



Casmalia Resources Disposal Site

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION 9 • APRIL 2001

U.S. EPA PROPOSES REMEDY FOR THREE LANDFILLS

This fact sheet announces the U.S. Environmental Protection Agency's (U.S. EPA) preferred action to address contamination at the Heavy Metals/Sludges Landfill, the Caustic/Cyanide Landfill and the Acids Landfill (hereafter called the Three Landfills) at the Casmalia Resources Disposal Site. U.S. EPA is requesting written and oral comments on this proposal.

U.S. EPA's proposed action consists of installing a multi-layer cover system over the Three Landfills and adjoining areas, and conducting maintenance of the cover system indefinitely into the future.

To assist the public in providing its comments, this fact sheet provides specific information about the alternative cleanup methods U.S. EPA is considering. U.S. EPA's proposed action is preliminary and a final decision will be made after all comments are considered.

The 30-day public comment period begins April 6, 2001, and closes on May 7, 2001. A public meeting will be held on Thursday, May 3, 2001, from 7:00 to 9:00 p.m. at the Winfred Wollam Elementary School in Casmalia.

For information about how to provide your comments, please see page 5.

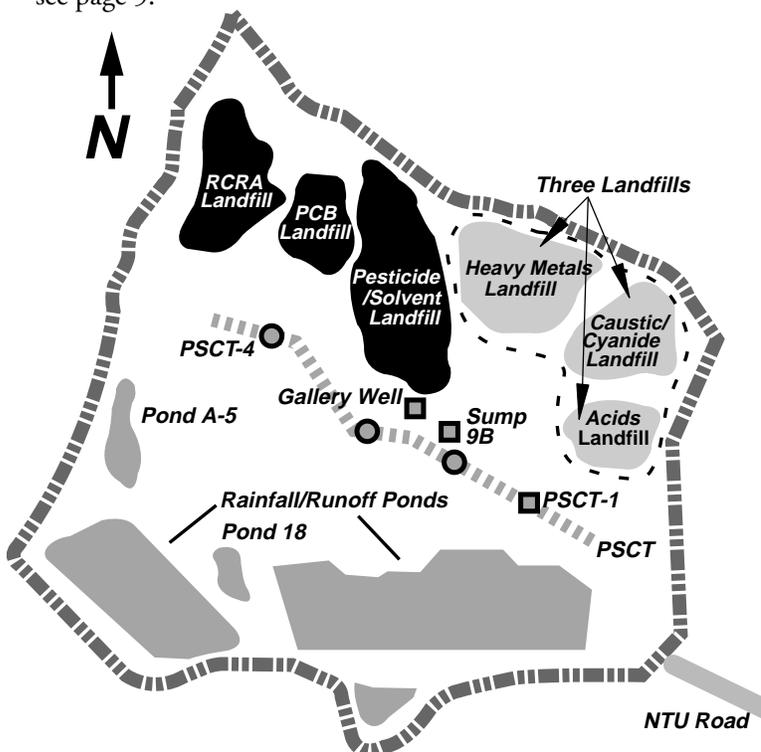


Figure 1: Casmalia Resources Disposal Site

PUBLIC COMMENT PERIOD

April 6 - May 7, 2001

COMMUNITY MEETING

DATE: Thursday, May 3

TIME: 7:00 to 9:00 pm

PLACE: Winfred Wollam Elementary School, Casmalia

U.S. EPA is addressing the waste at these landfills using the federal Superfund Law (formally called the Comprehensive Environmental Response, Compensation and Liability Act or CERCLA) which authorizes interim site work under the title of a Non-Time-Critical Removal Action. U.S. EPA encourages you to review the information contained in this factsheet and a document called the Final Engineering Evaluation and Cost Analysis Report (Final EE/CA Report). Information regarding how to get a copy of the Final EE/CA Report is provided at the back of this factsheet.

The Final EE/CA Report was prepared by a group called the Casmalia Steering Committee or CSC. The CSC is a group of 54 parties, largely oil, gas, and aerospace companies, who sent waste to the Site. In 1996, the CSC signed a consent decree with U.S. EPA to conduct certain work at the Site. Preparation of the Final EE/CA Report is one of the CSC responsibilities under the consent decree. By letter dated March 9, 2001, U.S. EPA approved the Final EE/CA Report for the public comment process. U.S. EPA's letter and State of California comments on the Final EE/CA Report are attached to the Final EE/CA Report.

Site History

The Casmalia Resources Hazardous Waste Management Facility, located 10 miles from Santa Maria, California, is an inactive hazardous waste treatment, storage and disposal facility. It accepted in excess of 5.5 billion pounds of hazardous waste from approximately 10,000 contributors during the period 1973 to 1989.

As a result of the facility operations, the soil and the groundwater at the facility became contaminated. In late 1991, the owner/operator abandoned all active efforts to clean up and close the facility, claiming financial difficulties.

In 1992, the U.S. EPA took action to control the site and to address immediate health threats.

During an initial investigation, U.S. EPA found that the contamination had moved less than 500 feet beyond the site boundary. During the last decade, millions of gallons of contaminated groundwater have been treated or disposed to prevent movement of contaminants off-site.

In 1996, the Casmalia Steering Committee or CSC, took over operations at the site, including the continuation of groundwater containment and cleanup work. In 1999, the CSC installed a cover system on the Pesticides/Solvents Landfill. The CSC continues to perform work at the Site under the direction and oversight of U.S. EPA with technical assistance from the State of California.

U.S. EPA Proposes Cap

U.S. EPA is recommending that the Three Landfills, including the areas in between the landfills (shown in Figure 2), be covered with a multi-layered landfill cover system or cap. This landfill cap would be similar to the landfill cap that was installed on the Pesticide/Solvent Landfill two years ago.

The technical name for this landfill cap is called a "RCRA-equivalent" cap (a protective cover meeting the requirements of the federal Resource Conservation and Recovery Act for closure of hazardous waste landfills). Its design and construction is specified by federal and state laws. Unlike a traditional landfill cap that only covers the landfill waste, the proposed cap

ties all three landfill cover systems together with a continuous multi-layered barrier.

Currently the three landfills are covered by 10 to 60 feet of soil. Rainfall can leach down through the soil and buried hazardous waste in each landfill and generate additional groundwater contamination. In addition, the current soil cover is subject to erosion and therefore does not provide long-term protection of the public and the environment from direct exposure to the underlying hazardous waste.

U.S. EPA's proposed landfill remedy would: (a) minimize the further leaching of chemicals from the landfills into groundwater, (b) contain the landfill waste and reduce the potential for direct contact with contaminated soils and

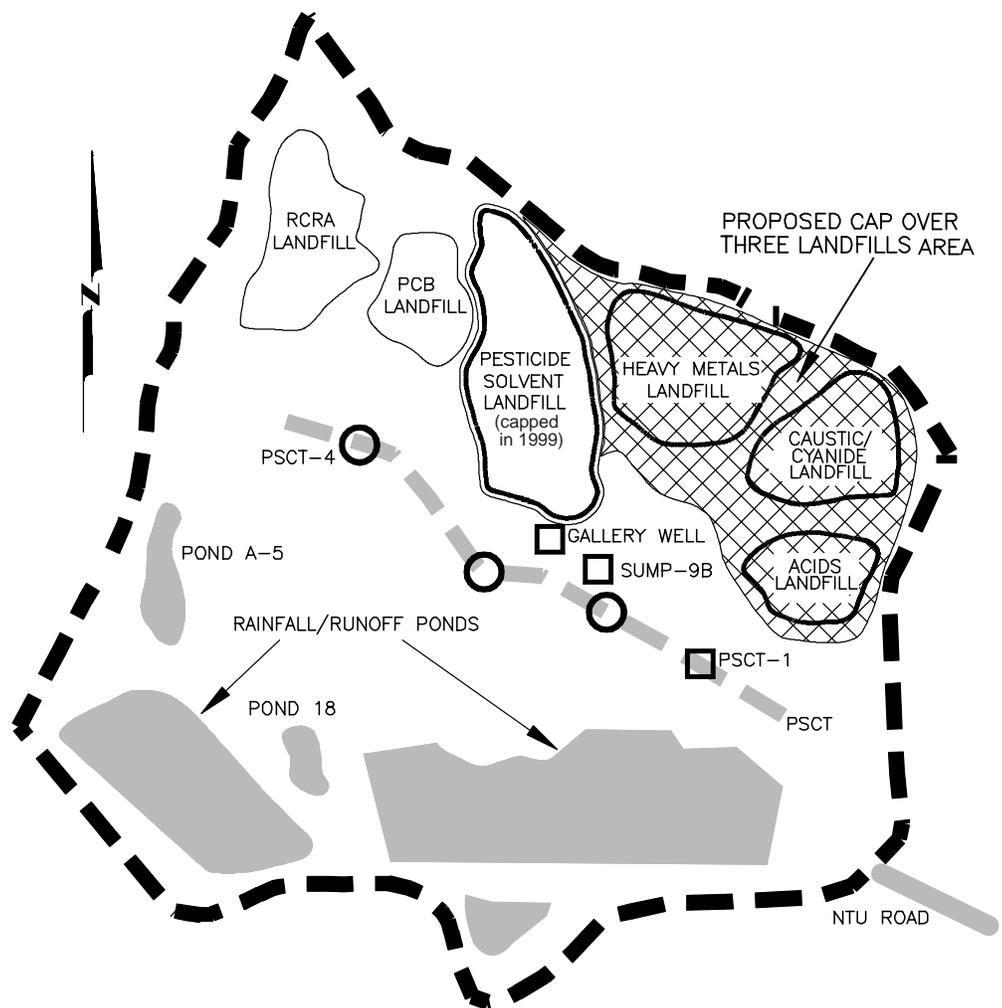


Figure 2: Casmalia Resources Disposal Site, showing Option 2, EPA's proposed option for the Three Landfills.

hazardous waste, and (c) provide a long-term solution to minimize erosion and maximize stability of the landfills.

When completed, this multi-layered cover system further reduces the amount of rainfall penetrating the landfills, which reduces the creation of contaminated groundwater, which in turn reduces the amount and cost of groundwater treatment, thus protecting the environment while reducing the overall cost of the remedy.

It should be noted that the remedy under consideration does not address groundwater contamination at the site. Groundwater contamination is currently being evaluated under a different investigation process.

U.S. EPA Considered the Options

When the U.S. EPA plans to implement a remedy, it must look at multiple options. Prior to its detailed analysis of capping options in the Final EE/CA Report, U.S. EPA first considered alternatives to capping. For example, U.S. EPA considered the option of digging up and removing the waste from each landfill and transporting that waste for treatment off-site. However, U.S. EPA screened out this option due to the unacceptable short-term human health and environmental risks posed by the excavation and transportation of hazardous waste. In addition, the costs of landfill excavation and off-site treatment would be prohibitive.

After the option of digging up the waste was eliminated, U.S. EPA concluded that no practical on-site waste treatment option was available and that only waste containment re-

mained practical. U.S. EPA's decision to contain instead of treat waste from large landfills at the Casmalia Site is compliant with the Superfund regulations and guidance documents and is consistent with U.S. EPA's years of experience of remediating large waste landfills nationwide.

Since waste containment was deemed the only practical alternative, U.S. EPA analyzed two containment options (i.e. capping) in detail, along with the No Action alternative which by regulation is required to be considered in all Superfund remedy analyses. Therefore, the Final EE/CA document analyzed the following three options in detail:

- 1) No Action (i.e., do nothing to the landfills)
- 2) Cap the Three Landfills including the area in between the landfills
- 3) Cap only the Three Landfills.

Option 1: No Action

The No Action alternative serves as a baseline to compare against other alternatives under consideration. The No Action alternative implies that no further work will be taken to address the contaminants and waste in the three landfills.

Option 2: A Multi-layered Cover System for the Three Landfills and All Areas

This alternative would involve placing a cap on the area that includes the three landfills and the ground in between (see Figure 2, page 2). The RCRA-equivalent cap for this option consists of multiple layers, including a 2-foot thick vegetated soil cover, a biotic barrier about 1-foot below the ground to keep burrowing animals out, a drainage layer, a plastic liner, a geo-synthetic clay liner, and a 2-foot thick foundation layer.

Table 1: Evaluation of Remedy Options for the Three Landfills

Remedy Option	1 No Action	2 Cap three landfills and areas in between	3 Cap three landfills
Effectiveness	Poor	Good	Moderate
Implementability	Poor	Good	Good
Cost*	No cost		
Capital:		\$10,458,000.	\$10,452,000.
O&M (per yr):		\$ 106,000.	\$ 106,000.
Present Worth (30yr):		\$11,773,000.	\$11,767,000.
Recommended by EPA?	NO	YES	NO

*Note: Under the Cost category, "Capital" mean the costs of constructing the remedy.
 "O&M" means the costs of operation and maintenance of the remedy.
 All dollars are provided as dollars in the year 2000.

A cross-sectional view of the RCRA-equivalent cap is shown in Figure 3, below.

The objectives of the cap would be to:

- (1) prevent direct contact with contaminants
- (2) prevent generation of contaminated stormwater runoff and wind blown dust
- (3) prevent rainwater from washing through the landfills and carrying contaminants into the groundwater
- (4) provide a long-term solution to minimize erosion and maximize the stability of the landfills.

The design of the cap would be sufficient to prevent significant damage due to settling and earthquakes. Approximately 300,000 cubic yards of clean soils will be imported to the site for construction purposes. The clean soils will most likely be taken from Laguna Sanitation District, located about three miles from the site on Black Road. To prevent ponding of rain water on the cap, this alternative includes storm water runoff controls and ditches.

This alternative also includes groundwater monitoring around and in between each of the three landfills to evaluate potential changes in groundwater conditions over time. This monitoring will assist U.S. EPA evaluate the continued effectiveness of the cover system in the future. This alternative includes long-term maintenance of the cap. Basic maintenance and monitoring requirements will generally include annual settlement surveys, erosion control monitoring, and maintenance of the vegetative cover.

Option 3: A Multi-layered Cover System for Only the Three Landfills

Under Option 3, only the horizontal extent of each landfill would be covered with a RCRA-equivalent cap (see Figure 4, page 5). This alternative differs from Option 2, in that the area to be covered is smaller by approximately 5 acres. The

cost for this option is nearly identical to Option 2, despite the smaller area being capped. This is because of the increased construction costs associated with additional footage cap liner terminations and more complex storm water drainage channels.

Figure 3 provides a description of the layering of the RCRA-equivalent cap proposed under Option 2 and 3. RCRA-equivalent caps described are required by federal and state regulations to cover former hazardous waste landfills. Therefore, only RCRA-equivalent caps were considered for the detailed analysis since non-RCRA-equivalent caps would not be allowed by law. A summary of the evaluation of the remedy options are provided in Table 1 below. Please refer to the Final EE/CA Report, which is located in the Information Repository, for a comprehensive discussion of the remedy evaluation process.

U.S. EPA's Recommendation

As required by federal regulations, U.S. EPA used the following three criteria to analyze remedy options:

- 1) Effectiveness (e.g., does the option comply with federal and state laws and protect human health and the environment during construction and in the long-term?)
- 2) Implementability (e.g., can the option be built from an administrative and technical perspective?)
- 3) Cost (e.g., what is the cost to construct, operate, and maintain each option?)

Option 2, U.S. EPA's recommended remedy option, was determined superior due to its effectiveness and overall cost-effectiveness. Option 3, although rated equally good with Option 2 with respect to implementability, was deemed only moderately effective due to the comparatively higher rainfall infiltration and associated increased chemical contamination of groundwater when compared to Option 2. U.S. EPA

concluded Option 2 provides superior overall protection of human health and the environment for approximately the same cost as Option 3.

Therefore, U.S. EPA has concluded that Option 2 is the cost-effective remedy for the Three Landfills area. The amount of capping under Option 2 (i.e. capping over landfills and the in between the three landfills)

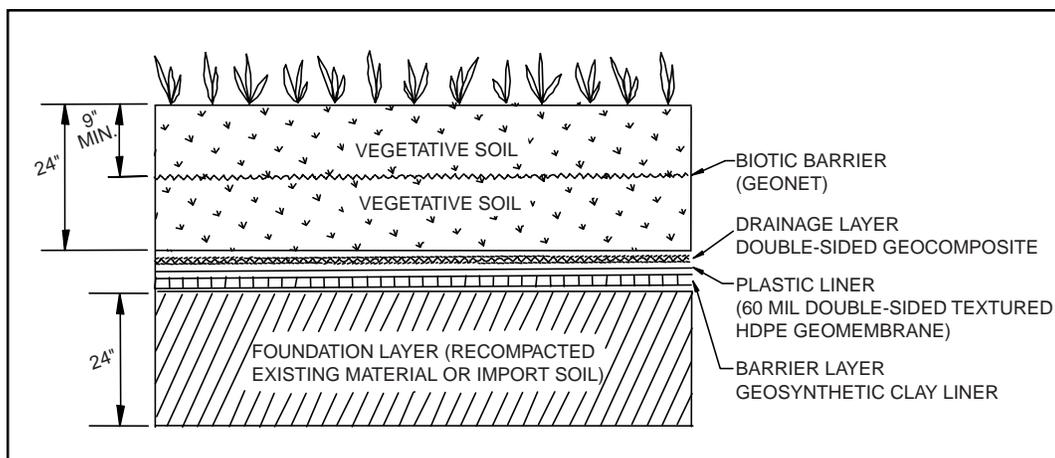


Figure 3: Layering of the RCRA-equivalent cap proposed under Options 2 and 3.

does not preclude U.S. EPA from effectively monitoring each landfill individually. In fact, U.S. EPA intends to continue long-term monitoring of wells near and in between each landfill to ensure the protectiveness of this remedy and any remedy constructed in this area in the future. It should also be noted that the performance of the selected action will be reevaluated when U.S. EPA considers its final site-wide remedy.

Future Activities at the Three Landfills Area

As explained above, the public comment period ends on May 7, 2001. U.S. EPA will consider each and every written and oral comment received during the comment period. U.S. EPA will also prepare and issue a "Response to Comments" document, which gives U.S. EPA's answer to the questions and concerns raised by the commenters. U.S. EPA will also issue a document called the "Action Memorandum." The Action Memorandum is a legally enforceable document that contains U.S. EPA final decision regarding the appropriate remedy for the Three Landfills area.

Copies of both the Response to Comments document and the Action Memorandum will be placed in the administrative record at the Santa Maria Library and extra copies will be available at the Casmalia Post Office. In addition, upon request, U.S. EPA will mail you your own personal copies of each of these documents. If U.S. EPA's Action Memorandum substantively affirms the recommended remedy in the Final EE/CA Report (i.e., Option 2, cap the three landfills, including the areas in between), then U.S. EPA will move forward with finalizing the design for this remedy.

Under this scenario, construction work to implement this remedy would likely commence in the summer of 2001. If U.S. EPA does not affirm the recommended remedy in the Final EE/CA Report, additional analysis will be necessary and the construction work will not begin this year.

Opportunities for Community Involvement

U.S. EPA invites your participation in selecting the remedy for the Three Landfills area at the Casmalia Resources Disposal Site. There are a number of ways you can become involved. A public meeting will be held on May 3, 2001, to solicit public comments on all the alternatives explained in this fact sheet. You may provide your comments in writing or orally.

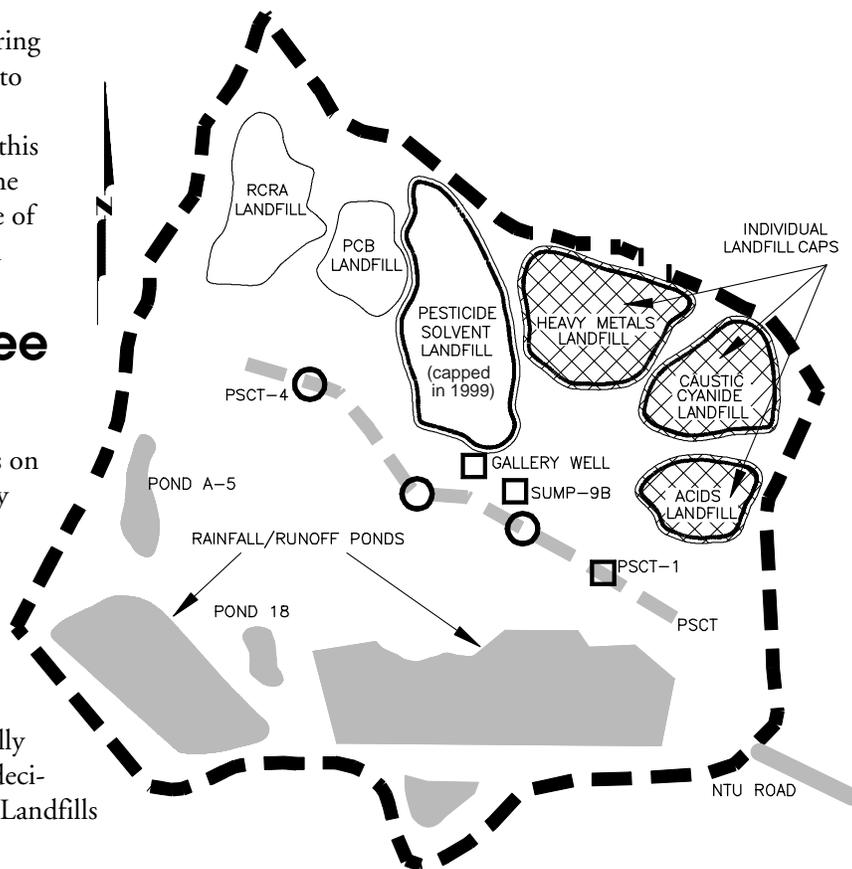


Figure 4: Casmalia Resources Disposal Site, showing Option 3 for the Three Landfills.

In addition, U.S. EPA welcomes comments submitted directly to our office. Please send those comments to Craig Cooper (see address on back page). Or written comments may be e-mailed to Craig Cooper at cooper.craig@epa.gov. All written comments sent by email must be dated no later than May 7 and all written comments sent by mail must be postmarked May 7.

If you would prefer, you may tell us your comments by calling David Cooper, the community involvement coordinator for the Casmalia Resources Disposal Site, using U.S. EPA's toll-free number 800-231-3075.

To learn more about the Site, you will find an extensive amount of information at U.S. EPA's information repositories at the Santa Maria Library, 420 South Broadway, Santa Maria, California, or the U.S. EPA Records Center, 95 Hawthorne, San Francisco. These repositories contain the documents that U.S. EPA used to identify its proposed remedy and which will be used to support any decision.

The public comment period for the three landfills area at the Casmalia Resources Disposal Site remedy extends from April 6, 2001, to May 7, 2001.

COMMUNITY MEETING MAY 3, 2001 AND COMMENT PERIOD APRIL 6 - MAY 7, 2001 FOR CASMALIA LANDFILLS

For More Information

If you would like more information or have questions about activities at the Casmalia Resources Disposal Site, please contact the following people:

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or you may call EPA's Community Involvement line and your message will be returned:

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