation issues
7. Cost	\$25,964,000	\$13,665,709	\$7,000,000
8. State Agency Acceptance	Accepts	Accepts	Will consider; has accepted similar approach elsewhere
9. Community Acceptance	Significant stated concerns; does not allow for additional evaluation before irreversible action taken Doesn't allow deferral of future use decisions.	Significant stated concerns; does not allow for additional evaluation before irreversible action taken. Doesn't allow deferral of future use decisions.	Significant community preference for wildlife habitat, preservation of future use options, and additional evaluation flexibility as long as remedy protective.
<b>SUMMARY</b>	<b>2</b>	<b>2</b>	<b>Best option</b>





**Figure 1. Current Ecological Regimes**



**Figure 2. Proposed Tree Planting Area**

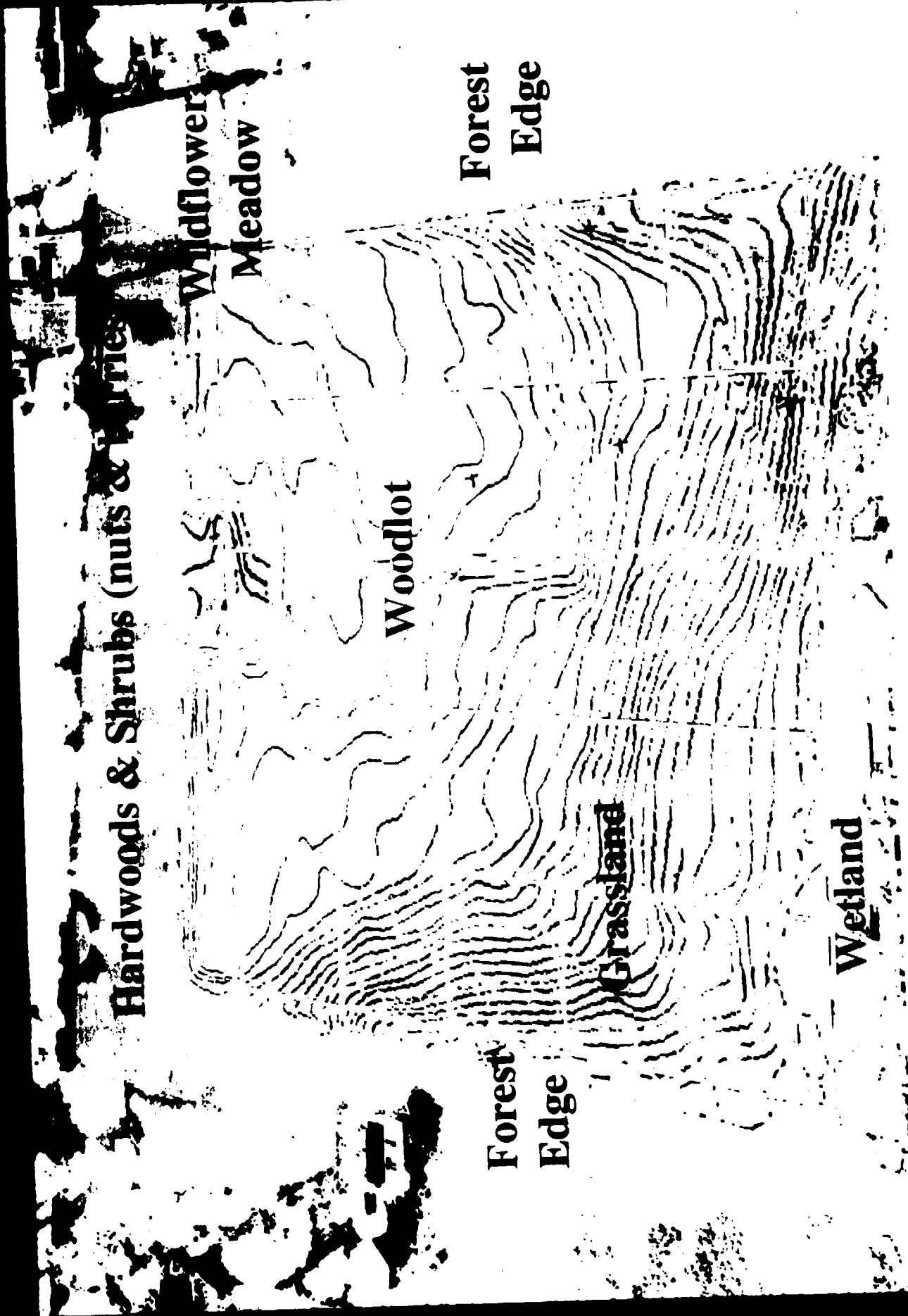


Figure 3. Future Ecological Regimes