

40123

MEETING AGENDA

PLACE: Carroll Building, 2nd Floor Conference Room

TIME: 9:00 a.m., August 29, 1986

INVITED: See Attached Sheet

SUBJECT: Combe Fill South Landfill (CFS)

PURPOSE OF MEETING: To finalize NJDEP's Input to  
CFS RECORD OF DECISION

- . Review of Record of Decision (ROD)
- . Details of Selected Alternative  
Attachment from ROD, Modified
- . Final Document

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COMBE FILL SOUTH: INTERAGENCY MEETING  
REMEDIAL ALTERNATIVE

Distribution List:

	<u>FYI</u>	<u>Review &amp; Comment</u>
Anthony Farro, Deputy Administrator Hazardous Site Mitigation Administration	[ ]	<u>X</u>
Charles DeWeese, Chief Bureau of Site Management	[ ]	<u>X</u>
Melinda Dower, Superfund Coordinator Division of Water Resources	[ ]	<u>X</u>
William O'Sullivan, Chief* Bureau of Engineering & Technology, DEQ	[ ]	<u>X</u>
Marty Rosen, Superfund Coordinator* Office of Science and Research	[ ]	<u>X</u>
Karen Jentis, Regulatory Contact Office of Regulatory Services	[ ]	<u>X</u>
Paul Schneider, DAG Division of Law	[ ]	<u>X</u>
John Trela, Director Division of Hazardous Waste Management	[ ]	<u>X</u>
Ron Kaiserman, Technical Coordinator Bureau of Environmental Evaluation and Risk Assessment	[ ]	<u>X</u>
Jim White, Director Division of Financial Management & Planning Services	[ ]	<u>X</u>
Mike DeBonis, Special Assistant to Director Hazardous Waste Management	[ ]	<u>X</u>
<del>Kirk</del> Stoddard, USEPA Project Officer <i>/ Ron Boraedline attended for</i>	[X]	<u>          </u>
Dan Toder, Project Geologist, DWR	[ ]	<u>X</u>
Len Romino, Chief, BSCM	[ ]	<u>X</u>
John Bojanek, DHSM	[ ]	<u>X</u>

\* PLEASE ALSO FORWARD COPY OF YOUR REVIEW TO TECHNICAL COORDINATOR.

c: Gerard Burke, Deputy Director, ORS - w/attachments  
Dr. Merry L. Morris, Acting Assistant Director, HSMS - w/attachments  
David Kindig, Section Chief BSM - w/attachments  
Janice Haveson, Community Relations - w/attachments

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*Ed Kaup*  
RECEIVED BY  
E. G. KAUP  
AUG 22 '86

RECORD OF DECISION  
REMEDIAL ALTERNATIVE SELECTION

Site Combe Fill South, Morris County, New Jersey

Description of Selected Remedy

- An alternate water supply and interim bottled water for affected residences
- A continuous clay cap
- An active gas-collection system
- Extensive shallow-aquifer pumping
- On-site treatment of groundwater and leachate, with discharge to Trout Brook
- Surface-water controls
- General site preparation
- An access road
- Security fencing
- Quarterly environmental monitoring

This remedy is an enhanced version of one of the alternatives developed to attain applicable and relevant federal requirements.

Declarations

Consistent with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), I have determined that the alternative described herein is a permanent remedy that will control the source of the contamination and mitigate off-site migration of contaminants.

I have further determined that this remedy is the lowest-cost alternative that is both technologically feasible and reliable. It effectively mitigates and minimizes threats to and provides adequate protection of public health and the environment. Furthermore, the selected remedy is appropriate when balanced against the availability of Trust Fund monies for use at other sites.

The State of New Jersey has been consulted and has given approval of the selected remedy.

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TABLE 4-1

**COMPONENTS OF REMEDIAL ACTION ALTERNATIVES  
COMBE FILL SOUTH LANDFILL**

COMPONENT	ALTERNATIVES							
	1	2	3			4	5	
	NO ACTION	NEW RCRA LANDFILL	ACHIEVE A	FEDERAL B	STANDARDS C	EXCEED STANDARDS	ACHIEVE A	SOME BUT NOT ALL STDS B
1. Security fencing	X	X	X	X	X	X	X	X
2. Environmental monitoring	X	X	X	X	X	X	X	X
3. Access road(s)			X	X	X	X	X	X
4. Grading, filling, and general site preparation			X	X	X	X	X	X
5. Multilayered, terraced cap								
A. With clay			X	X	X	X	X	
B. No clay								X
6. Gas venting								
A. Passive								
1. Trench			X	X				X
2. Pipe vents					X		X	
B. Active						X		
7. Gas treatment						X		
8. Surface water controls			X	X	X	X	X	X
9. Leachate collection trench			X	X		X		X
10. Shallow aquifer pumping					X			
11. Deep aquifer pumping								
A. Flow path No. 6				X	X			
B. All flow paths						X		
12. Groundwater barrier wall								
A. Circumferential							X	
B. Upgradient						X		
13. Groundwater/leachate treatment and disposal								
A. With discharge to Trout Brook			X	X	X			X
B. With discharge to Black River						X		
14. Creation of on-site RCRA landfill		X						
15. Alternate water supply	X	X	X	X	X	X	X	X

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Given the situation of containment instead of removal of the landfill wastes, local citizens appear to want the most extensive and comprehensive alternative possible. Thus, they would prefer Alternative 4, which exceeds applicable requirements, but hopefully will settle for one of the alternatives that attains those requirements. Fortunately, the recommended alternative was originally developed to attain applicable requirements and incorporates one component (active gas collection) from Alternative 4.

#### RECOMMENDED ALTERNATIVE

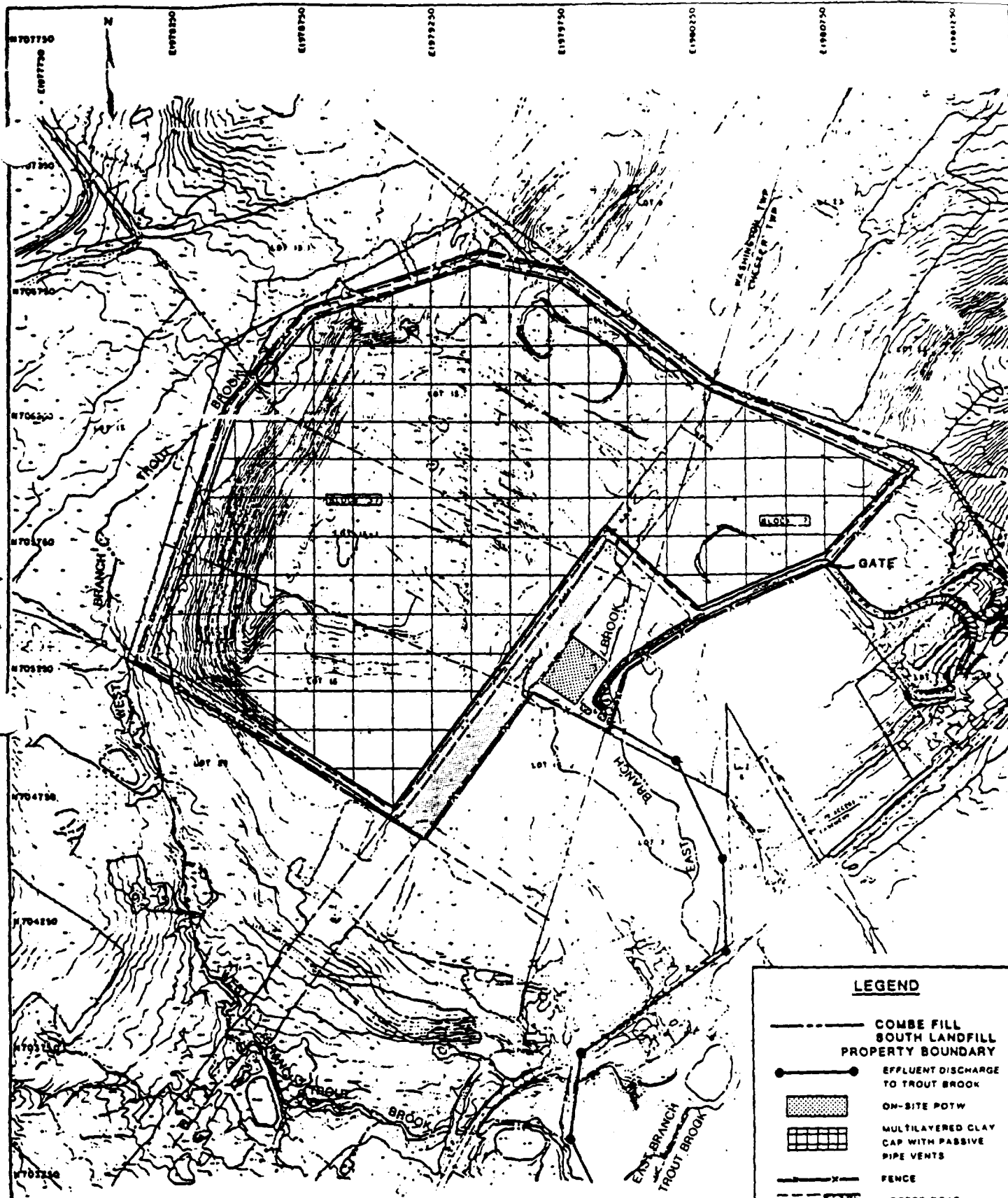
The alternative deemed most appropriate for the Combe Fill South site is a modified version of Alternative 3C, Cap With Shallow and Deep Pumping and On-Site Treatment. The modifications include:

1. Installation of a RCRA-approved multi-layered cap over those parts of the filled areas that are sufficiently level
2. A more extensive shallow-well pumping system, which replaces both the leachate-collection trench and the deep pumping system
3. In active gas-collection system, rather than the passive design proposed
4. Enhanced environmental monitoring of water, air, soils, and leachate.

A continuous clay cap would be expected to achieve the RCRA performance criterion of  $10^{-7}$  cm/sec permeability or less. Installing a multi-layered cap or "beanie" over the level areas of the fill would satisfy the structural criterion, as well. However, several problems exist with the latter. First, only approximately sixteen acres, or roughly 25% of the three landfilled areas, has slopes of 2 to 7%, as stipulated in the RCRA regulations. (Regarding the entire site has already been discussed and rejected under Alternative 2). Second, the present worth of the beanie is an estimated \$2.1 million, but cannot be considered cost-effective in view of the performance of the clay cap alone.

The main concern over pumping deep wells is the possibility of drawing contaminated ground water down from the shallow aquifer. Again, due to the fractured bedrock, predictions regarding patterns of downflow and adequacy of recovery are impossible. The more reasonable approach would be to remediate

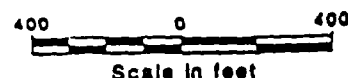
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# **LEGEND**

- COMBE FILL SOUTH LANDFILL PROPERTY BOUNDARY
- EFFLUENT DISCHARGE TO TROUT BROOK
- [Pattern] ON-SITE POTW
- [Pattern] MULTILAYERED CLAY CAP WITH PASSIVE PIPE VENTS
- FENCE
- ACCESS ROAD
- [Pattern] GRAVEL PAVED
- [Pattern] EXCAVATED WASTES MOVED TO MAIN AREAS UNDER CAP

**500097**



**Lawler, Matusky & Skelly Engineers**  
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One Blue Hill Plaza  
Pearl River, New York 10965

## **COMBE FILL SOUTH LANDFILL REMEDIAL INVESTIGATION/ FEASIBILITY STUDY**

**SCHEMATIC PLAN VIEW  
ALTERNATIVE No. 3C  
ACHIEVE STANDARDS WITH CAP,  
SHALLOW AND DEEP PUMP, AND TREAT**

**r. e. wright associates, inc.**  
earth resources consultants

**FIGURE 4-8**

the saprolite aquifer as much as possible first, then proceed with deep-aquifer pumping, should it still be deemed worthwhile at that time. Consequently, two high-density grids of shallow wells will be installed downgradient - i.e., to the northeast and southwest along the site's perimeter. The combined effects of these two well grids will compensate for the leachate-collection trench that would otherwise be necessary.

The other two modifications to Alternative 3C - active gas collection and expanded monitoring - were judged to be cost-effective given the size of the site and the volume of the landfilled wastes.

The no-action alternative allows the continued migration of chemicals in the groundwater, some of it toward drinking water wells. It will also allow the contamination of wetlands and Trout Brook to continue, as well as the erosion of the landfill's steeply sloped sides. Thus, while it is the least costly alternative by far, with a present worth of \$2.5 million, and is technically feasible, it provides only limited protection to public health and the environment. As such, it is rejected as being ineffective in achieving CERCLA objectives.

The RCRA fill alternative costs \$150 million more than the next most expensive alternative, yet its effectiveness is not increased correspondingly. It would eventually result in total or near-total control of adverse impacts, but allows them to continue during its construction period, which will be longer than for other alternatives. Moreover, its construction-related impacts will be greater than for the other alternatives.

Because it prevent off-site migration of contaminated ground water, the RCRA landfill alternative provides the best isolation of wastes from the environment of all the alternatives considered. However, its technical feasibility, effectiveness and reliability must be balanced against its extremely high cost and low implementability, both of which stem from the size and complexity of the site.

The continuous clay cap helps control release of gases from the fill in addition to reducing infiltration. As such, its value is based on preventive maintenance and its cost must be balanced against the reduction in O&M costs due to reduced volumes of leachate.

The steep slopes bordering the landfilled areas necessitate terracing to support the continuous clay cap. Gabion terracing has been proposed, which is a less common but well-established technology. Implementability is hampered by the need to extend the cap under the 150 foot wide right-of-way of the New Jersey Power and Light Company, which runs through the middle of the site. Again, the scale of the project is a drawback here.

The reliability of the cap will depend largely on the straight forward O&M program, which will include maintenance of the vegetative cover and any repairs, as necessary, to the cap or the gabion terraces.

#### OPERATION AND MAINTENANCE (O&M)

The O&M costs for the recommended alternative are itemized in Table \_\_\_\_\_. Except for the alternate water supply service charges and the monitoring and wastewater treatment programs, these costs are almost entirely due to routine maintenance and repair of the various components implemented. In particular, inspections of the cap are essential to ensure its continued reliability.

Funding for O&M expenditures will be provided through New Jersey's Spill Compensation Fund. The Division of Hazardous Site Mitigation will be responsible for implementing the O&M program. EPA contributions to O&M will be limited to the first year of operation once construction is completed.

#### SCHEDULE

The schedule for implementation of the selected remedy is as follows:

<u>Project Milestone</u>	<u>Date</u>
Approve Remedial Action	September 1986
Complete Enforcement Negotiations	
Amend Cooperative Agreement for Design	Contingent upon
Start Design	reauthorization of
Complete Design	CERCLA of State funding

#### FUTURE ACTIONS

Long-term O&M considerations will reflect the gradual reduction in the amount of contaminated ground water/leachate requiring treatment. As the shallow (saprolite) aquifer is remediated, the option of deep pumping will be re-considered as a possible means of removing contaminated ground water from the bedrock aquifer.

*Costs for monitoring program*