STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
245 West Broadway, Suite 425
Long Beach, CA 90802-4444
(310) 590-4858

M60050.002637
MCAS EL TORO
SSIC NO. 5090.3

February 16, 1996

Mr. Joseph Joyce
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
P. O. Box 95001
Santa Ana, California 92709-5001

Dear Mr. Joyce:

COMMENTS ON DRAFT INTERIM ACTION OPERABLE UNIT 1 FEASIBILITY STUDY PROPOSED PLAN, MARINE CORPS AIR STATION (MCAS) EL TORO

The Department of Toxic Substances Control (DTSC) has completed the review of the above subject document dated December 1995. The document describes the alternatives to clean up ground water contamination in the principal aquifer at MCAS El Toro and presents the U.S. Marine Corps/Navy's preferred alternative. DTSC supports Alternative 6A as the preferred alternative. As Orange County Water District plans to convert agricultural wells in the area of concern into drinking water wells, we believe that Alternative 2A may not be an acceptable contingency alternative. Moreover, Alternative 2A may not be a cost effective approach.

Enclosed are additional comments on the Proposed Plan from Ms. Marsha Mingay, our Public Participation Specialist. Please review and consider these comments carefully as the final document must be presentable to the public for review, consideration, and feedback to the base.

If you have any questions, please contact me at (310) 590-4891.

Sincerely,

Tayseer Mahmoud
Remedial Project Manager
Base Closure Unit
Office of Military Facilities
Southern California Operations

Enclosure

cc: See next page.

cc: Ms. Bonnie Arthur
U. S. Environmental Protection Agency
Region IX
Hazardous Waste Management Division, H-9-2
75 Hawthorne Street
San Francisco, California 94105-3901

Mr. Lawrence Vitale
Remedial Project Manager
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Mr. William R. Mills Jr.
General Manager
Orange County Water District
P.O. Box 8300
Fountain Valley, California 92728-8300

Ms. Marsha Mingay
Public Participation Specialist
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, California 90802-4444

Mr. Vish Parpiani
Environmental and Safety
Marine Corps Air Station-El Toro
P. O. Box 95001
Santa Ana, California 92709

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
245 West Broadway, Suite 425
Long Beach, CA 90802-4444

MEMORANDUM

TO: Tayseer Mahmoud
Project Manager

FROM: for Marsha Mingay

DATE: February 7, 1996

SUBJECT: **COMMENTS ON THE INTERIM ACTION FEASIBILITY STUDY PROPOSED PLAN FOR OU 1**

Public Participation has reviewed the above referenced document and submits the following comments.

The document contains all required information, however changes in the wording, use of added tables/matrices, deletion of repetitive information and a more prominent text box regarding the public participation opportunities will lead to a more reader friendly document for the general public. This is important since EPA's guidelines state that the Proposed Plan is to be written "in a clear and concise style and use illustrations and figures where appropriate to better summarize the information in the RI/FS." (EPA, Community Relations in Superfund: A Handbook, page 34).

Page 1 Text Box

Since the Proposed Plan stage of the CERCLA process is intended to inform the public and provide them with the opportunity to become involved, a more prominant public comment/meeting text box is appropriate. By utilizing a small space on the front page of the Proposed Plan, the reader could assume that you are minimizing the importance of public involvement in this process. Therefore, please review and incorporate the style and informational contents of the the attached examples.

Table of Contents

Incorporate the article entitled, "How Much Will Clean Up Cost?"

What Is the Purpose of the Proposed Plan?

Page 2, last paragraph in article -
After the first sentence in this paragraph, add the following, "The public is encouraged to review and submit comments on all the alternatives considered."

What is the Problem at MCAS El Toro?

Page 2, second paragraph -
The information presented may increase fear due to a lack of information regarding the relationship between toxicity, exposure pathways and health risks. Suggest the incorporation of information regarding exposure pathways either in this article, or in a separate article. If a separate article is written, utilize a parathetical statement to tie the information together.

Page 2, fourth paragraph -
Since this article provides a verbal picture of the situation at MCAS El Toro, combine the information presented with similar information found on page 5, under "Source Area". The following is suggested, "The sources of the regional groundwater contamination are concentrated in the southwestern portion of MCAS El Toro. Although the exact source location areas are still being determined, the presence of VOCs in the area are consistent with previous MCAS El Toro activities. These activities included hazardous chemical spills or releases into the soils. Overtime, the contamination seeped through the soils and into the groundwater."

What is an Interim Action?

Replace the first sentence with part of the sentence currently appearing in the article, "Why do we Need an Interim Remedial Action?" The paragraph in the article, "What is an Interim Action" would begin with the sentence, ""The U.S. Marine Corps/Navy has determined that the Phase I data, combined wiht historical data, are sufficient to proceed with the selection and implementation of a remedy for regional VOC contamination."

To streamline information contained within the document, delete the following from this article.

"because there are groundwater problems in other areas of the Station that will be addressed separately." (quote can be found at the end of the first paragraph)

"The U.S. Marine Corps/Navy's goal is to take remedial action to capture and remove contaminants from grounwater and to prevent them from spreading further. (Quote is located on page 3, above the bullets elaborating on this information).

What is Groundwater?

Delete the following sentence as it could be interpreted as condescending, "Groundwater is an important resource. It provides water from many purposes, including irrigation and domestic uses."

What is the History of MCAS El Toro?

Since we know that hazardous substances were used at MCAS El Toro and that they are a source of contamination, be more specific in the second paragraph. The following is suggested, "... Many potentially hazardous substances were used (such as ...) and are the source of groundwater contamination. These substances were released into the environment ..."

Include a definition for "bias for action". This is not a commonly known EPA policy (see 3rd paragraph of article).

What Studies Have Been Done?

The studies listed have all led to this proposed plan, therefore, an introductory paragraph which tie the studies together would provide the reader with an understanding of why these studies took place. (Note that the first paragraph in, "What are the contaminants ..." begins to achieve this objective.)

U.S. Marine Corps/Navy Monitoring of VOCs

To clearly present the information, reword the following sentences to read, "The U.S. Marine Corps/Navy analyzed samples of groundwater and found that the shallow groundwater contained VOCs. These findings suggested that the contamination of the regional groundwater was caused by Marine Corps activities."

What Are the Contaminants and ...

As stated in the comment for "What Studies Have Been Done?", this information should be used to introduce the studies which have been conducted. Since it is suggested that the information be moved, this section could be deleted.

Types of Contaminants Found

This information is best presented in table format, as you have done in Table 1. Therefore, the article can be deleted.

Source Areas of VOCs

As indicated in the comment for "What is the Problem ...", this information should be incorporated into that article.

Contamination Levels, Extent, and Migration

The information presented in paragraphs two through four, would be clarified immensely if it was presented in a matrix versus written paragraph form. Additional information also needs to be provided which will explain why data is not presented for each area of concern (e.g., no information was presented for TCE, on-station, in the deep aquifer). A suggested table format is attached as Example 2.

The fifth paragraph in this article is a description of the plume and its relationship to the MCLs. We suggest that an article heading be utilized to highlight this important information.

Is There Any Risk to Human Health?

When discussion risk, it is important to provide the reader with the bottom line conclusion first, and then go into the specifics. Following that format, move the second to the last paragraph in this article to the second paragraph position. This will provide the reader with the good news first.

The use of bullets in this article is confusing. We suggest the use of subheadings, to group the information presented. For example, the first bullet is generic information regarding excess lifetime cancer risk and the subsequent bullet provides specific information regarding excess lifetime cancer risk in relationship to MCAS El Toro. These first two bullets are vastly different than the third which talks about the potential for non-cancer effects. The use of subheadings will alert the reader that the following information is a separate type of assessment. Additionally, to follow the format of providing generic information and then specific information, break the third bullet into two paragraphs.

The wording in this article is confusing. The uneducated health risk assessment reader might interpret the information as:

4 wells exceed lifetime cancer risk value of one in 10,000
47 wells, exceed the one in 1 million risk level
8 wells exceeds a non cancer hazard index of 1.0 for max. exposure scenario
5 wells exceed a non cancer hazard index of 1.0 for average exposure scenario

Individuals with this understanding, will want to know which wells are these? Where are they located? To avoid this misinterpretation, please clarify the information.

Why Do We Need an Interim Remedial Action?

Information presented is mostly contained within the article, "What is an Interim Action". To streamline the document, delete this article.

What Will the Interim Action Entail?

Information presented is contained elsewhere in the document and therefore can be deleted.

What Are the U.S. Marine Corps/Navy's Cleanup Standards?

The second paragraph mentions that the contamination must be cleaned up to levels with a Hazard Index less than 1. Include a sentence which states what the hazard index at MCAS El Toro is currently.

The third paragraph, last sentence provides important information. Please provide additional information regarding the level of contamination that can remain in the groundwater after the remedial action is complete.

What Are the U.S. Marine Corps/Navy's Cleanup Alternatives?

For some of the alternatives, you have provided information on whether the alternative will meet the objectives or not. Please include this type of information for **all** of the alternatives listed since it allows the reader to understand your decision process.

In the desciption for Alternative 4B, the term "safety margin" is used. Please either reword, or define its meaning to avoid misinterpretation.

How Were the Cleanup Alternatives Evaluated?

The article is confusing because it does not contain specifics or examples. What were the alternatives that were eliminated in the "initial screening"?

Change the last sentences in this paragraph to read, "These alternatives were evaluated using the nine criteria summarized in Table 3. Based upon that evaluation, the U.S. Marine Corp/Navy has identified 6A and 2A as their preferred alternative."

How Do the Cleanup Alternatives Compare?

This article is extremely confusing and would be best presented to the reader in a matrix format. Please see the example fact sheet provided.

Table on page 13

To assist the reader in understanding the information presented, define "18 ET1" in the table.

Evaluation of Preferred Alternative by EPA Criteria

Provide information on how the "alternatives would remain protective over the long term."

The article states, "The time period required for compliance would be significant, because the volume of VOC-contaminated groundwater is large." Provide the anticipated time period so that the reader can understand your conclusion.

The article states, "Both Alternatives 6A and 2A would require significant periods of time to meet the remedial objectives for clean up of the groundwater." Provide the anticipated time period so that the reader can understand your conclusion.

Provide information regarding the 4 percent discount rate.

Eliminate the brackets surrounding paragraph for "State Acceptance".

How Will the U.S. Marine Corps/Navy Decide ...

Spell out the accronym for IDP

Glossary

Incorporate the Water Board's Resolution 68-16 since it is relatively unknown to the general public and is used frequently in the document.

Page 16, text inset box

Insert "Interim Action" before "Remedial Investigation.

Where to Get More Information

Add DTSC Public Participation Specialist as a point of contact. Information to be included is:

Ms. Marsha Mingay
Public Participation Specialist
State of California
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, CA 90802
(310) 590-4881

cc: Claire Best, Supervisor
Public Participation Unit
Office of Military Facilities

Sherrill Beard
Geology Unit
Office of Military Facilities

Frazer Felter
U.S. EPA
75 Hawthorne Street (H-1-1)
San Francisco, CA 94105

Bonnie Arthur
U.S. EPA
75 Hawthorne Street (H-9-2)
San Francisco, CA 94105

EXAMPLE 1

EPA *McColl Superfund Site*

Fullerton, California
September 1992

Inside:

Soft Material Solidification with a Contingency for RCRA-Equivalent Closure is the Proposed Cleanup Alternative

In this Proposed Plan, the United States Environmental Protection Agency (EPA) is proposing in situ **solidification** of soft waste material (soft material solidification, or SMS) with a contingency for **RCRA**-equivalent closure as its preferred cleanup alternative for the McColl Superfund Site.

EPA, the lead agency, and the California Department of Toxic Substances Control (DTSC), the support agency, are seeking public comment on the cleanup alternatives being considered for the McColl Superfund Site. Only after public comments on this proposed plan have been received and considered will EPA, in consultation with DTSC, issue a **Record of Decision (ROD)** describing the remedy EPA selects for the McColl site. In this case, the Agency is proposing a contingency ROD consisting of the alternatives described above to help avoid future delays if the soft material solidification alternative cannot be technically implemented. DTSC has

continued on page 2

Opportunities for Public Involvement

Community Meeting

Community members are invited to attend an upcoming public hearing regarding the cleanup alternatives for the McColl site.

Thursday
September 17, 1992
7:00 pm
Parks Jr. High School
Music Room
1710 Rosecrans Avenue
Fullerton

At the meeting, EPA will present the Proposed Plan, respond to questions, and receive formal comments from the public, both oral and written.

Public Comment Period
August 31 to September 29, 1992

During the comment period, you are encouraged to express your opinions on the Proposed Plan and the other alternatives considered for the McColl site cleanup. EPA, in consulation with DTSC, may modify the preferred alternative or select another response action presented in this Proposed Plan and the SROA II based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here. Comments can be submitted orally or in writing at the public hearing, or can be sent in written form (postmarked no later than September 29, 1992) to:

Pam Wieman
Remedial Project Manager
U.S. Environmental Protection Agency
75 Hawthorne Street (H-6-1)
San Francisco, CA 94105-3901

The Agency may extend the comment period if requested.

continued from page 1

had the opportunity to review this Proposed Plan before publication and intends to offer formal comments during the public comment period.

Soft material solidification (SMS) at McColl would involve hardening the tar-like material, drilling muds, and cover soil at the waste pits (sumps) on the site; building subsurface slurry walls around the sumps to prevent migration of water into the waste and outward migration of contaminants; stabilizing steep slopes on the site with retaining walls; placing a multilayer cap (RCRA-equivalent cap) over the sumps with a gas collection and treatment system; and conducting groundwater monitoring and operation and maintenance in perpetuity at the site.

Although EPA is confident that SMS could be successful at the site, there is inherent uncertainty whenever a remedial alternative involves a proven treatment technology used in an innovative manner. Accordingly, EPA has decided to include RCRA-equivalent closure as a contingency element of the Proposed Plan. If SMS cannot be implemented, EPA will proceed immediately with implementation of RCRA-equivalent closure at the McColl Site. Closure would consist of constructing a multilayer cap over the untreated sumps with a gas collection and treatment system; building subsurface slurry walls around the sumps to prevent migration of water into the waste and outward migration of contaminants; stabilizing steep slopes on the site with retaining walls; and conducting groundwater monitoring and operation and maintenance in perpetuity at the site.

What is Superfund?

Superfund is a program established in 1980 by the U.S. Congress under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The program provides funds and authority to respond to hazardous waste problems that threaten public health and the environment. In 1986, the program was reauthorized for five years by the Superfund Amendments and Reauthorization Act (SARA), and was recently extended until 1996. EPA is responsible for the Superfund program. State governments work as partners with EPA and sometimes have the lead role for site projects and cleanups.

This fact sheet is the Proposed Plan required under section 117(a) of CERCLA as part of public participation. This document summarizes information that can be found in greater detail in the SROA II Report and other documents contained in the Administrative Record for this site. EPA and DTSC encourage the public to review these other documents to gain a more comprehensive understanding of the site.

EPA believes that solidification of soft material best meets the criteria EPA must consider in evaluating cleanup alternatives. (See Figure 6 on page 6 for a discussion of how a remedy is chosen.) Definitions of the terms that appear in **boldface** type can be found in the Glossary on page 16.

This fact sheet addresses all of the the alternatives considered by EPA in the Supplemental Reevaluation of Alternatives II (SROA II) for the cleanup at McColl. The SROA II evaluated alternatives previously considered in the 1989 SROA, as well as an alternative proposed by the McColl Site Group* (the companies that are potentially responsible parties - PRPs - for the cleanup, including Shell Oil Company, Atlantic Richfield Company, Phillips Petroleum Company, Union Oil Company, and Texaco Marketing and Refining, Incorporated), and a range of in situ solidification alternatives. This Proposed Plan addresses cleanup of the waste and contaminated soils at the site. EPA is still investigating possible groundwater contamination and will make a decision regarding cleanup of groundwater, if needed, at a future time.

The Administrative Record, which contains all of the documents considered by EPA in developing this Proposed Plan, is available for public review at the Fullerton Public Library, Archives Department (see back page). Documents include the SROA II, the Baseline Public Health Evaluation (BPHE), the Public Health Evaluation of Remedial Alternatives (PHERA), the Nine Criteria Analysis, and other technical documents.

** McAuley LCX Corporation is also a PRP, but is not a member of the McColl Site Group.*

The McColl Site: Background and History

The McColl Superfund Site is an inactive hazardous waste disposal facility used in the 1940's for the disposal of acidic sludge, a byproduct of World War II refinery operations. The waste was deposited in a series of 12 pits, or sumps, on about eight acres of the approximately 20-acre site (see Figure 1). From 1951 through 1962, fill soil and drilling mud from oil exploration activities in the Coyote Hills area were deposited in some of the pits in an effort to make the site suitable for future development.

By 1962, the Upper Ramparts area of the site, containing two sumps (R-5 and R-6), was covered with soil and has since remained open space. In the early 1980's, a clay cap was placed on the Lower Ramparts area (containing Sumps R-1, R-2, R-3, and R-4) in an attempt to reduce odors and lower the potential for direct human contact with contaminants. The Los Coyotes area of the site was covered during the construction of the Los Coyotes Country Club Golf Course. The six sumps in that area (L-1 through L-6) were covered with soil.

In the late 1970's and early 1980's, areas east of the McColl site were subdivided and developed for single-family residences. West of the site, recreational facilities were developed for the Ralph B. Clark Regional Park. As population and housing development increased, more and more complaints were received about odors emanating from the site. Investigations undertaken by DTSC identified extensive contamination.

In 1982, the McColl site was placed on EPA's National Priority List (NPL) which made site cleanup eligible for federal funding through the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, commonly known as Superfund. From 1980 to 1983, DTSC conducted a Remedial Investigation/Feasibility Study (RI/FS) to determine the best method to clean up the site. Based upon that investigation, a decision was made to excavate and redispose the waste in an authorized landfill in Kern County, CA. That county, however, challenged the decision, resulting in a California Superior Court Order requiring DTSC to prepare an Environmental Impact Report for the project. The court action halted cleanup measures at the site.

In February 1989, after a reevaluation of the alternatives (SROA), EPA and DTSC proposed thermal destruction as the preferred cleanup alternative. A trial excavation of the waste material at the site was done under an enclosure during June and July 1990. The results provided detailed information on how best to handle the waste in a full-scale excavation operation.

EPA had planned to sign a Record of Decision (ROD) in March 1991. However, EPA determined the community should have the opportunity to comment on the documents EPA was relying on to make its decision, including information developed during treatability studies and the 1990 trial excavation. EPA also decided to reevaluate and update its analyses of the alternatives considered for site remediation identified in the 1989 Proposed Plan. EPA has now completed these steps in the SROA II and other technical documents described on page 1.

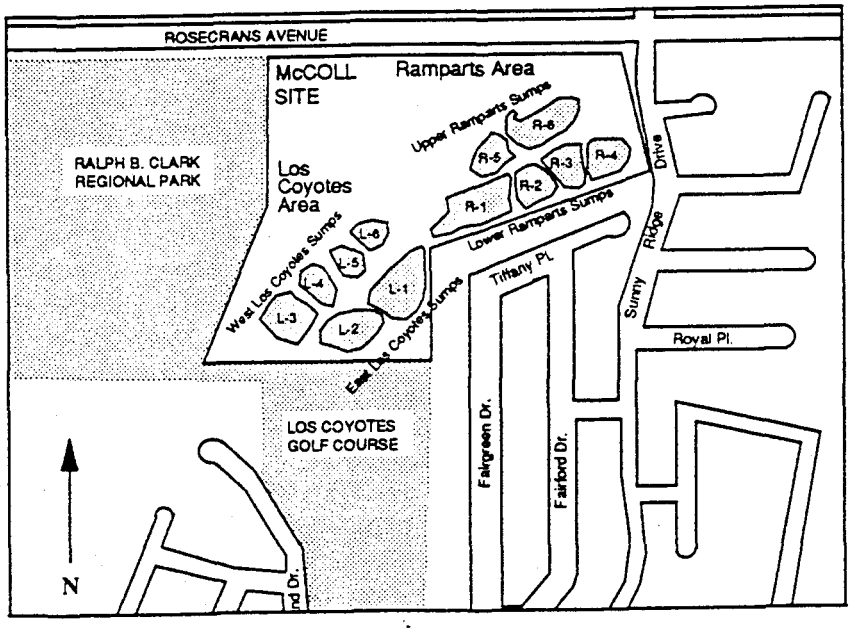


Figure 1. McColl Site Map

Characteristics of the McColl Waste

The principal compounds of concern identified in the BPHE and PHERA for the site include **benzene, toluene, xylene, sulfur dioxide, tetrahydrothiophenes**, and **arsenic**. Extensive field work has been done to determine the charactersitics and extent of site contamination.

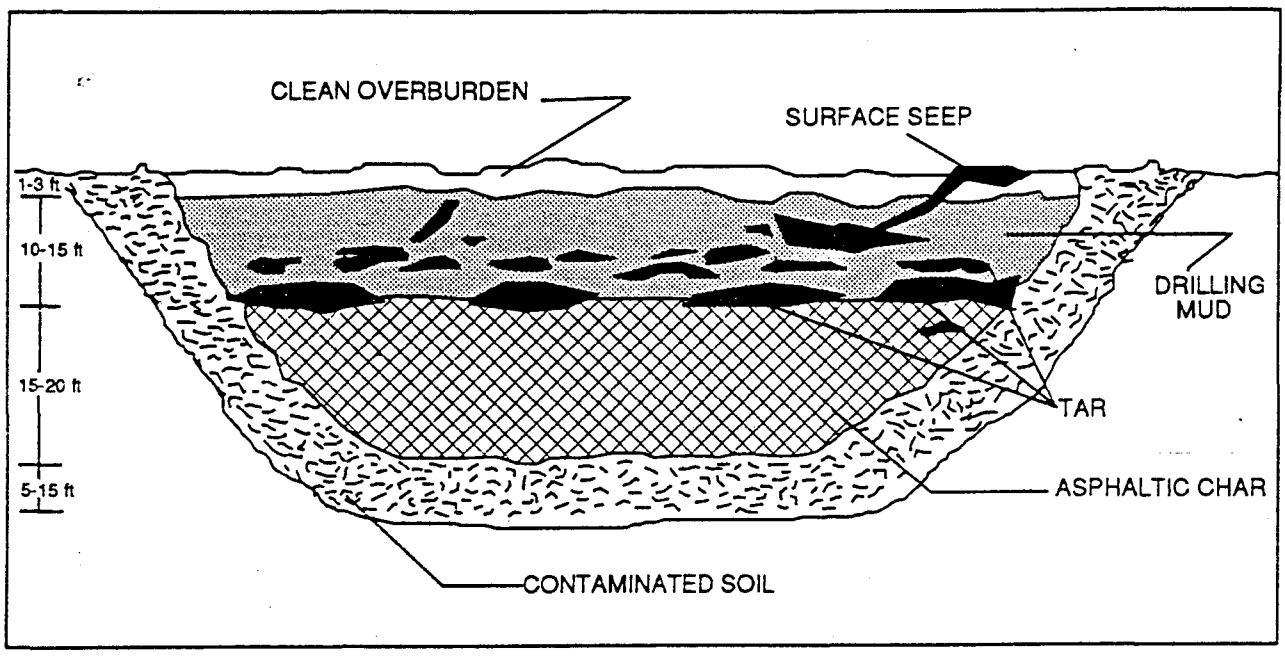


Figure 2. Typical Sump Cross Section

The waste material is distributed across the site in 12 sumps which range in depth from 17 to 55 feet. Based on field studies, the volume of contaminated material is approximately 97,100 cubic yards. Each of the sumps at McColl consists of several layers in the following order: cover soil; soft material, which includes portions of the tar (a black, sticky material), drilling mud, clay, and soil; and char (a black, asphaltic material), which also includes some pockets of tar (see Figure 2). The thickness of each layer varies from sump to sump. The sumps are covered with soil from less than one to five feet thick. It has been estimated that the **continuous char layer** starts approximately 6 - 17 feet below the ground surface (see Figure 3). The char and tar are very acidic, with pH measurements of less than 1.0.

During warm weather, the tar sometimes surfaces as seeps, releasing an unpleasant odor and creating the potential for direct contact with contaminants. The seeps are removed as part of routine site maintenance.

Sump	Maximum Depth to Top of Char, ft.
L1	15
L2	10
L3	14
L4	14
L5	15
L6	12
R1	15
R2	15
R3	17
R4	10
R5	10
R6	6

Figure 3. Depth to Char Layer in the Sumps

Alternatives Considered for Cleaning Up the McColl Site

EPA evaluated the following nine options for the McColl site cleanup:

1) *No Action*
2) *RCRA-Equivalent Closure*
3) *RCRA-Equivalent Containment*
4) *On-Site Rotary Kiln Incineration*
5) *Full In Situ Solidification with a RCRA-Equivalent Cap*
6) *Full In Situ Solidification with a Clay Cap*
7) *Soft Material Solidification (SMS)*
8) *Selective In Situ Solidification without Excavation*
9) *Selective In Situ Solidification with Waste Excavation*

A no action alternative must be considered at every Superfund site. It provides a baseline from which to evaluate other cleanup options.

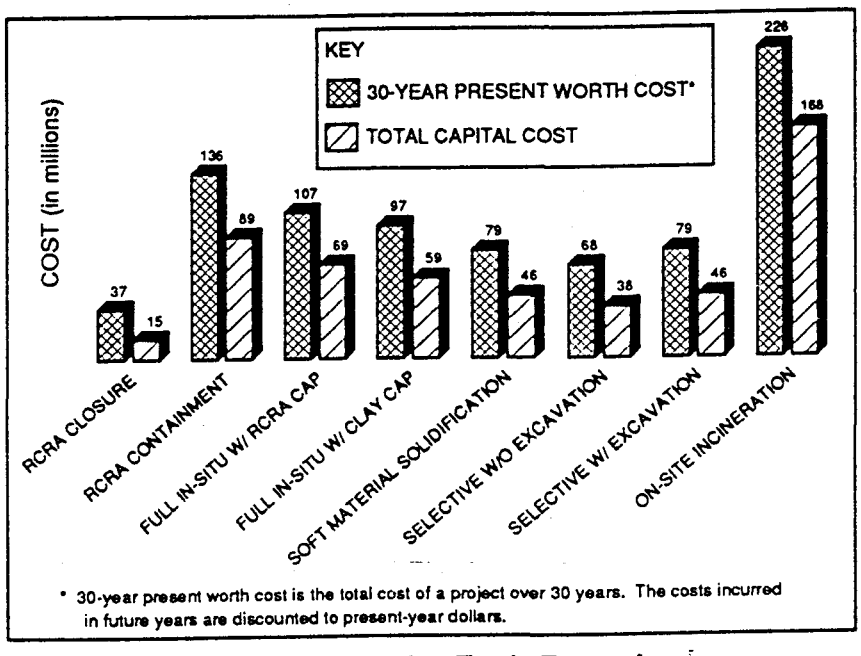


Figure 4: Estimated Costs for Each Remedy

The closure and containment options were previously evaluated in the 1989 SROA, and the incineration option was evaluated as a generic thermal destruction alternative at the same time. The SROA II updates the analyses of these alternatives. The various solidification alternatives have not been considered before. Alternative 9, selective in situ solidification with excavation, is the alternative proposed by the McColl Site Group.

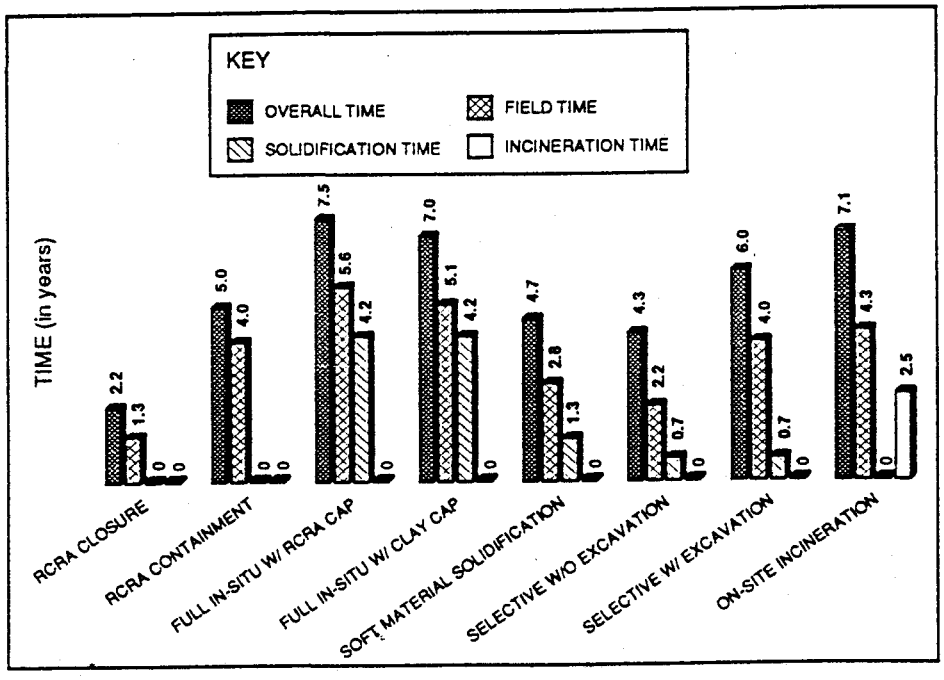


Figure 5: Estimated Timeframes for Each Remedy

Cost and time comparisons for the alternatives are shown in Figures 4 and 5. Figure 7 compares the amount of material to be treated by each option. The criteria used to evaluate the alternatives are shown in Figure 6. The technical elements of each alternative are summarized in Figure 8. For a more detailed description of the alternatives, please refer to the SROA II, copies of which are available at the Fullerton Public Library, Archives Department.

SELECTING A CLEANUP REMEDY

The U.S. EPA uses nine criteria to evaluate alternatives for cleaning up a hazardous waste site. The nine criteria are as follows:

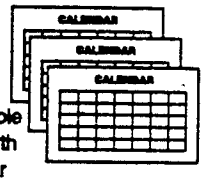
1 Overall Protection of Human Health and the Environment

Addresses whether a remedy provides adequate protection of human health and the environment, and describes how risks are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Addresses whether a remedy will meet all ARARs or Federal and state environmental statutes and/or provide grounds for invoking a waiver.

3 Long-term Effectiveness



Refers to 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, or Volume Through Treatment (TMV)

Refers to the anticipated ability of a remedy to reduce the toxicity, mobility and volume of the hazardous components present at the site.

5 Cost

Evaluates the estimated captial, operation and maintenance costs of each alternative.

6 Short-term Effectiveness

Addresses the period of time needed to complete the remedy, and any adverse impacts on human health and the environment that may be posed during the construction and implementation period, until the cleanup goals are achieved.

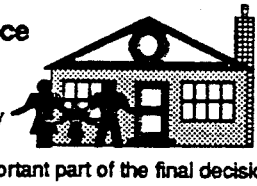
7 Implementability

Refers to the technical and administrative feasibility of a remedy, including the availability of materials and services needed to carry out a particular option.

8 State Acceptance

Indicates whether, based on its review of the information, the state concurs with, opposes, or has no comment on the preferred alternative..

9 Community Acceptance



Indicates whether community concerns are addressed by the remedy and whether the community has a preference for a remedy. Although public comment is an important part of the final decision, EPA is compelled by law to balance community concerns with all of the previously mentioned criteria.

FINAL REMEDY

Figure 6. The Nine Criteria

Preferred Alternative Provides the Best Treatment Solution

EPA has proposed soft material solidification as the remedy for the cleanup of the McColl Superfund Site. EPA believes that SMS offers the best balance of the nine criteria used to select remedial alternatives and utilizes treatment technologies to the maximum extent practicable.

EPA believes that SMS:

- is protective of human health and the environment

- will comply with all Applicable or Relevant and Appropriate Requirements (ARARs)

- provides for long-term effectiveness and protection

- can treat approximately 55,000 cubic yards of the waste to reduce toxicity and mobility

- is cost-effective

- provides for short-term effectiveness and protection

- is the most technically implementable of the solidification alternatives

- is potentially acceptable to the State

- is potentially acceptable to the community

EPA believes that, if SMS is not technically implementable, the RCRA-equivalent closure option is the most appropriate remedy for the site. Both SMS and RCRA-equivalent closure meet statutory requirements for remedy selection. However, RCRA-equivalent closure is not the primary remedy for cleanup because 1) it does not treat the waste; 2) it relies more on **institutional controls** (such as fencing, guards, and limiting uses of the site) than SMS does for success in protecting human health and the environment; and 3) the community and the State may not support this alternative.

EPA rejected the other alternatives for the following reasons:

EPA believes that the no action alternative is not protective of human health and the environment due to the potential for exposure to the hazardous materials at the site. Under the assumed no action conditions, exposure could be through direct contact, inhalation, or ingestion of hazardous materials.

EPA believes that the RCRA-equivalent containment and the on-site rotary kiln incineration alternatives rely extensively on the ability to excavate the hazardous material. While excavation under an enclosure is technically possible, the uncertainties associated with undertaking full-scale excavation at McColl in close proximity to residences are high. The uncertainties could adversely affect the overall cost, the overall time for implementation, and the ability to implement the remedy successfully. It is also possible that the uncertainties could adversely impact the ability to provide protection of the community and workers during implementation (short-term effectiveness).

EPA believes the uncertainty in the ability to locate the specified material for the selective in situ solidification, with and without excavation alternatives, is high. This uncertainty could adversely affect the overall cost, the overall time for implementation, and the ability to implement the remedy successfully. The waste volume treated by this alternative is 40% less than the selected alternative, while the costs are similar. For the selective in situ solidification with excavation alternative, there are uncertainties associated with excavation and disposal that could affect the ability to successfully implement the remedy.

EPA believes that the uncertainty in the ability to solidify the waste up to 55 feet for the full in situ solidification alternatives is high. This uncertainty could adversely affect the overall cost, the overall time for implementation, and the ability to implement the remedy successfully.

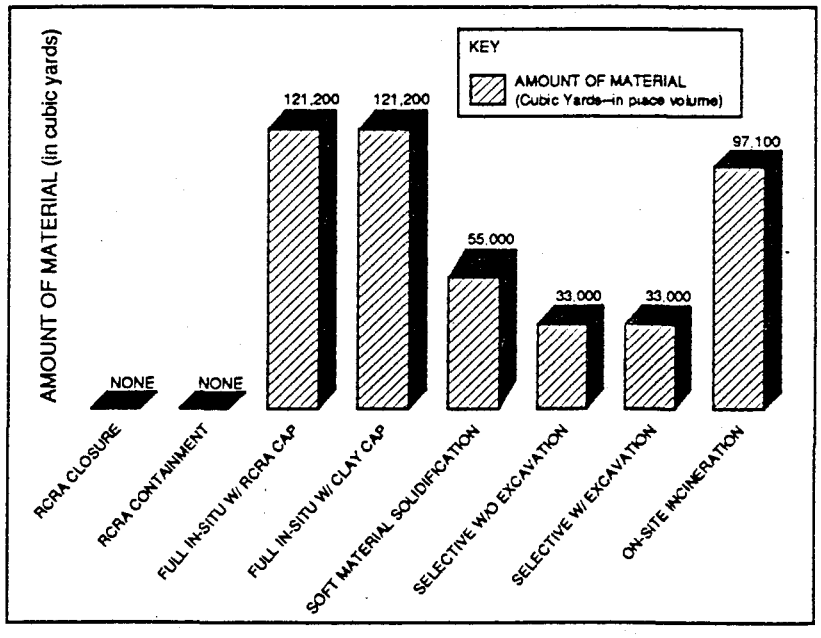


Figure 7: Estimated Amount of Material to be Treated

RCRA CLOSURE	RCRA CONTAINMENT	FULL IN SITU SOLIDIFICATION WITH RCRA COVER	FULL IN SITU SOLIDIFICATION WITH CLAY COVER
• Subsurface cut-off walls • Slope stability improvements and retaining walls • RCRA-equivalent cap • Gas collection & treatment system • Groundwater and vadose zone monitoring wells • Long-term O&M of gas collection system and cap • Limited guard and fence	• Slope stability improvements and retaining walls • Construction of a RCRA-equivalent on-site landfill • Excavation of wastes in sumps using enclosures • Placement of waste in landfill • Installation of landfill cover • Gas collection and treatment system • Groundwater and vadose zone monitoring wells • Long-term O&M of gas collection system and landfill • Limited guard and fence	• Slope stability improvements and retaining walls • Full in-situ solidification of all waste and cover material, including the arsenic in Sump R-1 • Capture and treatment of emissions from the solidification process • Grading of solidified material • RCRA-equivalent cap • Gas collection and treatment system • Groundwater and vadose zone monitoring wells • Long-term O&M • Limited guard and fence	• Slope stability improvements and retaining walls • Full in-situ solidification of all waste and cover material, including the arsenic in Sump R-1 • Capture and treatment of emissions from the solidification process • Grading of solidified material • RCRA-equivalent clay cover • Gas collection and treatment system • Groundwater and vadose zone monitoring wells • Long-term O&M • Limited guard and fence
SOFT MATERIAL SOLIDIFICATION	**SELECTIVE IN SITU SOLIDIFICATION WITHOUT EXCAVATION**	**SELECTIVE IN SITU SOLIDIFICATION WITH EXCAVATION**	**ON-SITE ROTARY KILN INCINERATION**
• Characterization of sumps using cone penetrometer tests calibrated with boring • Subsurface slurry cut-off walls • Slope stability improvements and retaining walls • In situ solidification of soft material (clean cover, drilling mud, tar, and designated material), including the arsenic in Sump R-1 • Grading of solidified material • RCRA-equivalent cap • Gas collection and treatment system • Groundwater and vadose zone monitoring wells • Long-term O&M • Limited guard and fence	• Characterization of sumps using core penetrometer test calibrated with boring • Subsurface slurry cut-off walls • Slope stability improvements and retaining walls • In situ solidification of identified zones of tar and drilling mud, including the arsenic in Sump R-1 • Grading of solidified material • RCRA-equivalent cap • Gas collection and treatment system • Groundwater and vadose zone monitoring wells • Long-term O&M • Limited guard and fence	• Characterization of sumps using cone penetrometer tests calibrated with borings • Surface slurry cut-off walls • Slope stability improvements and retaining walls • Excavation and off-site treatment and disposal of arsenic-contaminated material • In situ solidification of identified zones of tar and drilling mud • Excavation and off-site treatment and disposal of selected tar material • Grading of solidified material • RCRA-equivalent cap • Gas collection and treatment system • Groundwater and vadose zone monitoring wells • Long-term O&M • Limited guard and fence	• Excavation of arsenic and off-site treatment and disposal • Excavation of all waste using an enclosure • On-site treatment of waste in a rotary kiln incinerator • Flue gas treatment to meet SCAQMD regulations • Final grading and aesthetic improvements to the site • Placement of ash on-site as clean material • No guard and fence

Figure 8. Components of the Alternatives Considered

What Soft Material Treatment through In Situ Solidification Would Include

The description of this alternative is based on the conceptual design discussed in the SROA II. The technical components of this alternative may be modified as part of the design stage of the project.

Soft material treatment through in situ solidification would target the drilling mud, acidic tar material, soil cover, and other soft material above the continuous char layer. Soft materials would be solidified using drill rigs capable of injecting solidifying and neutralizing agents into the waste while it is in the sumps and then mixing them thoroughly. An emission control **shroud** system would be attached to the drill rig. (See Figure 9). Neutralizing and hardening the soft portions of the sumps would immobilize the tar and drilling muds above the char layer, neutralize the sulfuric acid in the waste, and reduce future earth settling. The arsenic-containing wastes, found only in Sump R-1, also would be solidified as part of the treatment process.

The process would consist of the following steps:

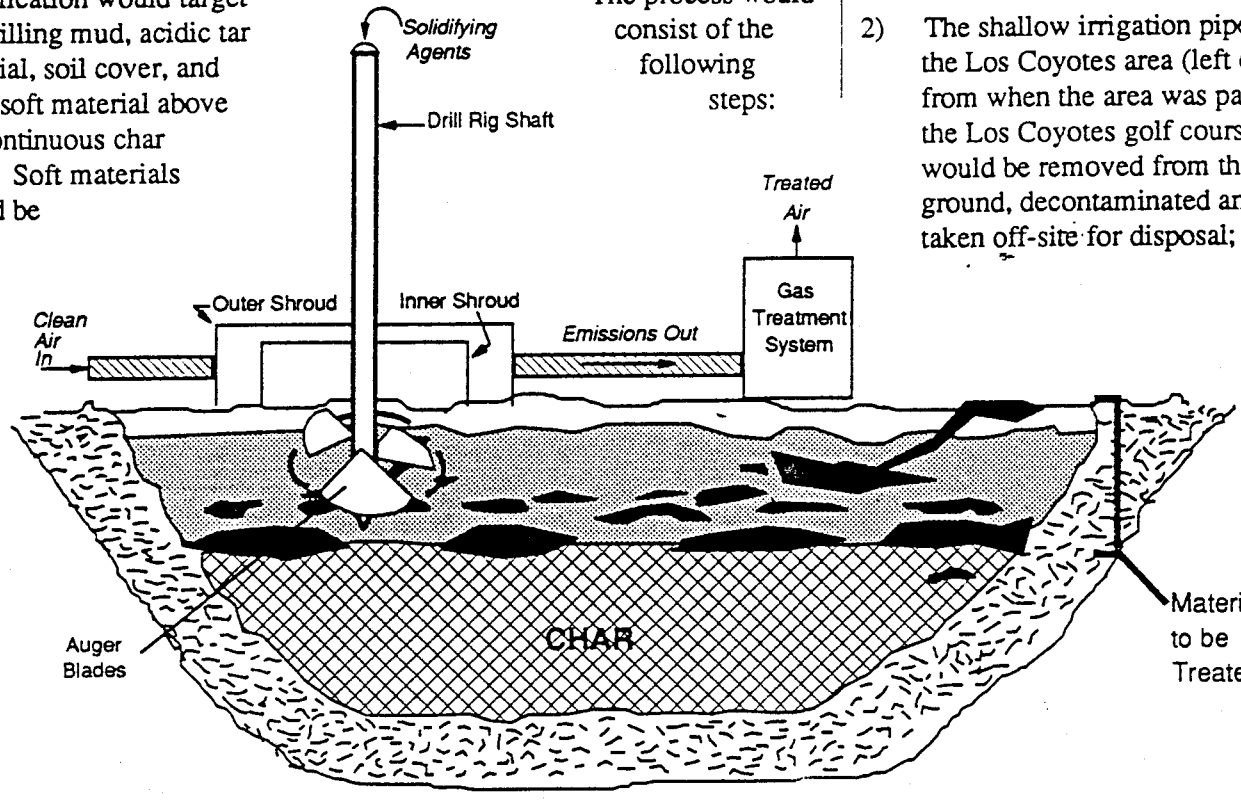


Figure 9. Treating the Soft Material with In Situ Solidification

1) Pre-treatment activities would include on-site road grading for transport vehicles; installation of support facilities (storage for solidifying agents, expansion of decontamination areas for equipment and employees, extension of gas, water, and electric lines to the staging areas near the sumps, etc.); installation of the air pollution control system to be used during drilling; and installation of the perimeter air monitoring network to monitor sulfur dioxide and hydrocarbon emissions levels at the site boundary.

2) The shallow irrigation pipes in the Los Coyotes area (left over from when the area was part of the Los Coyotes golf course) would be removed from the ground, decontaminated and taken off-site for disposal;

3) Each sump would be surveyed using a **cone penetrometer** and **in-place borings** to determine where the soft material ends and the continuous layer of char begins;

continued on page 10

How Solidification Works

The solidification and neutralization process involves mixing substances (such as cement or fly ash) with waste to make it more solid and to immobilize the chemicals it contains. The solidification process at McColl would produce a crumbly material that resembles gravel.

At McColl, soft material would be mixed with solidifying agents using two large auger-drill rigs. The diameter of each auger is proposed to be five feet. The auger would drill into a sump to the depth where the continuous char layer begins. The solidifying agents would be fed into the waste through the auger, which has a hollow shaft, and then mixed with the tarry waste by the rotating action of the auger.

The drilling patterns that would be designed for each sump would ensure that soft material above the continuous char level is treated. In total, EPA expects that about 55,300 cubic yards of material would be treated using soft material solidification.

During drilling, emissions from the sumps would be controlled using a shroud. Currently, the SROA II assumes that a double shroud system would be used, consisting of two steel boxes, one inside the other, that fit over the auger and form a seal with the ground. It is estimated that 99% of emissions from the drilling would be collected in the shroud and sent through two air treatment systems to remove contaminants, including sulfur dioxide, total hydrocarbon compounds, and particulates. Air monitoring of emissions would also be conducted to monitor the effectiveness of the treatment system.

continued from page 9

4) Foam would be applied over all the sumps for emission control and would be reapplied as necessary;

5) The drill rig would deposit a one-foot-thick layer of lime slurry under the surface of each sump to absorb sulfur dioxide emissions from solidification work;

6) Using the drill rig, more lime would be added to the sumps down to the continuous char layer to neutralize the acidity of the waste and to neutralize pockets of sulfur dioxide gas;

7) The soft material above the char layer in the 12 sumps would be solidified (see "How Solidification Works") using two drill rig units, each with a proposed five-foot diameter auger;

8) The solidified material would be graded to provide drainage and run-off control;

9) Underground slurry walls would be constructed around the Upper Ramparts sumps, with another slurry wall around the Lower Ramparts and Los Coyotes sumps;

10) Unstable slopes around the sumps would be reinforced with retaining walls;

11) The sumps would be covered with a RCRA-equivalent cap, including a permanent gas collection and treatment system consisting of scrubber units and granular activated carbon units to remove sulfur dioxide and total hydrocarbon compounds from emissions;

12) Groundwater monitoring wells would be installed; and

13) The site would be monitored and the collection and treatment systems would operate in perpetuity.

Use of Long-Term Engineering and Institutional Controls in the Preferred Remedy

The selected remedy relies heavily on long-term engineering (LTE) and institutional controls to assure long-term protection of human health and the environment. The institutional controls envisioned need to be maintained in perpetuity.

The remedy contains the following LTE controls: multilayer RCRA-equivalent cap, slurry walls, and retaining walls for steeply sloped areas. Institutional controls necessary for the maintenance of these LTE controls involve land use restrictions and ongoing maintenance activities.

A brief discussion of the LTE controls and their associated institutional controls is presented below. The retaining wall discussion may be of particular interest to the community due to the potential for visual impacts on homeowners in the vicinity of the site.

RCRA Multilayer Cap: The cap has been conceptually designed to be between seven and nine feet

continued on page 11

continued from page 10

thick (see Figure 10). A restricted use cap would be seven feet thick; a cap designed for limited recreational use would be nine feet thick. The purpose of the cap is to ensure that water doesn't get into the waste and that gaseous emissions are not released to the atmosphere without treatment. This is accomplished through the use of clay and gravel layers, synthetic (plastic) liners, water and gas collection systems, and other materials. To maintain the integrity of the cap, 1) future excavations must not occur within the capped portions of the site, 2) burrowing animals must not build homes in the cap, and 3) deep-rooted vegetation must not be planted on the cap. The land use restrictions envisioned to help maintain the cap's integrity will limit the type of structures and vegetation allowed on the cap.

Slurry Walls: The slurry walls have been conceptually designed to extend to depths of approximately 60 feet underground surrounding the waste. (See Figure 11.) The purpose of the slurry walls is to minimize the potential for existing groundwater to come into contact with the waste or for mobile contaminants within the waste to migrate from the sumps and contaminate groundwater or additional soil. This will be achieved through the construction of a vertical concrete wall surrounding the sumps that is resistant to the acidic nature of the waste. To maintain the integrity of the slurry wall, 1) future excavations must not damage the slurry wall and 2) deep-rooted vegetation that could penetrate the slurry wall must not be planted. The land use restrictions envisioned will limit the type of structures and vegetation allowed at the site.

Retaining Walls: With the addition of material during solidification and placement of the cap, the retaining walls have been conceptually designed to be up to 25 feet in height (to support 9 - 12 feet of additional material plus 10 - 13 feet of existing slope material). Currently, the retaining walls will be placed on the slopes of the Upper Ramparts, Lower Ramparts, and Los Coyotes portions of the site (see Figure 12).

EPA realizes that the aesthetic impact of the retaining walls is a concern to the community, and is investigating methods to minimize the use of retaining walls. This could be accomplished through one or more of the following methods: 1) limiting the area needing retaining walls for support; 2) reducing the overall height of the retaining walls; or 3) reducing the angle at which the retaining walls will be constructed. Based on the conceptual design of the alternative, one or all of the above considerations may be incorporated during design. Of

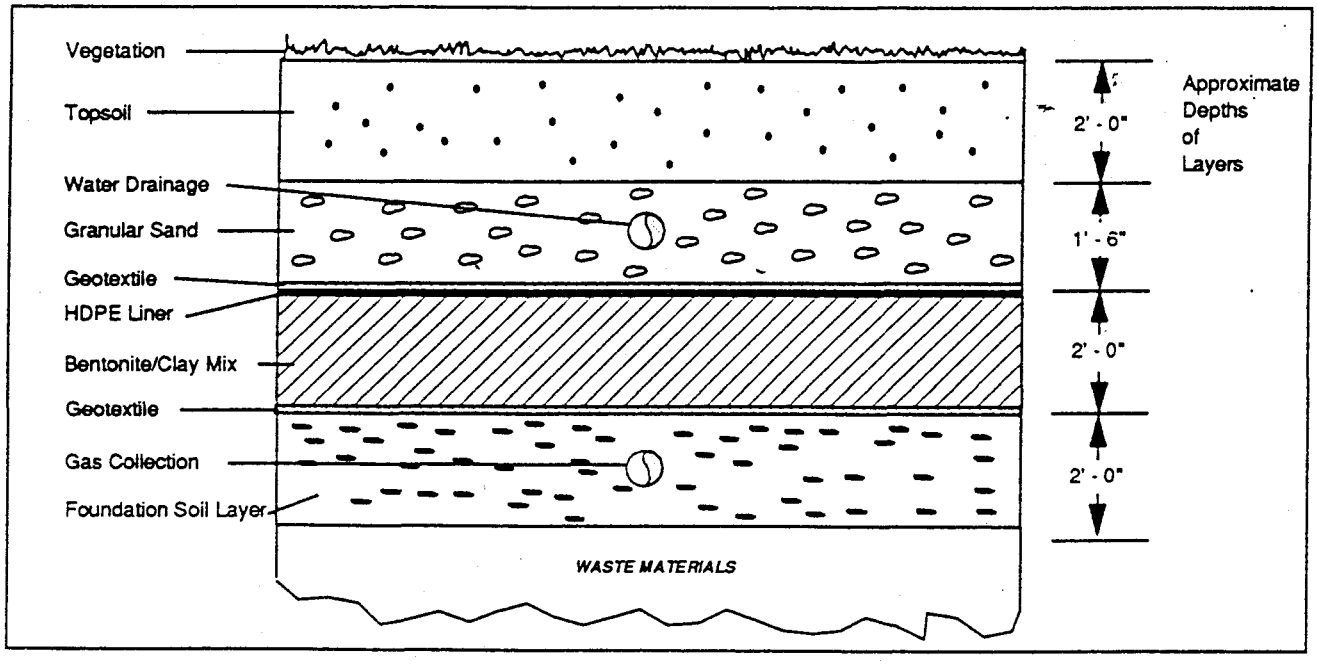


Figure 10: RCRA-Equivalent Cap

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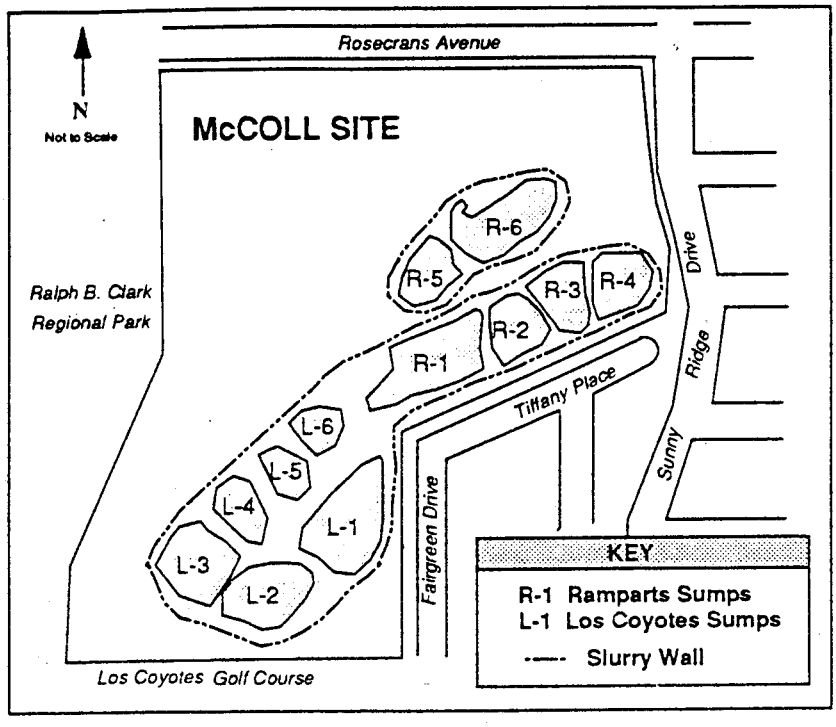

Figure 11. Slurry Walls Surrounding Sumps

What the Site Would Look Like Following Remediation

As part of the construction of the preferred remedy, the site would be contoured and landscaped to allow for limited recreational use. Public access would be available to the whole site with the exception of the area containing the air treatment system for the RCRA-equivalent cap. The latter area would be fenced and entry controlled. Because hazardous waste would remain on site after remediation, the site would remain a hazardous waste site on the National Priorities List.

The site itself would be 9 - 12 feet higher in elevation due to the placement of the cap (7-9 feet) and the addition of material during solidification (2-3 feet). It would be landscaped with plants native to

continued on page 13

the alternatives not involving full treatment, EPA believes that the SMS alternative offers the greatest potential for minimizing the use of retaining walls. This is because SMS involves treatment of the highest volume of soft material waste, which potentially allows for subsequent recontouring of the site.

The main purpose of the retaining walls is to provide stability and strength to the natural contours of the site. The retaining walls also will support the weight of the additional material placed at the site during cleanup. This additional strength and stability is important to maintain the integrity of the cap, particularly in the event of a significant earthquake. This will be accomplished through the placement of retaining walls on the slopes of concern. The walls may be made of concrete (crib retaining walls or formed blocks), metal, or other material. The exact material to be used will be decided during the design phase of the project. It is believed that plants can be incorporated into the design of the retaining walls to make them more aesthetically pleasing. Land use restrictions will be necessary to restrict placement of structures on the site that could affect the integrity of the retaining walls.

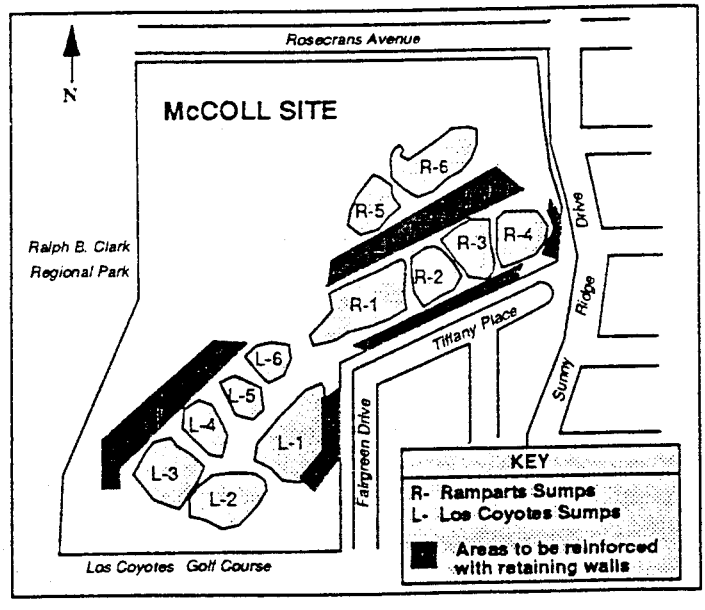

Figure 12. Location of Retaining Walls

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the area. The ultimate land use would be determined by the landowners. However, land use would need to be consistent with the design of the cap and the land use restrictions. EPA believes if the proposed remedy were implemented, potential uses by the landowners could include a nature park, a limited use recreational park, or a golf course. Uses such as tennis courts or amphitheatres would be excluded because they would damage the integrity of the cap. The exact height and contours of the site would be determined during design.

Off-site improvements would be incorporated into the project along Rosecrans and Sunny Ridge Drive to improve access to the site and to improve the aesthetics of the site. The exact placement and nature of the off-site improvements would be decided during design through discussions with the community and the City of Fullerton.

EPA recognizes that there will be impacts to the community during the construction of the project. Concerns have been expressed by the community related to aesthetic impacts, noise impacts, dust, odors, and truck traffic. EPA is concerned about these impacts as well and is committed to minimizing them. EPA is committed to working with the community on these issues and will incorporate these modifications as appropriate.

Contingency ROD: How EPA Will Decide on Implementation of Soft Material Solidification or RCRA-Equivalent Closure

EPA is proposing to issue a contingency ROD for the McColl Site. Under a contingency ROD, EPA selects a remedy for implementation and also selects a secondary remedy. The secondary remedy is the contingency measure -- in the event the first remedy cannot be implemented, the secondary remedy has already been selected. As discussed below, the ROD will identify the specific criteria EPA will consider in deciding whether to implement the primary or secondary remedy.

Generally, a contingency ROD is appropriate when there is some uncertainty about the ability of a remedial option to achieve the desired results. In the case of the McColl site, EPA is proposing an innovative application of a proven technology: solidification is a demonstrated technology but has not been used on McColl-type waste. EPA believes that in situ solidification will work, but large-scale application must be confirmed in the field. EPA is proposing a contingency remedy to ensure that a remedy will be implemented at the McColl Site without additional delay.

EPA is proposing to treat one sump with SMS following the design phase. EPA would then evaluate

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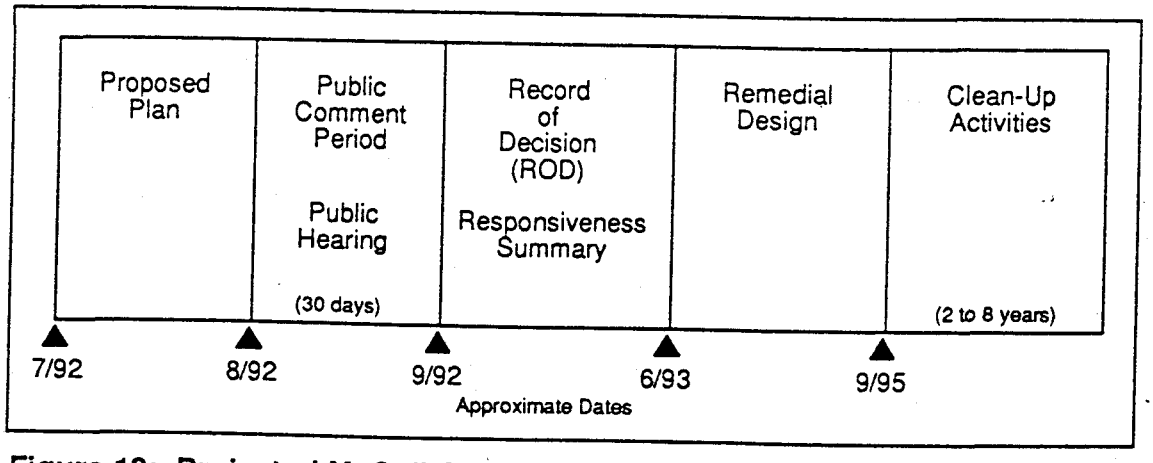

Figure 13: Projected McColl Cleanup Schedule

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the results of this effort to confirm that SMS is a technically implementable alternative. If, as EPA now believes, SMS were technically implementable, SMS would be performed on the remaining 11 sumps.

In making the decision whether SMS is technically implementable, EPA would consider the following criteria at a minimum: effectiveness in treating the soft material, including the extent of solidification and resulting stability of the solidified material; ability to move or grade the treated material; estimated time for completion if SMS were applied to the remaining 11 sumps; estimated cost of completion for the remaining 11 sumps; ability to control emissions and to protect workers and the public during implementation; and overall noise levels. In assessing these criteria, EPA would consider whether the results deviate excessively, both individually and collectively, from the expected results set forth in the SROA II and the Nine Criteria Analysis.

EPA would inform the public of its decision on whether SMS is technically implementable after using SMS on the first sump. If, in EPA's judgment, SMS is not technically implementable, the RCRA closure alternative would be implemented as the preferred alternative. Because of the opportunity for public comment on both alternatives during the current comment period, EPA does not anticipate providing an additional comment period regarding this decision. If EPA were to decide to implement a contingency remedy that differs significantly from the RCRA-equivalent closure remedy described in the ROD, EPA would issue additional documentation explaining the rationale for the change in the original decision, as required by federal regulations. If this action were taken, it could result in a delay to the schedule. The projected cleanup schedule is shown in Figure 13.

McColl and Public Health

Public Health Assessment

Estimating the public health risk associated with each alternative is a major part of evaluating the cleanup alternatives. While no public health risk is desirable, each cleanup alternative has some level of risk associated with it. The PHERA is used to guide EPA in selecting a remedy that will be protective of human health and the environment. The PHERA evaluates health risks both during and after implementation of each alternative.

The BPHE evaluates risk posed by the site if no cleanup action were to be taken. The no action alternative assumes that no action is taken at the site, including no guard or fence and no site maintenance. The no action assessment is used to provide a baseline for comparison for other alternatives and to verify that the site needs to be cleaned up.

Primary Health Concern is Inhalation of Hazardous Compounds

Inhalation, ingestion, and direct contact are the most common exposure pathways. The primary exposure pathway of concern for McColl is inhalation. Since groundwater contamination is still under investigation, the risk associated with potential groundwater contamination has not yet been assessed. Therefore, it is important to remember that the current risk assessment may not represent the total risk posed by the site. Nevertheless, it does provide information that will help EPA select a remedy that is protective of human health and the environment.

How Health Effects are Measured

A public health risk assessment is broadly defined as an analysis in which facts and assumptions are used to estimate the potential for adverse effects on human health that may result from exposure to specific compounds.

EPA expresses potential carcinogenic (cancer) risk in terms of a probability. For instance, a carcinogenic risk level of 1 in 1,000,000 means that one additional person out of one million people exposed to a chemical could develop cancer as a result of that exposure. (In scientific notation, 1 in 1,000,000 is expressed as 1×10^{-6}).

To protect public health, EPA is concerned with the probability that

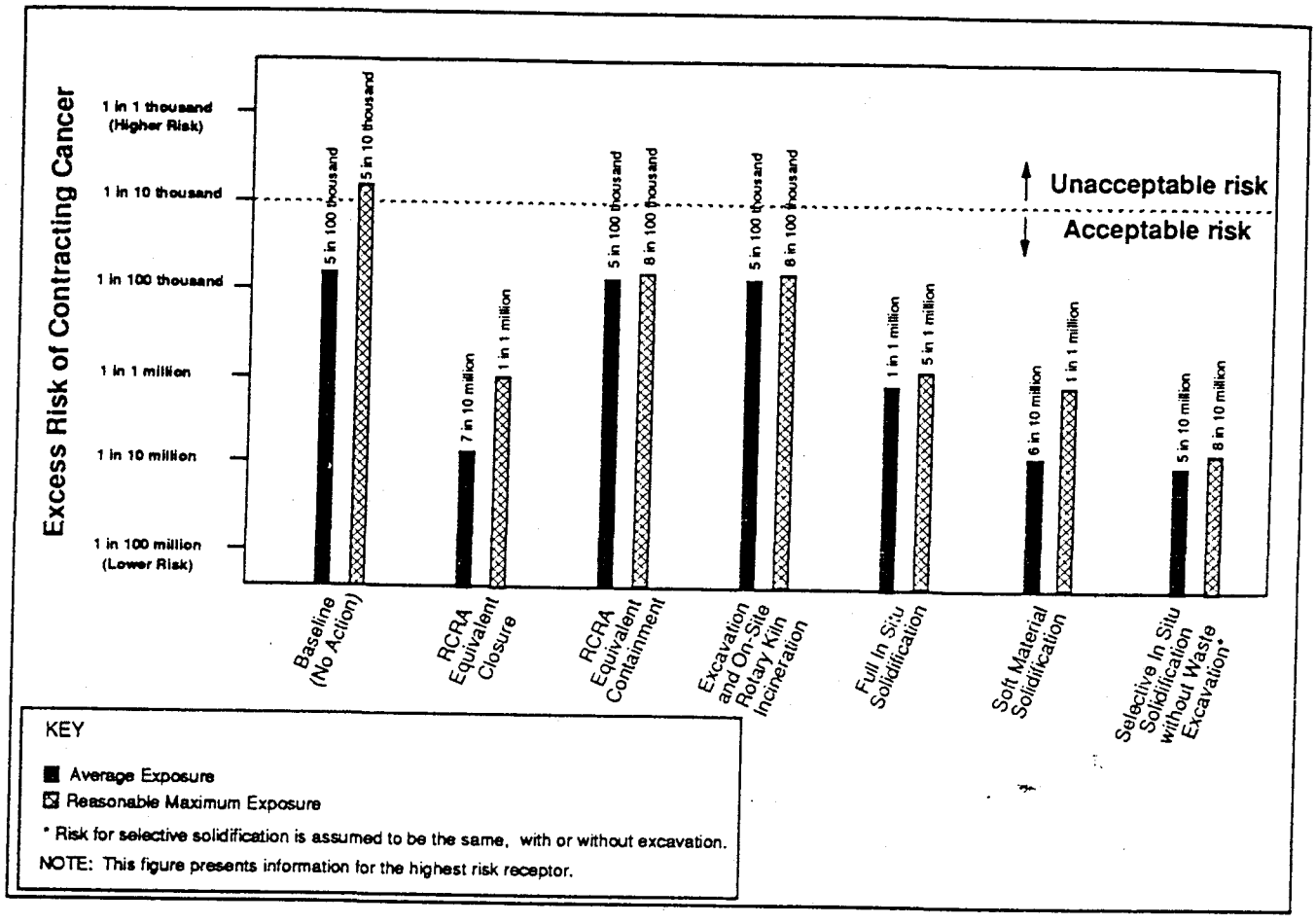

Figure 14. Summary of Cancer Risks for Cleanup Alternatives

exposure to specific chemicals may result in cancer. For Superfund projects, EPA's goal is to implement cleanup actions that fall within the range of 1 in 10,000 (1×10^{-4}) to 1 in 1,000,000 (1×10^{-6}) excess lifetime cancer risk.

Chemicals that do not cause cancer, but may cause other health effects (e.g., respiratory irritation, liver disease) are considered for both their short- and long-term effects. Estimated exposure levels for specific chemicals are compared to the threshold concentration levels where health effects have been observed in the most sensitive populations. This comparison is presented as a ratio called the Hazard Index (HI).

If the Hazard Index is greater than 1.0, health effects could potentially occur. If the ratio is less than 1.0, health effects are unlikely. For Superfund projects, EPA's goal is to implement cleanup actions with an HI less than 1.0.

To calculate the risk probabilities and hazard ratios, assumptions have to be made concerning the nature of the problem. Generally, to account for uncertainties associated with the assessments, EPA makes conservative assumptions that weigh in favor of protecting public health. EPA has used two different exposure scenarios for estimating risk for McColl: average exposure and reasonable maximum exposure. Average exposure uses the average concentration of contaminants at McColl to calculate exposure levels. Reasonable maximum exposure assumes higher contaminant concentrations and exposure conditions than average exposure scenarios as the basis for exposure calculations.

Carcinogenic risk and Hazard Index estimates for each remedial alternative are shown in Figures 14 and 15, respectively. These numbers represent the maximum numbers calculated as part of the BPHE, the PHERA,

continued on page 16

Continued from page 15

and the Addenda to these documents.

As can be seen from Figure 14, the estimated carcinogenic risk from each alternative is within or below EPA's acceptable risk range. Figure 15 shows that the non-carcinogenic impact from each alternative is below 1.0, which is acceptable to EPA. These conclusions are based on Hazard Index numbers that do not include impacts from benzene, sulfur dioxide, and chromium. Based on these assessments, all alternatives meet the health criteria for selection of a remedy.

Glossary

Applicable or Relevant and Appropriate Requirements (ARARs):
All of the statutory and regulatory requirements and policy that have a bearing on the way in which a Superfund cleanup is conducted. ARARs could include air quality regulations, noise level restrictions, etc.

Arsenic:
A metal that is usually found as arsenate or arsenite. It can harm living things at low concentrations, and can enter the food chain.

Auger:
A piece of equipment used for drilling holes into soil.

Benzene:
A colorless, liquid organic compound which is volatile and flammable. Benzene is used as a solvent. It is a known human carcinogen (cancer-causing agent).

Cone penetrometer:
A tool that measures soil properties (e.g., density, shear strength) while being pressed into the ground.

Continuous char layer:
The discrete level at which the char layer in the sumps begins.

Exposure pathways:
The various ways in which humans or animals can be exposed to contaminants. Exposure pathways

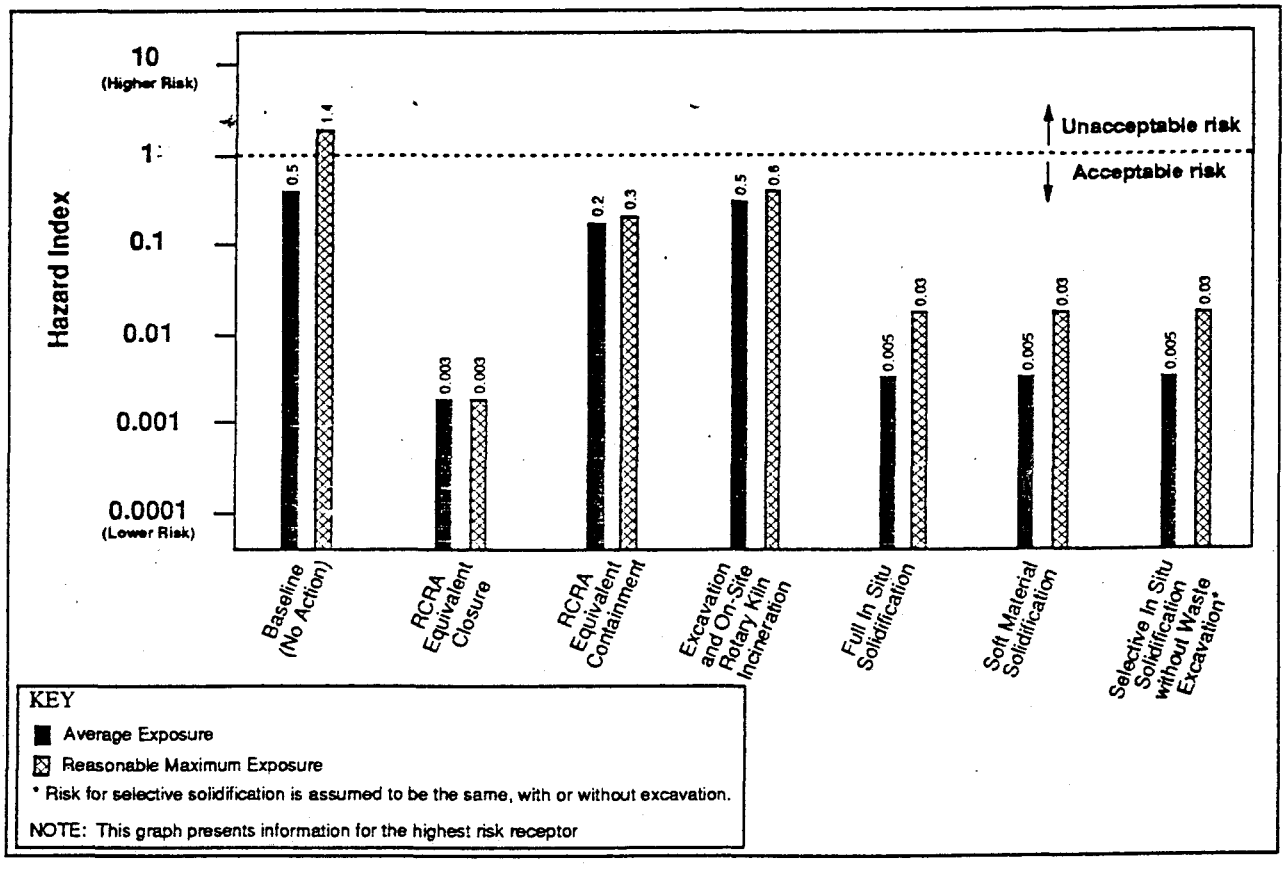

Figure 15. Summary of Noncancer Risks for Cleanup Alternatives

include inhalation, ingestion, and direct skin contact.

Fly ash:
Fine ash left over from the burning of coal and other materials.

Granular activated carbon:
Treated carbon that can attract and hold contaminants. It is often used in air filters to remove organic contaminants from an air stream before the treated air is released to the atmosphere.

In-place borings:
(Boring samples) Holes drilled and sampled to determine the type of subsurface materials present.

In situ solidification:
Hardening of materials in place. Solidification involves mixing hardening agents such as cement with the materials to be solidified.

Institutional controls:
Administrative measures or rules imposed by government entities and used to supplement technical actions at a hazardous waste site. Institutional controls include actions such as restrictions on use of properties.

Long-term engineering controls (LTE):
Engineering measures taken to prevent physical contact with the waste material of concern (e.g., a RCRA-equivalent cap).

pH:
A logarithmic scale (from 0 - 14) that measures how acidic or basic a substance is. Substances with a pH below 7.0 are acidic (such as vinegar). The lower the number, the greater the acidity. Substances with a pH above 7.0 are basic, or alkaline (such as baking soda). The higher the number above 7, the greater the alkalinity. Substances with a pH of 7.0 are neutral (such as water).

RCRA:
The Resource Conservation and Recovery Act approved as an amendment to the first federal solid waste legislation, the Solid Waste Disposal Act of 1965. Under RCRA, Congress established initial directives and guidelines for the EPA to regulate the management of hazardous wastes as they are produced.

RCRA-equivalent cap:
A system that meets RCRA requirements for covering hazardous materials. The system includes a multilayer cap that has low permeability (is nearly waterproof); a gas collection and treatment system; and a surface water collection system.

Record of Decision (ROD):
A public document that describes which alternative has been selected for cleanup of a Superfund site. The ROD is based on information generated during the remedial investigation/feasibility study, and on consideration of public comments. It includes a Responsiveness Summary that responds to public comments.

Scrubber unit:
A device that uses a liquid spray or a dry, porous material to remove gaseous pollutants from an air stream. Scrubbers are used as air pollution control devices on exhaust stacks.

Seep:
At McColl, a seep is an area where some of the tarry waste material has flowed above the ground surface and is exposed.

Shroud:
A device used to contain gaseous and particulate emissions. At McColl, a shroud would be used over the auger to capture emissions resulting from drilling into the waste and to direct them through a treatment system.

Slurry:
A liquid mixture of water and cement-like particles.

Slurry wall:
A subsurface wall that acts as a barrier to prevent horizontal movement of subsurface water and liquid waste.

Sulfur dioxide:
A heavy, pungent gas formed primarily from the combustion of fossil fuels. It can cause irritation to the respiratory tract and eyes, and at very high levels can cause death.

Tetrahydrothiophenes:
A family of sulfur-containing compounds which usually have a strong, unpleasant odor. These compounds can be smelled at low concentrations.

Toluene:
A toxic volatile organic compound used as a solvent and as an anti-knock agent in gasoline.

Xylene:
A toxic volatile organic compound used chiefly as a solvent.

How to Comment on Cleanup Alternatives

The public comment period on the cleanup alternatives for the McColl site is your formal opportunity to participate in the remedy selection process. Comments will be accepted in writing throughout the comment period and/or orally at the community meeting. (You can use the form on the next page to submit written comments.) The following is a brief guide to help you prepare and submit comments.

Effective Community Comments

To comment most effectively, community members are encouraged to:

1) voice support for or opposition to specific alternatives;
2) list specific reasons for supporting or opposing particular alternatives;
3) ensure comments are concise and contain points to which the Agency can respond directly; and
4) comment on documents EPA used to develop its Proposed Plan.

1) Voicing Your Support or Opposition:

It is best to comment on all the alternatives, not just the preferred alternative. When considering the alternative, review the nine criteria described on page 6. Use the criteria as a basis for making your comments on the alternatives.

2) Commenting on the SROA II, BPHE, PHERA, and Addenda:

The SROA II and related documents evaluate the technical implementability, cost, and public health and environmental protectiveness of the cleanup alternatives. These documents include the:

Characteristics of the site;
Remedial action goals and description of alternatives;
Applicable or Relevant and Appropriate Requirements (ARARs);
Public Health Assessment;
Technical evaluation; and
Cost analysis.

This information is the basis for EPA's Proposed Plan. When commenting on the SROA II and related documents, you may want to comment on the description of an alternative or on a specific aspect that affects remedy selection. For example, commenting on the operations hours proposed for incineration is a comment on the description of an alternative. In terms of the selection criteria, you may want to comment on the cost estimate -- is it too low because it does not include long-term maintenance or is it too high because it assumes too many contingency factors?

EPA Response to Public Comments

All significant comments received on the Proposed Plan or the SROA II and related decision documents will be addressed in the "Responsiveness Summary," which is part of the Record of Decision.

ENVIRONMENTAL PROTECTION AGENCY COMMENT SHEET
Cleanup Alternatives for the McColl Superfund Site

Date _____

Name _____ Representing _____

Address _____ City, State, Zip Code _____

Daytime Phone _____ Evening Phone _____

To comment most effectively, community members are encouraged to do one or more of the following:

- Voice support or opposition for certain alternatives
- Comment on the Supplemental Reevaluation of Alternatives II (SROA II)
- Comment on the Proposed Plan

COMMENT:

Comments must be postmarked no later than September 29, 1992. Please mail comments to:
Pam Wieman, Remedial Project Manager, U.S. EPA
75 Hawthorne Street (H-6-1), San Francisco, CA 94105-3901

For More Information

Documents for the McColl Superfund Site are located in the information repository at:

Fullerton Public Library
Local History Room
353 W. Commonwealth Avenue
Fullerton
(714) 738-6333

Hours:

Monday - Thursday	10 am - 9 pm
Friday	10 am - 6 pm
Saturday	10 am - 5 pm
Sunday	Closed

If you have questions about the Superfund cleanup at McColl, please call or write EPA's Community Relations Coordinator for the site:

Fraser Felter
U.S. EPA
Region 9
75 Hawthorne Street (H-1-1)
San Francisco, CA 94105
(415) 744-2181

You may also call EPA's toll-free Superfund hotline and leave a message. Your call will be returned. The hotline number is:
(800) 231-3075

Important McColl Superfund Site Telephone Numbers

McColl Security Office	(714) 523-5310
California EPA Public Participation Section	(916) 445-9543
Orange County Public Health Nurses for health-related inquiries	(714) 575-2800
U.S. EPA for odor complaints	(415) 744-2181
U.S. EPA Media Contact: Paula Bruin	(415) 744-1587

United States Environmental Protection Agency
Region 9
75 Hawthorne Street (H-1-1)
San Francisco, CA 94105
Attn: Fraser Felter

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INSIDE: Proposed Plan for Cleanup at McColl Superfund Site

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EXAMPLE 2

ON STATION		BOUNDARY		OFF-STATION		C O Cs (1)
DEEP	SHALLOW	DEEP	SHALLOW	DEEP	SHALLOW	
ND	2,000 ppb*	20-35 ppb		< 5 ppb	< 5 ppb	TCE
	58 ppb			ND		PCE
	8 ppb	?	?			1,1 DCE
			9 ppb	5.4 ppb		1,2 DCE
	26 ppb			ND		Carbon-tetrachloride
	730 ppb*			ND		Benzene

(1) Chemicals of Concern
(?) Proposed plan does not define the data source of 2.1 ppb
(*) This will be addressed in the OU 2 study