Superfund Program
Proposed Plan
2nd Operable Unit

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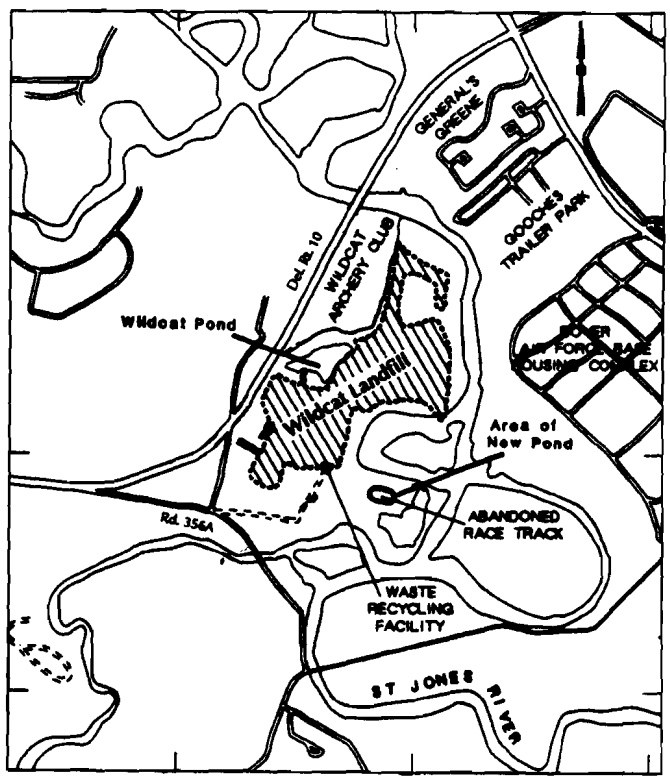
DNREC
and
EPA Region III

Wildcat Landfill Pond
Kent County, DE

November, 1988

This document will describe:

* the background of the Wildcat Landfill pond;
* the purpose of the proposed plan;
* the remedial alternatives;
* the alternative preferred by DNREC and EPA;
* the reason for selection of the preferred alternative; and
* the public comment period and public meeting to be held by DNREC and EPA.



APPROXIMATE LANDFILL BOUNDARY

INTRODUCTION

To fulfill the requirements of CERCLA Section 117(a), the Delaware Department of Natural Resources and Environmental Control (DNREC) and the U.S. Environmental Protection Agency (EPA) have prepared this Proposed Plan to describe remedial actions planned for the pond located adjacent to the Wildcat Landfill Superfund Site, Kent County, Delaware. This adjacent pond is described as the second operable unit in the June 29, 1988 Record of Decision (ROD) for the Wildcat Landfill. That ROD selected the remedy for problems both on-site and off-site which included providing a soil cover for the leachate seeps located near the adjacent pond. The proposed actions for addressing the second operable unit are intended to alleviate existing environmental impacts on the pond and it's biological community. Further, these actions are intended to be consistent with the remedy selected in the first ROD.

This proposed plan describes the various actions considered for the second operable unit pond and DNREC's and EPA's preferred course of action. The agencies invite public comment during the public comment period extending from November 4, 1988 to November 28, 1988. Documents relevant to this proposed plan are available for public inspection at locations described at the end of this proposed plan.

SITE BACKGROUND

The Wildcat Landfill Superfund Site is an inactive municipal and industrial landfill located approximately two and one-half miles southeast of Dover, Delaware. The landfill is approximately 45 acres and is bordered to the north and east by the St. Jones River and associated wetlands, and to the west and south by residential and commercial establishments. A pond, created by construction of the landfill, is located directly adjacent to the site along the northwestern border. A Proposed Plan (May 1988) and Record of Decision (June 1988) detailed the remedy selected for the landfill and the adjacent areas of concern except the pond. The major components of this selected remedy included (1) grading, soil covering, and revegetation of areas of the landfill where direct contact risks were identified, (2) removal and off-site disposal of drums containing wastes that were encountered on-site or during grading activities, (3) replacement of two wells located near the site, (4) institutional restrictions on water well installation on the site and in the shallow aquifer in specified areas near the site, (5) institutional restrictions on commercial or residential building on the site, (6) installation of monitoring wells adjacent to the shallow aquifer surface discharge areas, and (7) ground water monitoring to assure the effectiveness of the remedy.

The pond was studied during the initial remedial investigation activities and the findings are detailed in the Remedial Investigation (RI) Report (May 1988). However, the pond was targeted for additional study to determine if the contaminants had any impacts on pond biota, and was subsequently separated as a 'second operable unit.' Additional studies were undertaken by the U. S. Fish and Wildlife Service (USFWS) as documented in their November 1988 report.

The Remedial Investigation Report for the Wildcat Landfill included extensive evaluation of the potential impacts of the landfill on the pond. The findings from the RI were (1) acute toxicity was found in the extreme southwestern portion of the pond, (2) leachate seeps were found along the landfill and the pond contained elevated levels of certain heavy metals above Federal Water Quality Criteria, and (3) bioaccumulation of several metals was found in turtles and mummichog fish.

The Final Feasibility Study (FS) (July 1988) addressed the range of alternatives for the landfill and also addressed the leachate seeps found along the periphery of the landfill bordering the pond. That feasibility study did not address the pond pending the additional USFWS study.

The USFWS study (November 1988) characterized the effects of contaminants, specifically lead, upon resident painted turtles in the pond. The results of this study showed that there are depressed levels of certain enzymes in the turtles which indicates physiological impacts possibly from the elevated levels of lead.

PURPOSE OF THE PROPOSED PLAN

Besides presenting a brief summary of the initial remedial investigation and the USFWS supplemental report findings, the proposed plan identifies the alternatives evaluated, gives the alternative preferred by DNREC and EPA, and provides the basis for that preference.

The remedial alternatives selected for the pond were evaluated on the basis of their success in protecting human health and the environment, compliance with other environmental requirements, ease of implementation, short- and long-term effectiveness, reduction in toxicity, mobility and volume, and being consistent with the remedy chosen for the landfill in the first ROD. However, the final remedy will not be selected until the public comments have been received and addressed.

PROPOSED ALTERNATIVES

The decision on remedy selection for the pond was deferred in the first ROD pending additional study by the USFWS on bioaccumulation of heavy metals in small fish and turtles in the pond and possible effects on migratory birds. The majority of the sampling efforts for the pond was accomplished in the remedial investigation for the landfill and adjacent environs. The Remedial Investigation Report (May 1988) is therefore used extensively in evaluating the alternatives appropriate to address the pond.

A limited range of alternatives is considered appropriate in addressing environmental concerns found in the pond, namely, (1) no-action and (2) draining and filling of the pond and creation of a new pond elsewhere on the property but in an area removed from landfill contamination. This limited range of alternatives was considered appropriate because of the special relationship of the pond to the landfill and the remedy already selected for the landfill in the first ROD: (1) the remedy for the landfill includes extending soil cover onto leachate seeps draining into the pond and, therefore, filling of the pond would be an extension of these activities, (2) future

releases into the pond would be eliminated and equivalent habitat created elsewhere, and (3) the PRP Group has proposed draining and filling of the pond and creation of a new pond as part of their settlement on the remedy selected for the first operable unit.

DNREC and EPA have developed this limited range of alternatives and are using the existing Remedial Investigation and Feasibility Study supplemented by the USFWS report to evaluate the effectiveness of the remedies. Should the PRP Group fail to implement the remedy selected for the pond, the agencies would complete the USFWS study of the possible effects on migratory birds and develop a broader range of alternatives.

The final remedial alternatives considered in this proposed plan are summarized below. The summary includes the various requirements associated with each alternative.

No Action

The no action alternative for the pond would allow the existing hydrologic, biologic and hydrochemical systems to remain as they exist presently. The remedy selected for the landfill includes covering the leachate seeps adjacent to the pond. The no action alternative would not minimize or eliminate the existing impacts documented in the remedial investigation or the subsequent USFWS study nor on any potential impacts upon migratory birds. The alternative may comply with the Federal Water Quality Criteria but would depend on the outcome of the existing remedy where leachate seeps are eliminated.

Filling Pond and Construction of Replacement Pond

This alternative would require that the existing pond be drained and filled and that a new pond of similar area and habitat value be constructed elsewhere on the property in an area unaffected by landfill contamination. Additionally, a monitor well directly upgradient of the newly created pond would be constructed to assure that the Federal Water Quality Criteria are met. A similar monitor well is being constructed in the same general area to monitor discharges into Tidbury Creek and is discussed in the first ROD. The filling of the pond would be an extension of the leachate seep cover requirement making the remedial action of this alternative an extension of the remedy in the first ROD.

Since the PRP Group has agreed to implement the pond remedy coincident with the landfill remedy, a cost analysis was not performed and will not be considered in this proposed plan. However, if the remedy is not implemented by the PRP Group, such a cost analysis would be performed by the agencies prior to remedy selection.

DNREC's and EPA's Preferred Alternative

Both DNREC and EPA have carefully considered the proposed remedial alternatives for addressing the problems posed in the pond adjacent to the Wildcat Landfill site. The two alternatives considered are consistent with the remedy selected in the first ROD for the landfill.

Based on available information, the preferred alternative is draining and filling of the existing pond and creation of a new pond because it provides the best balance among the evaluation criteria on which the alternatives were analyzed. This alternative eliminates the existing environmental problems at the pond as well as potential future releases to the pond from the landfill. The new pond will be at least equivalent in area and habitat value as the existing pond. Monitoring of ground water discharge to the pond will also be required concurrent with the monitoring detailed in the first ROD. Under this alternative the following actions would occur:

(1) The pond will be drained along the western edge of the landfill and into the St. Jones River;
(2) The surface water in the pond will be tested prior to discharge to assure that applicable water quality standards are not exceeded;
(3) The entire surface area of the pond will be filled with appropriate material to assure a stable surface capable of supporting vegetation;
(4) The filling of the pond will be conducted in conjunction with the covering of the leachate seeps detailed in the June 1988 ROD;
(5) A new pond will be constructed of approximately equal surface area to the existing pond and of equal to or better habitat value. The new pond will constructed in accordance with the appropriate Federal and State guidelines;
(6) A monitor well will be constructed upgradient of the pond similar in design and purpose to the monitor wells required in the June 1988 ROD. Their purpose is to assure that Federal Water Quality Criteria is met at the ground water discharge locations;
(7) Sampling of the new pond and the monitor well will be done in accordance with the landfill remedy monitoring detailed in the June 1988 ROD; and
(8) Administrative restrictions will be placed on future development affecting the newly constructed pond.

RATIONALE FOR PREFERENCE

This alternative was selected because of the potential for future releases into the adjacent pond, however remote, from the landfill. The creation of the new pond of at least equal area and habitat value assures that a suitable and diverse ecosystem will be created from implementation of the remedy. Additionally, the preferred remedy is consistent with the remedy selected for the landfill in the June 1988 ROD which includes the covering of leachate seeps along limited areas of the pond. The remedy has also been proposed by the PRP Group interested in implementing the remedy for the landfill. This remedy alleviates the existing contact problems posed to existing pond biota and creates a suitable replacement resource.

The no action alternative does not address the impacts of landfill contaminants on biota in the pond either existing or in the future.

Both DNREC and EPA have, however, determined that should the PRP Group for whatever reason not implement the preferred remedy, then the USFWS study will be continued to document whether the contaminants in the existing pond pose any threat to migratory birds and to further assess the range of alternatives for addressing the pond.

NEXT STEPS

This proposed plan puts forth the remedial action preferred by both DNREC and EPA. However, selection of the final remedial action will not be made until all input received during the public comment period is evaluated and considered in the decision-making process. Both DNREC and EPA rely on public input in selection of the final remedy so that the needs and concerns of the local community are addressed.

DNREC and EPA will use the findings of the RI, FS, USFWS Study Report, and public comments to select the final remedy. That remedy will be documented in the Record of Decision (ROD) which will summarize how the final decision was made. Implementation of the remedy selected in the ROD will begin following design of the remedy.

PUBLIC COMMENT

DNREC and EPA will hold a public meeting at 7 PM on November 15, 1988 at the DNREC building located at 89 Kings Highway, Dover, Delaware. DNREC and EPA will present the findings of the RI and the USFWS Study Report followed by a presentation of the preferred alternative. All interested citizens are invited and encouraged to ask questions and provide comment.

The public meeting takes place during the public comment period which began on November 4, 1988 and concludes on November 28, 1988. All site related documents are available for review at the Dover Public Library, 45 S. State Street, Dover, Delaware, and at the U.S. EPA Region III, 841 Chestnut Street, Philadelphia, PA. Interested citizens are invited to review these documents. Written comments must be submitted to the following addresses by the close of business of November 28, 1988:

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