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Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R10-88/015
July 1988

EPA

Superfund Record of Decision:

Pacific Hide & Fur, ID

50272-101

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Pacific Hide & Fur, ID
First Remedial Action - Final

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14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

The Pacific Hide & Fur (PHF) site, consists of approximately 11-acres of fenced land, located in the northwest edge of Pocatello, Bannock County, Idaho. The site, a former gravel mining area, was purchased by McCarty's, Inc. (MI), a scrap metal dealer, in 1958. MI purchased scrap metal, batteries, drained transformers, and capacitors filled with PCB oils from various sources, storing them onsite in a previously excavated gravel pit. The waste is stored in the excavated pit, comprised of approximately three acres, for resale, reuse, or salvage. In August 1979, PHF purchased the rights to salvage scrap metal for four years. In the course of salvage operations, materials may have been moved from the pit. Also, PHF may have purchased scrap metals and transformers and stored them onsite. Records indicate that none of the new transformers purchased by PHF contained PCB oils. Transformers containing fluids were drained into site drums or into the pit. In January 1983, the U.S. EPA and the Idaho Department of Health and Welfare (IDHW) began investigating the site to determine whether disposal of PCB oils were occurring on or offsite due to operations at the metal facility. EPA declared the site to be an immediate threat to public health and welfare. As a result, approximately 593 PCB capacitors were transported offsite for incineration, and 21 hazardous materials drums and 30 cubic yards of soil were transported offsite for disposal. Additionally,
(See Attached Sheet)

17. Document Analysis a. Descriptors
Record of Decision
Pacific Hide & Fur, ID
First Remedial Action - Final
Contaminated Media: soil
Key Contaminants: PCBs

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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(Formerly NTIS-35)
Department of Commerce

EPA/ROD/R10-88/015
Pacific Hide & Fur, ID
First Remedial Action - Final

16. ABSTRACT (continued)

11 ground water wells and a security fence were installed at the site. The primary contaminants of concern affecting the soil are PCBs.

The selected remedial action for this site includes: excavation of soil to an average of 1.5 feet followed by screening to separate large contaminated materials and testing for further contamination; stabilization of a portion of the soil using an immobilization technique; construction of a bottom clay liner, where necessary; capping of the stabilized and remaining materials; removal of some ground water monitoring wells; ground water monitoring; and deed and access restrictions. If the fixation technology is found to be impracticable, onsite containment will be implemented as the final remedial action. The estimated present value of this remedial action ranges from $1,330,000 to $1,890,000. There is no O&M associated with this remedy.

DECLARATION FOR THE

McCarty's/Pacific Hide and Fur Superfund Site

Record of Decision

Site

McCarty's/Pacific Hide and Fur
Pocatello, Idaho

Statement of Basis and Purpose

This decision document presents the selected Remedial Action for the McCarty's/Pacific Hide and Fur Superfund site, in Pocatello, Idaho, developed in accordance with CERCLA, as amended by SARA, and the National Contingency Plan. This decision is based on the Administrative Record for this site. The attached index identifies the items which comprise the Administrative Record upon which the selection of the Remedial Action is based.

The state of Idaho has provided written concurrence on the selected remedy.

Description of the Selected Remedy

This Record of Decision addresses source control of on-site contamination through excavation of contaminated soils and fixation of the soils in a solidified matrix. If fixation is found to be impracticable through a pilot study, on-site containment will be implemented. The entire area of concern will be capped to further reduce surface water infiltration, to eliminate the potential for direct contact, and to eliminate the potential for airborne releases of contaminated materials.

The Remedial Action will include:

- Determining which portions of the contaminated materials can be practicably excavated and processed (screening). Factors used in making this determination are worker and public health, and physical limitations of excavation and processing equipment.

- Excavation of all highly contaminated materials which can be practicably excavated and processed.

- Excavation of all low level contaminated soils. Excavation will cease when those soils containing contaminants that exceed the 10^{-4} to 10^{-7} cancer risk values have been removed. This risk range corresponds to a 25 ppm PCB soil contaminant level.

- Immobilization of processed material in fixation matrix.
- Consolidation of remaining materials of concern.
- Construction of a bottom liner, where necessary.
- Construction of a cap over entire unit.
- Construction of groundwater monitoring wells
- Removal from service of existing groundwater monitoring wells which are no longer needed.

Treatment will be sufficient to significantly reduce the mobility of the contaminants and should be permanent. The liner and cap will further contain and isolate the contaminants from the environment.

Continued groundwater monitoring will be performed to ensure that no contamination migrates into the aquifers after the Remedial Action is complete.

Institutional controls, such as deed restrictions to prohibit excavation or drilling, will be developed, consistent with the final design, to ensure that the Remedial Action will continue to protect human health and the environment.

In compliance with SARA, the effectiveness and performance of this final Remedial Action will be reassessed at regular intervals, not to exceed five years.

DECLARATION

The selected remedy is protective of human health and the environment, attains federal and state requirements that are applicable or relevant and appropriate, and is cost-effective. With fixation, this remedy satisfies the preference for treatment that reduces toxicity, mobility, or volume as a principal element. With the use of fixation technologies, it is determined that this remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable. A pilot test is necessary to determine the maximum practicable extent to which fixation can be applied. If the alternative treatment is found to be impracticable, a waste containment remedy, which does not include treatment, will be implemented which is also protective of human health and the environment, attains federal and state requirements that are applicable or relevant and appropriate, and is cost effective.

6-28-88

Robie G. Russell — Date
Regional Administrator
U. S. Environmental Protection Agency, Region 10

DECISION SUMMARY
REMEDIAL ALTERNATIVE SELECTION
FINAL REMEDIAL ACTION
McCARTY'S/PACIFIC HIDE AND FUR
POCATELLO, IDAHO

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APPENDIX

I. INDEX TO ADMINISTRATIVE RECORD

II. RESPONSIVENESS SUMMARY

III. APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

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I. INTRODUCTION

The purpose of this Decision Summary is to summarize:

- Past activities at the site
- The nature and extent of contamination
- The pathways of contaminant migration
- Risk associated with potential exposures
- The method for establishing site cleanup standards
- The method of remedial alternative development
- The methodology for evaluation of remedial alternatives
- The results of the detailed evaluation of alternatives
- The preferred remedial alternative
- The enforcement status of the site
- The opinions and acceptance of the preferred alternative by the community.

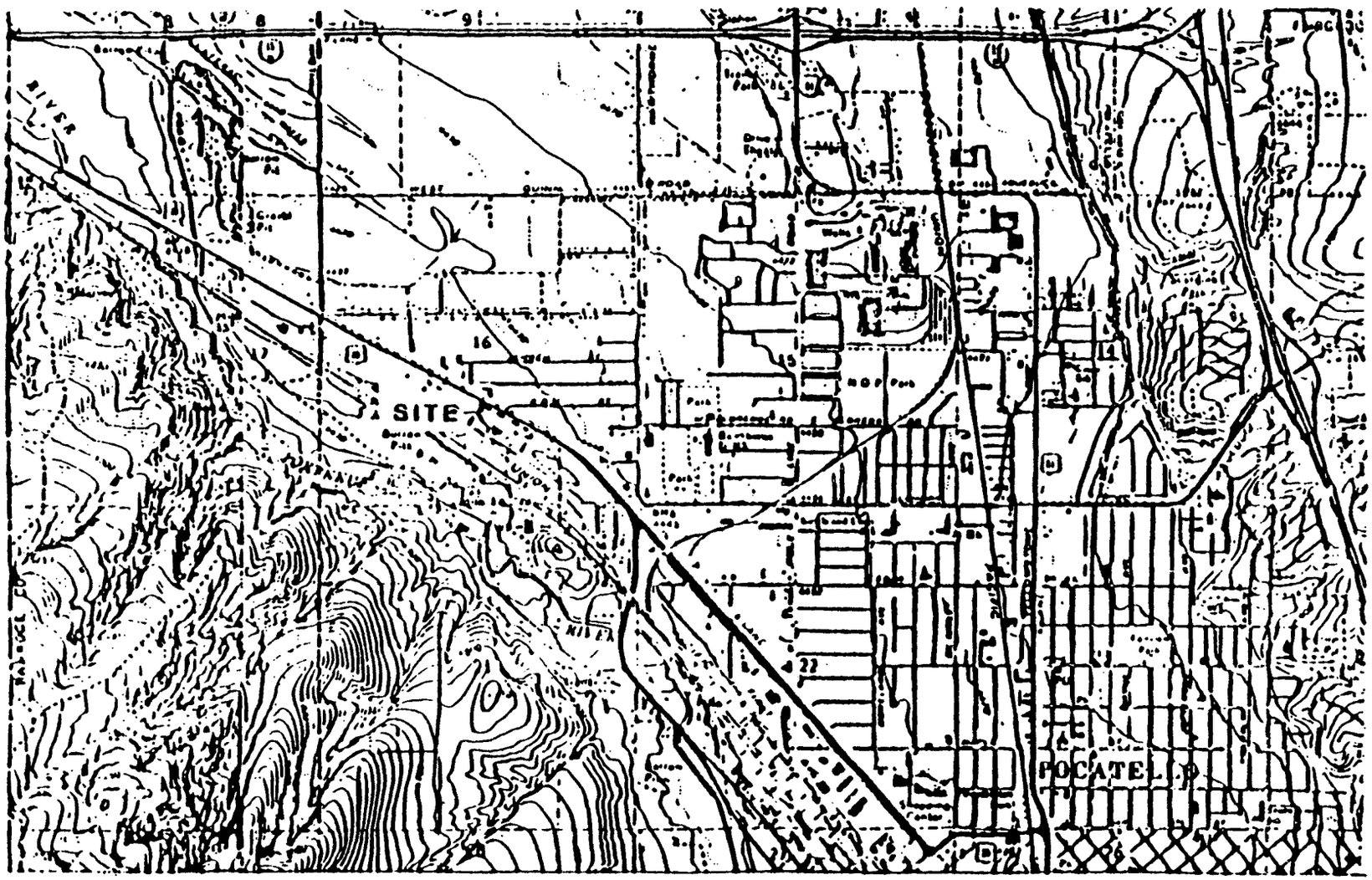
This information is presented to support the Record of Decision.

II. SITE DESCRIPTION AND LOCATION

The McCarty's/Pacific Hide and Fur site consists of approximately 11 acres presently enclosed by a fence, located in the southern half of Section 16, Township 6 South, Range 34 East of the Boise Meridian, Bannock County, Idaho. The site is located at the northwestern edge of Pocatello, Idaho at 3500 U.S. Highway 30 West. A vicinity map is shown in Figure 1.

Union Pacific railroad tracks border the site on the south. The Portneuf River is approximately 1,100 feet south of the site. On the north, the site is bounded by U.S. Highway 30 West. West of the site is the headquarters of the existing scrap metal operation. Facilities at the headquarters consist of a one story building including office and garage facilities, a metal shed used for scrap metal storage, a metal shear, parking areas and roadways.

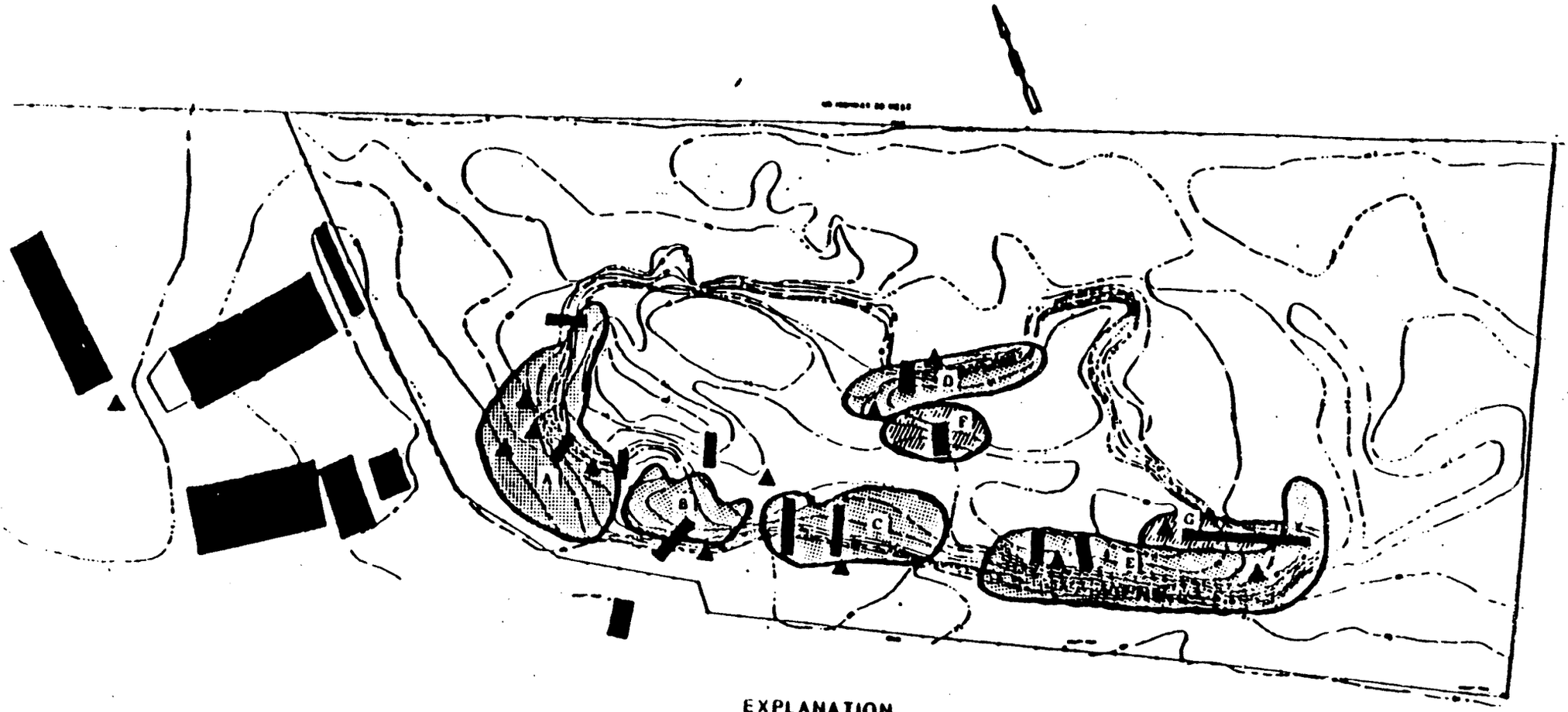
The majority of the site is relatively level and is covered with scrap metal including vehicles, truck bodies, machinery wire rope, tin cans, and miscellaneous debris. Topographically, the elevation of the groundwater surface is approximately at 4,400 mean sea level (msl) and slopes gently to the north and west with a maximum of 4 feet of relief between monitoring wells across the site. The center of the site consists of a gravel pit approximately 20 feet deep and comprising approximately 3 acres. The gravel pit was excavated in the 1940's and 50's and since approximately 1956, has been used for storage or disposal of scrap metal. A site map showing areas of concern is shown in Figure 2.



Vicinity Map

Figure 1

CGI-107



EXPLANATION

- Indicates Test Pit
- Indicates Surface Sample
- Suspected Areas Where Transformers Were Disposed Prior To August 1978
- Areas Where Capacitors Were Lying Prior To August 1978

Reference:

Dorsey & Whitney, "Information Provided Pursuant To Temporary Restraining Order", United States Vs. Pacific Hide And Fur, Inc. Et Al Civil No 83-4068 Date 3/83

Site Map and Topographical Survey by Shurtliff Engineering Date: 8/66

RETEC

Historic Information

Figure 2

086-024

III. SITE HISTORY

A. Site Operation/Disposal History

The site was previously used by a gravel mining operation as early as 1949. The site was purchased by McCarty's, Inc. in approximately 1958, which operated a scrap metal business there until August 1979. McCarty's, Inc. purchased scrap metal from various sources, stored it until it was cut up, sold and transported to various steel mills or salvaged and reused. Some scrap metal was stored in the pit awaiting resale or salvage.

In the course of these operations, transformers were purchased and scrapped at this site. The majority of the transformers were empty of fluid when received at the site. The processing of the transformers consisted of salvaging the copper wire and scrapping the casing. Any fluids that the transformers may have contained were apparently drained on the bank of the pit in the general area of the southwest corner.

Associated with the purchase of transformers, some capacitors filled with PCBs were received. Having no salvage value, the capacitors were discarded in the pit. Records regarding the site indicate that capacitors containing PCB oils were received between 1970 and 1973, but give no indication that PCB oil-filled transformers were received at the site.

Batteries were also accepted at this site. Methods of disposal of battery acids are unknown. The lead contained within the batteries was salvaged and sold for reprocessing. The battery casings were broken and disposed of at various locations on site. Used drums were accepted for use as shipping containers for scrap metal. Some of the drums had residue remaining on the bottom of the containers.

In August 1979, the McCarty's Inc. scrap metal business was sold to Pacific Hide and Fur, Inc. Included in this transaction was sale of the land and buildings comprising the headquarters west of the site. However, title to the site was retained by the McCarty's Inc. Pacific Hide and Fur, Inc. purchased the rights to salvage any ferrous metals in the pit for a period of 4 years. In the course of these salvage operations, materials may have been moved around the pit. In addition, some scrap metals purchased by Pacific Hide and Fur, Inc. may have been stored at the site.

The Pacific Hide and Fur, Inc.'s operation was generally similar to that of McCarty's, Inc. Scrap metal was purchased from various sources, sorted and stored until it was resold or processed and shipped to purchasees. A few transformers were purchased by Pacific Hide and Fur, Inc.; however, Pacific Hide and Fur, Inc.'s records indicate that none contained PCB oils. Some of the transformers did contain fluid which in one case was drained into drums in a shed behind the office building; in the other instance, the fluid was drained onto the ground in the pit.

In January 1983, the U.S. Environmental Protection Agency (EPA) and Idaho Department of Health and Welfare (IDHW) began investigating the site to determine if disposal of PCB oils was occurring on the property and if contamination of the soils and groundwater on or off-site had occurred due to operations at the facility.

B. Regulatory History

Based on groundwater samples obtained from vicinity wells, on-site PCB soil contamination data, as well as the general site conditions, the EPA declared the site to be an immediate threat to the public health and welfare. EPA undertook an Emergency Removal in March 1983 to mitigate the immediate threat. 593 PCB capacitors were removed from the site and transported to an approved disposal facility for incineration. Thirty cubic yards of contaminated soil was excavated and disposed of off-site in an approved landfill. Twenty-one drums containing hazardous materials were also removed from the site during the Emergency Removal and transported to an approved disposal facility. Subsequent to the Emergency Removal, fifteen additional capacitors were found in various scrap piles on-site. These capacitors were disposed of at approved facilities in 1986.

The Emergency Removal also included construction of 11 groundwater monitoring wells, the collection and analysis of groundwater samples, and the collection and analysis of soil samples. A security fence was also constructed around the site to restrict access.

The Emergency Removal was followed by the listing of the site on the National Priority List on September 21, 1984.

The McCarty family, Pacific Hide and Fur Depot, Inc., and Idaho Power Company have either previously owned the land at the site, currently own or operate the facility, or owned the capacitors and transformers which were discarded at the site. Collectively these companies are termed Potentially Responsible Parties (PRPs). With guidance and oversight by the U.S. EPA and IDHW, the PRPs have undertaken and completed the Remedial Investigation (RI), Risk Assessment, and Feasibility Study (FS) for the site. The U.S. EPA and IDHW have accepted the PRP RI, FS, and Risk Assessment reports as sufficient to provide enough information to make a clean-up decision. However, EPA and IDHW evaluations and conclusions about the risks imposed by the site and the relative merits of the remedial alternatives differs from those of the PRPs. Consequently, revisions to portions of the PRP documents were developed to reflect EPA and IDHW positions.

An alternative for clean-up of the site was initially proposed by the PRPs. Based on the RI, FS, Risk Assessment and additional research, the preferred alternative described in this document was developed by the EPA and IDHW.

IV. ENFORCEMENT

EPA initiated a civil action against a number of the PRPs in March 1983. The action was filed under CERCLA, RCRA and TSCA, and sought injunctive relief for response action and cost recovery under CERCLA sections 106 and 107. The action was commenced at the same time that EPA undertook a removal action at the site, during which EPA carried out the activities described in Section III Site History of this document. Following a number of legal developments that included the issuance of a preliminary injunction that assisted EPA in the conduct of the removal action, the parties entered into a Partial Consent Decree in which the PRPs agreed to perform an RI/FS at the site. This Decree was entered by the U.S. District Court for the District of Idaho, on September 29, 1986.

In a separate legal proceeding, a criminal enforcement under TSCA action was taken against Pacific Hide and two of its managers. The alleged criminal violations included improper storage and disposal of PCB capacitors, and incomplete recording as to PCB materials at the site. A jury verdict convicting Pacific Hide and these managers was obtained at the U.S. District Court and for the District of Idaho in 1985. That conviction was later overturned at the ninth circuit court of Appeals.

A separate legal proceeding was taken against Pacific Hide under TSCA administratively. The administrative complaint in this action was issued in 1987. The violation alleged in that proceeding included improper storage of PCB materials and failure to complete annual reports concerning the presence of PCBs at the site. This proceeding was settled in May 1988.

The RI, FS, and Risk Assessment were conducted by the Potentially Responsible Parties under the Consent Decree described above. EPA will soon begin implementation of the settlement procedures set forth in Section 122 of CERCLA, 42 U.S.C. §9622. Special Notice Letters will be sent to the PRP's in late June 1988 to offer those same parties the opportunity to perform the selected remedial action pursuant to a consent decree. Informal negotiations between EPA and the PRPs on the clean up have begun. The state of Idaho has been involved in the negotiation.

If for any reason agreement cannot be reached with these parties, EPA will initiate alternative action to ensure that the remedial action proceeds in a timely manner.

V. DOCUMENTATION OF SIGNIFICANT CHANGES

No significant changes from the proposed plan were produced in the development of the Record of Decision.

VI. COMMUNITY RELATIONS

Community relations activities conducted at McCarty's/Pacific Hide and Fur site to date include the following:

- In March 1983, EPA began an Emergency Removal Action at the site. (See Section III--Site History) EPA addressed community information needs about the action at that time through press releases and media interviews.

- In September 1984, McCarty's/Pacific Hide and Fur was added to the National Priorities List under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

- In July 1986, community interviews were conducted in preparation for the community relations plan.

- The Remedial Investigation began in September 1986 with the Potentially Responsible Parties doing the work with EPA and IDHW oversight. A fact sheet was distributed to the mailing list announcing this in August 1986.

- A fact sheet was mailed out to all citizens and local officials on the EPA mailing list on March 31, 1988. This fact sheet outlined the alternatives reviewed during the RI/FS, EPA's evaluation of each alternative and indicated which alternative was the EPA/IDHW preferred alternative. The fact sheet also announced the beginning of the comment period and the public meeting.

- On April 5, 1988, EPA placed a public notice in the Idaho State Journal announcing:
  - a public meeting on the RI/FS results
  - a brief description of the investigation results
  - the public comment period running from April 15 to May 13
  - location of the information repositories
  - and the EPA contacts.

- The PRPs were provided an RI/FS package which included:

  1) an Executive Summary of the RI/FS, 2) the EPA/IDHW proposed plan, 3) EPA revisions to the FS, 4) EPA addendum to the Risk Assessment, 5) the notice of the public meeting, and, 6) the fact sheet.

- Flyers announcing the public meeting were given to a local contact for distribution in the city.

- The public meeting was held on April 19, 1988. Approximately 30 people attended the meeting. The meeting was recorded by a court reporter and the transcript is available at the information repositories.

- A responsiveness summary was prepared by EPA in May 1988. This document addressed the comments received from the public and the potentially responsible parties during the comment period. The questions/comments and EPA's response are listed by category in this document.

VII. SITE CHARACTERISTICS - REMEDIAL INVESTIGATION

The purpose of the Remedial Investigation (RI) was to determine the nature and extent of contamination at the site. Because PCBs are the major contaminant of concern, the RI was undertaken to establish the presence of PCBs remaining at the site, the extent to which waste materials were distributed over the site (both vertically and horizontally), the extent of migration ,if any, of PCBs from the site and the presence of contaminants including PCBs, if any, in the groundwater. In addition to defining the nature and extent of contamination, the RI was designed to characterize site geology and hydrology. This information was used to evaluate mechanisms and rates which toxic compounds may be transported from the site to potential receptors. The RI was performed in several phases, with intermediate reports reviewed by the U.S. EPA and IDHW. Many of the concerns of these regulatory agencies were addressed by modifications to the text of the document. The final RI document was submitted to the U.S. EPA in February 1988. A summary of the RI results for soil, groundwater, surface water, and air follows.

Soil

The RI incorporated existing data developed earlier by the EPA and IDHW. The RI also included the collection and analysis of twenty-five surface and sub-surface soil samples, excavation, logging, and sampling and analysis from twelve test pits, and construction and logging of four boreholes (as part of groundwater monitoring well construction). Shallow soil samples from two of the borings were analyzed for PCBs. The information gathered from these activities helped define the extent and level of PCB soil contamination at the site. PCBs were found to exist at varying levels in most of the samples obtained. Figure 3 shows surface and subsurface soil sample locations. Figure 4 shows exploration trench locations and monitoring well locations.

The PCB contamination was found to be present in "hotspots", in areas where capacitors had existed, or bulk oil disposal was believed to have occurred. These hotspots were mainly located within the silt and scrap fill. Data collected during the RI indicates that the levels of PCBs in the soils diminishes rapidly at short distances from the hotspots.

The trenches and boreholes were also used to further develop an understanding of the local geology and hydrogeology.

Groundwater

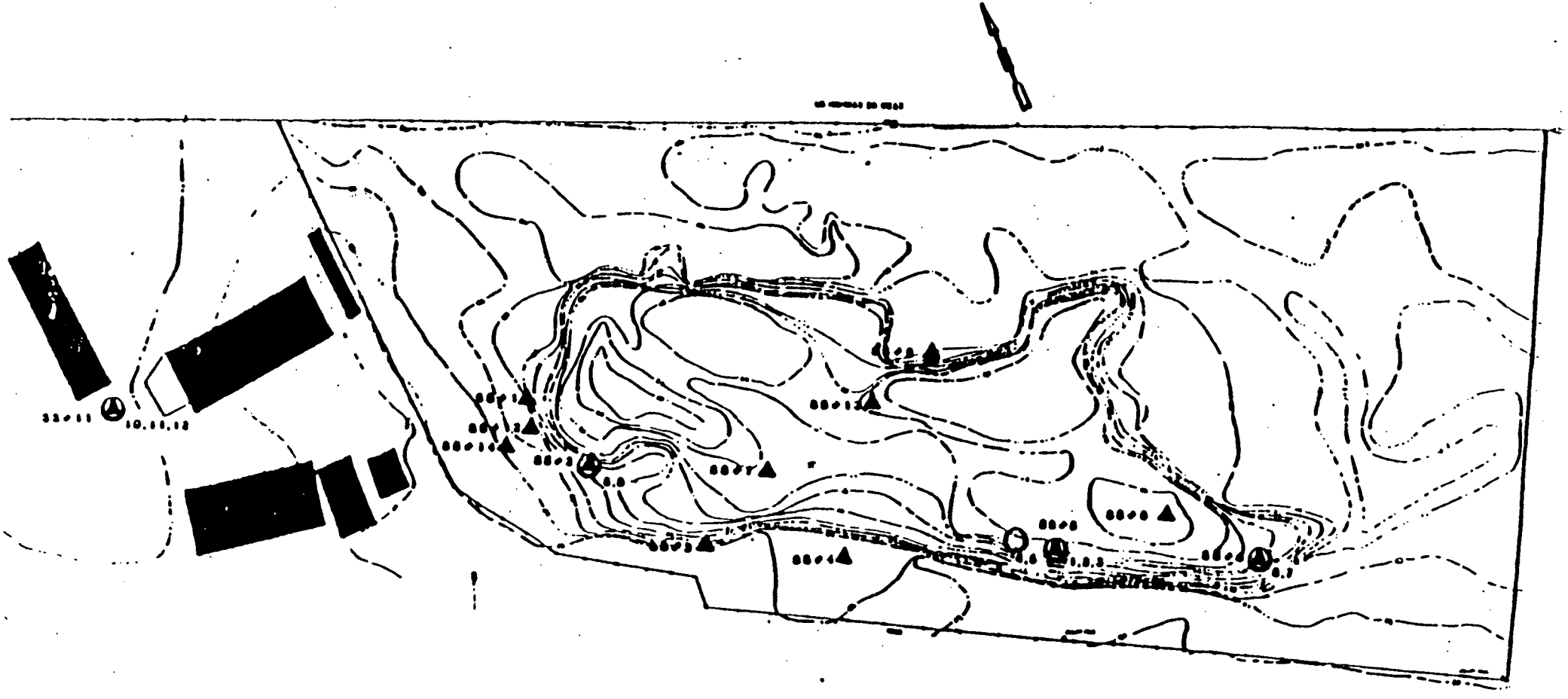
Four groundwater monitoring wells were constructed and used in conjunction with existing on-site wells to monitor water level elevations and to obtain water samples from the two shallowest water bearing zones. A total of fifteen wells were sampled during the first sampling round and fourteen wells sampled during the second round. All samples were analyzed for PCBs. None of the water samples obtained during the RI were found to be contaminated with PCBs above the detection limit.

The four new wells were also sampled for an extensive list of contaminants (Priority Pollutant List). The results from this analysis indicate that there is no groundwater contamination at this site at the present time. Analytical results of some earlier samples show the presence of PCBs. However, the data was suspect due to poor quality resulting from improper sampling and/or analytical procedures. Subsequent sampling showed no PCB contamination above detection limits. The RI groundwater analysis results, the disposal practices, and the waste and site characteristics all indicate that the PCBs are not present in the site groundwater at this time.

Groundwater level measurements were taken at the site from June, 1986 to September, 1987. These measurements were used to develop an understanding of the groundwater flowrate and direction. The information obtained during the groundwater investigation showed that at least one additional well will be required for groundwater monitoring during and after Remedial Action.

Surface Water

A surface water investigation was undertaken to determine if the site impacts nearby water bodies. It was found that the site is located outside the 100 year flood plain and would therefore not be flooded by the Portneuf River under severe high water conditions. The investigation showed that the topography prevents drainage toward the Portneuf River, and that all nearby surface water drains into the pit. Because of these factors, as well as annual precipitation, surface water was found to not be a route of contaminant migration.



EXPLANATION

- Indicates Surface Sample #8
- Indicates Surface Sample #8 and Area of Supplementary Surface Samples 6 and 7
- Indicates Area of Supplementary Surface Samples 4 and 8

Reference:

Site Map and Topographical Survey by Shurtliff Engineering

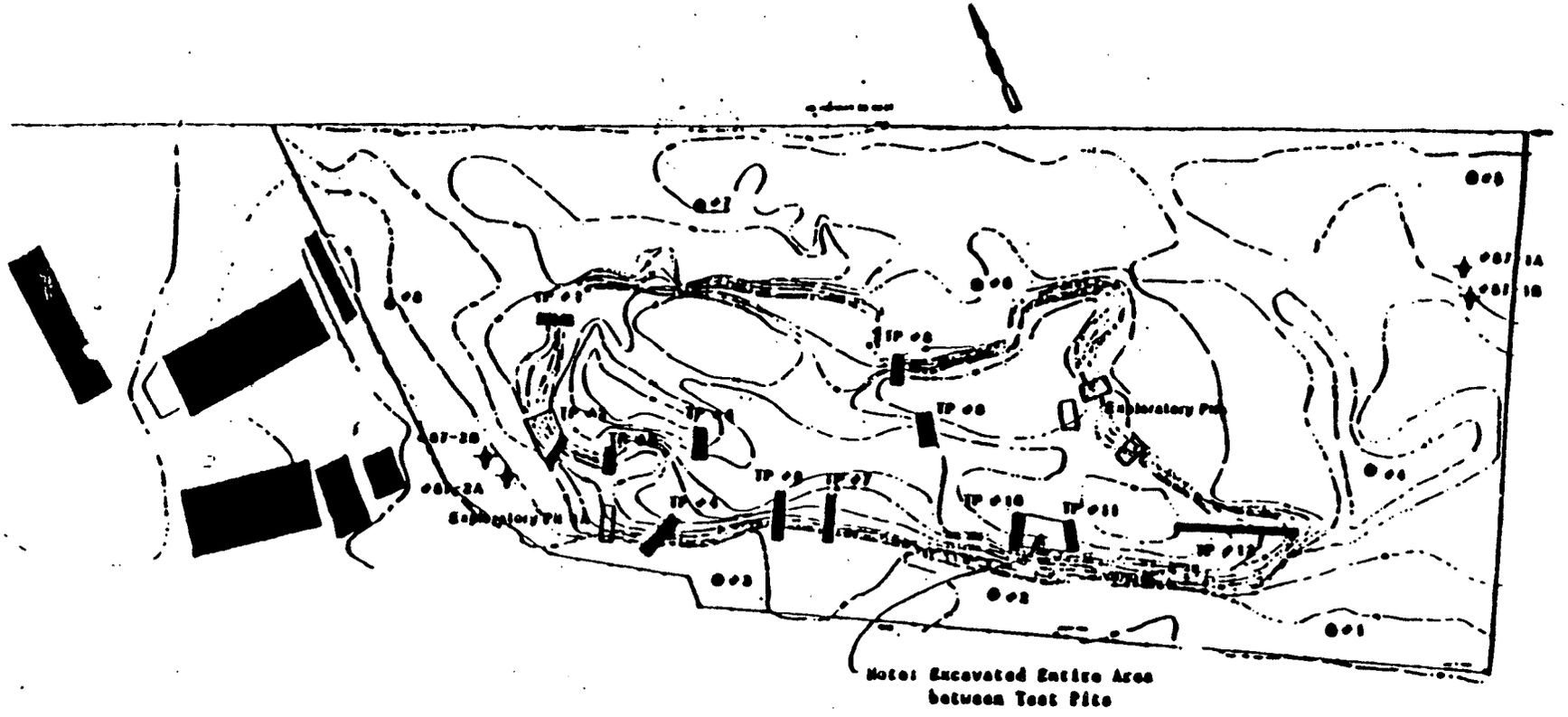
Date: 9/86

REIC

Surface and Supplemental

Figure 3
Soil Sample Locations

C86-024 | 1.1



EXPLANATION

- ● Indicates Wells Installed for EPA in 1983
- ✦ Indicates Wells Installed by Betec in April 1987
- TP #3 Indicates Test Pit #3
- Indicates Extra Trenching

References:

Site Map and Topographical Survey by Shurtliff Engineering

Date: 9/86

Test Pit And Well Figure 4 Locations

RETEC

C88-024

4.1

Air

Through the RI/FS process it was determined that contaminants of concern could potentially be transported from the site, especially during remedial activities. Also, persons on-site could be exposed to contaminated dust (see Section X - Selected Remedial Alternative). These factors will be taken into account during design of the chosen remedy. Adequate dust control measures will be used during construction to protect both the on-site workers and the public from excessive contaminated dust. Also, the remedy will be designed to adequately reduce or eliminate movement of contaminated dust from the site.

VIII. SUMMARY OF SITE RISKS - RISK ASSESSMENT

The purpose of the Risk Assessment was to determine the probability of potential harm to humans caused by the site as it presently exists and to provide information which could be used in establishing clean-up levels for contaminated soils. The Risk Assessment produced by the PRPs with EPA and IDHW oversight as a part of the Remedial Investigation/Feasibility Study provides background information on PCB properties, fate and transport, toxicity, guidelines and standards. The development of the exposure scenario and resultant ingestion, dermal absorption and inhalation exposure levels are also provided. This information provides an overall picture of one potential exposure scenario.

With the scenario developed by the PRPs a range of risks associated with the PCBs on-site was estimated. The estimates were based on ingestion, inhalation, and direct contact exposure. The information produced through the RI process indicated that groundwater is not presently a route of exposure. Additionally, there does not appear to be a food chain route of exposure. The ingestion route is therefore based on consumption of contaminated soils only.

The risk estimation of carcinogenesis provided in the PRP Risk Assessment for the site as it presently exists ranges from 2.1×10^{-3} to 8.8×10^{-7}. The risk of the total site area was estimated to be 2.1×10^{-3}. The areas corresponding to the risks shown in Table 1 are delineated in Figure 2.

TABLE 1

Total Dose and Estimated Maximum Carcinogenic Risk for Total Exposure

Location	Maximum Total Dose) (mg/kg/dat^)	Maximum Risk Estimate for Total Exposure
Area A	0.013	1.1x10-4
Area B	1.2x10-4	1.1x10-6

Table I
Total Dose and Estimated Maximum Carcinogenic
Risk for Total Exposure
(Continued)

Area C	1.0x10-3	8.6x10-6
Area D	1.1x10-4	8.8x10-7
Area E	0.25	2.1x10-3
Area G	1.2x10-4	1.0x10-6
Office Area	2.8x10-3	2.4x10-5
Total Area	0.25	2.1x10-3

The Risk Assessment established PCBs as a human probable carcinogen as determined by the EPA Cancer Assessment Group. The CAG determined the Carcinogenic Potency Factor (CPF) for human exposure to be 4.3 $(mg/kg/day)^{-1}$ and classified PCBs as Group B2 - Probable Human Carcinogens. The Office of Toxic Substances (OTS) of EPA estimated the CPF to be 3.57 $(mg/kg/day)^{-1}$.

In the development of the exposure scenario, the PRPs made basic assumptions which differ from those normally used by EPA in similar situations. Also, the PRP Risk Assessment did not provide information which could directly be used to develop clean-up levels for site remediation. Consequently, revisions to the Risk Assessment were necessary. Changes in the basic exposure assumptions were made. Additionally a range of probabilities of cancer incidence for various population groups was produced for a specified contaminant level. This information was then used in the development of the site clean-up level i.e., that level at which excavation may cease. The EPA Risk Assessment evaluations for this site were based on the results of the RI and methodology currently in use by the U.S. EPA. These methods establish guidance for the estimation of levels to which hazardous waste sites should be cleaned up. The Risk Assessment examined pathways through which humans may be exposed to PCBs, the resulting exposure levels, and corresponding risks.

Based on specific conservative exposure assumptions, the Risk Assessment findings showed that clean up of all soils contaminated with PCBs at a level of ten parts per million (ppm) or more and leaving the remainder unprotected would result in a cancer incidence range of two persons per 1,000,000 persons exposed to nine persons per 100,000 persons exposed (i.e. $2x10^{-6}$ to $9x10^{-5}$). Using these same assumptions and data, a cancer incidence range estimate was established for unprotected soils remaining at 25 ppm. The estimated range was found to be five persons per 1,000,000 persons exposed to three persons per 10,000 persons exposed (i.e., $5x10^{-6}$ to $3x10^{-4}$). These results were then compared to a previously established PCB clean-up policy.

With the input from a wide variety of environmental and industrial organizations, the EPA has established a clean-up policy for PCB spills. This policy was developed because there was a recognized need for a standard by which PCB spill clean-ups could be undertaken. The policy was designed mainly for the clean-up of PCB contamination due to accidents involving PCB laden equipment. The requirements and standards in this policy are based upon the agency's evaluation of the potential routes of exposure and potential risks associated with the more common types of PCB spills, as well as the costs associated with clean-up following such spills.

For restricted access areas, the PCB clean-up policy calls for contaminated soil to be cleaned to 25 ppm PCBs by weight. This clean-up level is based in part on the fact that soil ingestion, inhalation, and direct contact will be lower in these areas (due to restricted access) as compared to non-restricted access areas. The policy also calls for clean-up to ten ppm with a ten inch cover of clean soil in non-restricted access areas.

Although this policy was not expressly designed for Superfund remedial actions, the EPA believes it is appropriate to use these standards as a reference in conjunction with the Risk Assessment data to develop the clean-up standard. Therefore, the clean-up level provided in the EPA/IDHW preferred alternative takes into account both the results of the Risk Assessment and the PCB spill policy.

The EPA/IDHW preferred alternative calls for excavation outside the area to be fully capped down to the 25 ppm level with a soil cover over the excavated area. By covering the contamination remaining after excavation, and by using site security and institutional constraints such as deed restrictions, direct contact can be significantly reduced or eliminated. Exposure due to inhalation and ingestion can also be reduced or eliminated. This will reduce the potential for cancer incidence well below that estimated in the Risk Assessment.

IX. ALTERNATIVES EVALUATION - FEASIBILITY STUDY

The purpose of the Feasibility Study was to develop and evaluate possible alternatives for site clean-up. The process by which remedial alternatives are evaluated is designed to select the most efficient and cost-effective strategy to protect human health and the environment by eliminating or controlling releases of contaminants. A total of eleven applicable technologies were assembled for the McCarty's/Pacific Hide and Fur site from a master list of over forty potential technologies.

The preliminary alternatives were evaluated using the following criteria:

1. applicability of the technology to clean-up of PCB contaminated silt and scrap

2. limitations associated with the technology

3. effects of site conditions

4. the level of development of a technology and its performance record

As a result of these analyses a total of six of these alternatives were retained for further consideration. These alternatives constitute a wide range of options for action at the site. Options range from no action (which actually includes continued groundwater monitoring and limited stabilization activities) to complete removal and destruction of all materials believed to be contaminated with PCBs.

Table 2 contains a brief description of the six candidate alternatives.. These alternatives were subjected to detailed analysis, according to regulatory guidelines. The detailed analysis of each alternative included:

- An assessment of how well the alternative is expected to effectively prevent or reduce the threat to public health and welfare and the environment.
- Evaluation in terms of how reliable, implementable, effective and safe the remedial action would be.
- Refinement of the alternative with emphasis given to defining established methods of handling or treating wastes.
- An assessment of how well the alternative is expected to meet the preference for reduction in toxicity, mobility or volume of the waste through the use of permanent solutions and alternative treatment technologies or resource recovery technologies.
- An analysis of any adverse environmental impacts and methods for reducing or eliminating these impacts.
- Detailed cost estimation, including costs associated with long-term operation and maintenance associated with the alternative.
- The degree to which each alternative conforms to federal and state requirements and regulations. Appendix III lists the federal and state applicable or relevant and appropriate requirements for this site by which the alternatives were evaluated.
- Concerns of the community.

Each of the candidate alternatives was rated using criteria corresponding to the above factors according to an above the median/median/below the median scheme. An above the median rating means the alternatives rate high for the particular criteria in question when compared to the remaining alternatives. Median and below the median ratings follow the same logic.

A summary of the ratings for each alternative was then developed to compare the alternatives. Table 3 illustrates the ratings.

The selection of the preferred alternative considered the degree to which site clean-up goals would be attained, the degree of clean-up performed as required by regulation, and the degree to which routes of contaminant exposure are eliminated or controlled.

Table 2: Summary of Remediation Alternatives

Alternative 1 - No Action

Limited handling of oversize scrap, limited grading, soil cover and seeding. Limited soil cap would cover entire 8,200 cubic yards of contaminated material. Construction of additional groundwater monitoring wells. Annual groundwater monitoring. Longterm maintenance and monitoring. Deed restrictions to prevent inadvertent redevelopment.

Table 2
Summary of Remedial Alternatives (Continued)

Alternative 2 - On-Site Containment

Limited handling of oversize scrap. Construction of clay bottom liner where needed. Consolidation of intermixed silt and scrap (area found to contain PCB contaminated soils) and additional contaminated area soils. Construction of clay cap and soil cover including seeding. Clay cap would contain entire volume of contaminated material (8,200 cubic yards). Construction of additional groundwater monitoring wells. Semi-annual groundwater monitoring for thirty years. Longterm maintenance and monitoring. Abandonment of unneeded wells. Deed restrictions to prevent inadvertent redevelopment.

Alternative 3 - Fixation

Pilot test to determine fixation and processing parameters. Limited handling of oversize scrap. Excavation of entire silt and scrap fill and additional contaminated area soils unless additional sampling shows specific areas to be uncontaminated. Processing (screening, shredding, sorting, etc.) to make material amenable to fixation. Mixing waste material and fixation material with water and placement in depressions or forms to produce solidified mass. Minimal soil cover including seeding. Annual groundwater monitoring for thirty years. Longterm monitoring and maintenance. Deed restrictions to prevent inadvertent redevelopment. Alternative will fix and contain entire volume of contaminated material (8,200 cubic yards).

Alternative 4 - Off-Site Disposal

Limited handling of oversize scrap. Excavation of entire silt and scrap fill and additional contaminated area soils unless additional sampling shows specific areas to be uncontaminated. Processing (shredding, screening, sorting, etc.) to make material acceptable for off-site disposal as specified by disposal facility. Contaminated material transported to disposal facility via truck or rail and disposed in regulated unit. Filling, grading, and seeding of site. Alternative will remove entire volume of contaminated material (8,200 cubic yards).

Alternative 5 - Incineration

A. On-Site Incineration

Pilot testing to determine incineration and processing parameters. Limited handling of oversize scrap. Excavation of part or all of fill and additional contaminated area soils unless additional sampling shows specific areas to be uncontaminated. Processing (screening, shredding, sorting, etc.) to make material amenable to incineration. Incineration of contaminated material. Fixation of the residual ash if necessary. Grading and possibly filling of site. Addition of topsoil and seeding. Alternative will treat entire volume of contaminated material (8,200 cubic yards).

b. Off-Site Incineration

Limited handling of oversize scrap. Excavation of entire silt and scrap fill and additional contaminated area soils unless additional sampling shows specific areas to be uncontaminated. Processing (shredding, screening, sorting, etc.) to make material acceptable for off-site incineration as specified by disposal facility. Contaminated material transported to incineration facility via truck or rail. Filling, grading, and seeding of site. Alternative will treat entire volume of contaminated material (8,200 cubic yards).

Table 2
Summary of Remedial Alternatives
(Continued)

Alternative 6 - Fixation/Containment

EPA/IDHW Proposed Alternative

Pilot testing to determine safety and feasibility of alternative and fixation and processing parameters. Limited handling of oversize scrap. Excavation of part or all of fill and contaminated area soils (Volume to be treated dependent on feasibility of material processing and fixation, as determined in pilot study. It is expected that a majority of the silt and scrap material can and will be solidified). Processing to make material amenable to fixation. Mixing waste material and fixation material with water and placement in depressions or forms to produce solidified mass. Construction of a clay bottom liner where needed. Construction of clay cap and soil cover including seeding or other erosion control mechanisms. Construction of additional groundwater monitoring wells. Semi-annual or annual groundwater monitoring for thirty years (depending on extent of treatment). Abandonment of unneeded existing wells. Deed restrictions to prevent inadvertent redevelopment. Alternative will treat/contain entire volume of contaminated material (8,200 cubic yards).

X. SELECTED REMEDIAL ALTERNATIVE

A. DESCRIPTION OF THE SELECTED REMEDY

The preferred remedial alternative (No. 6) is a combination of source control measures, measures to control contamination release, and measures to reduce human and environmental exposure to contaminants. This remedy addresses all contaminants of concern remaining on site. The alternative consists of excavating contaminated soils, stabilization of a portion of the contaminated material using a technique which immobilizes the contaminants, construction of a bottom clay liner where necessary, capping the stabilized and remaining materials, continued groundwater monitoring, deed restrictions, and restrictions to site access.

If the contaminated material cannot be processed or stabilized as determined in the pilot study, Alternative Two, On-Site Containment, will become the preferred alternative.

FIXATION/CONTAINMENT

Pilot Study

A Pilot study is necessary to determine 1) the extent to which the contaminated material can be processed in preparation for the treatment and 2) the optimum mix of binding agents. The pilot study will begin with the testing of various types of equipment and/or material handling operations to determine the feasibility of processing the silt and scrap material. Feasibility will be based on the 1) amount of contaminated dust emissions produced by the excavation and material processing activities, and 2) the physical limitations of various excavation and processing equipment when working with the silt and scrap materials.

Table 3

Screening of Alternatives Summary

Legend

- **AM** Above the Median
- **M** Median
- **BM** Below the Median

Alternative	Effectiveness					Implementability				
	ARARS	Protection of Public Health	Reduces TMV	Minimal Environmental Impacts	Demonstrated Performance Reliability	Feasibility and Availability	Constructability	Timeliness	O&M Requirements	Administrative Feasibility
1. No Action	BM	BM	BM	BM	AM	AM	AM	BM	BM	M
2. On-Site Containment	M	M	M	M	AM	AM	AM	M	M	M
3. Fixation	M	M	AM	M	BM	BM	BM	M	M	M
4. Off-Site Disposal	M	M	BM	BM	AM	M	M	AM	AM	AM
5. Incineration	M	M	AM	M	M	BM	BM	AM	AM	BM
6. Fixation/Containment	M	AM	AM	AM	BM	M	M	M	M	M

Dust emission is a key parameter for the preferred alternative due to the fact that the material slated for excavation and processing (silt and scrap) has the potential of becoming airborne during material movement due to dry and windy site conditions. Various types of equipment and/or dust control measures will be evaluated to determine if the contaminated materials can be handled without undue risk to workers or the public or excessive spread of contamination. To determine this, an air monitoring program will be implemented to quantify releases during short-term excavation/processing test(s). Emission levels will be compared to exposure limits based on EPA carcinogenic potency factors for polychlorinated biphenyls and EPA National Ambient Air Quality Standards for public exposure, and Occupational Safety and Health limits and standards developed by the American Conference of Governmental Industrial Hygienists for on-site worker exposure.

Because of the intermixed nature of the materials of concern (scrap metal and various debris intermixed with contaminated soils) the pilot test will also establish what sectors of the areas of contamination can practicably be excavated and processed. Figure 5 shows areas of excavation and potential excavation. Factors such as worker safety, equipment limitations (ability to excavate, move, and separate materials), and equipment breakdown and wear will be evaluated during the pilot study.

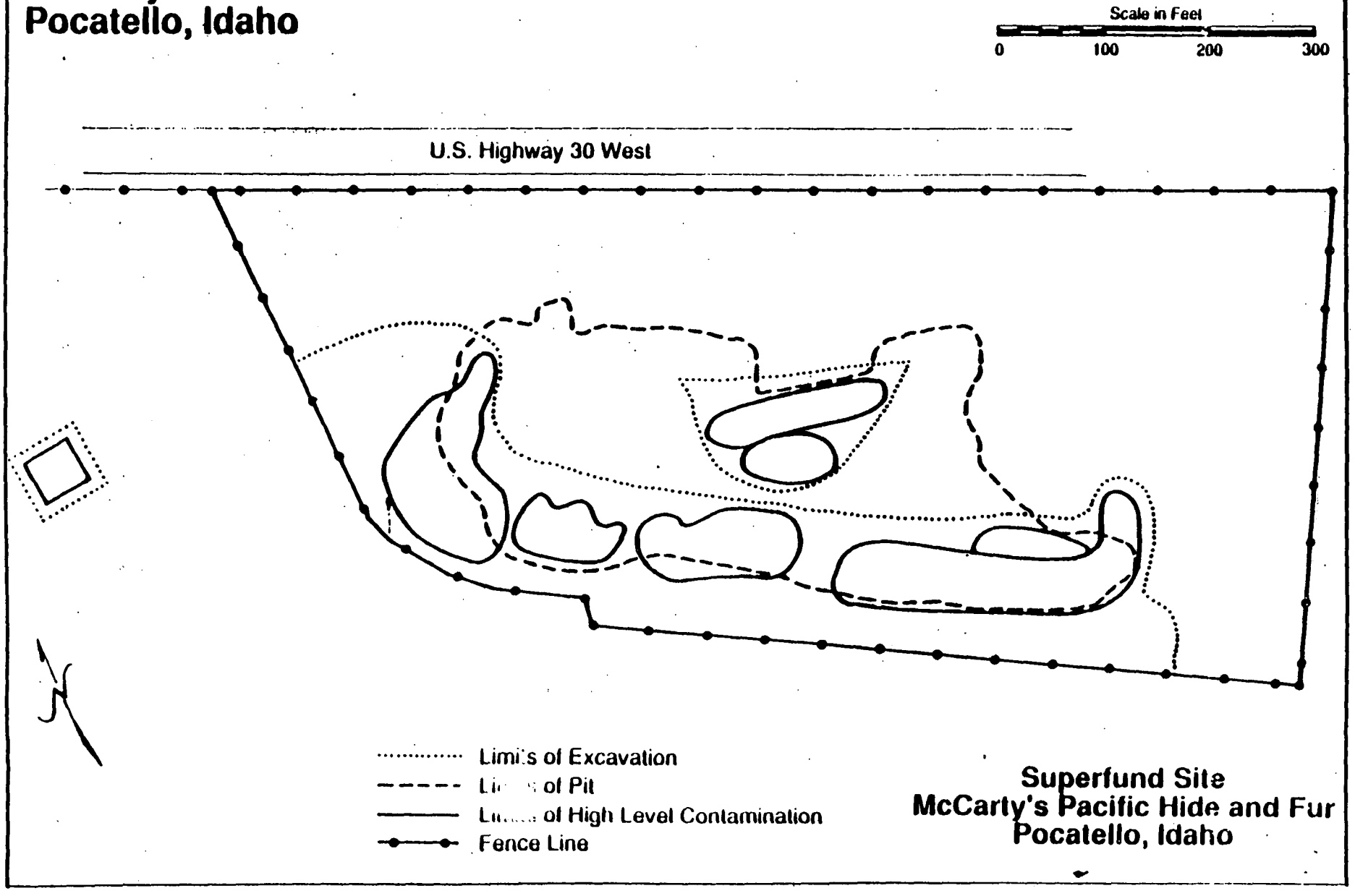
The determination of excavation and processing feasibility will dictate the remaining activities. If excavation and processing is found to be unpracticable for all materials of concern, on-site containment as described below will be implemented. If excavation and material processing is found to be practicable on only a minor portion of the materials of concern, the cost effectiveness of the fixation technology will be re-evaluated to take into account the increased per unit cost due to the small volumes being considered. If excavation and processing is found to be practicable for all or part of the material in question (unless fixation is found to not be cost effective as described above), the second phase of the pilot study will be implemented, namely determination of the best mix of fixation materials and contaminated soils. This portion of the pilot test will include laboratory experiments to ensure that the fixation process effectively immobilizes the PCBs. A comparison of reduction of mobility of PCBs before and after treatment will be undertaken. Also, strength tests, leachability tests, and durability tests will be performed on the solidified material during the pilot study. During design of the pilot study it may be determined that additional tests are necessary. These tests will help determine how well the solidified material will hold up over long periods of time under varying conditions and how well the solidified material contains the contamination.

Soil Excavation

The contaminated areas near the pit will be excavated to an average depth of 1.5 feet using backhoes, bulldozers and/or front end loaders to ensure that all potentially contaminated soil is contained (See Figure 5). The contaminated soils requiring consolidation are located outside the pit and outside the limits of high level contamination along the southwestern boundary

Fig[redacted] 5

Superfund Site
McCarty's Pacific Hide and Fur
Pocatello, Idaho



of the site. Also the soil from the area near the office where a single capacitor was found will require consolidation. Additionally, soils in the pit bottom outside the limit of high level contamination may require consolidation only. Specific work practices, as established during the pilot study, may be necessary to minimize dust emissions during excavation. That portion of the silt and scrap which is processable (as determined in the pilot study) will be excavated using similar equipment until the underlying fill material is reached. Because these fills are very different in appearance, the excavator will know when the underlying fill is reached. On-site soil sampling equipment will then be used in areas outside the area to be contained under the full cap to determine the level of remaining PCB contamination, if any. If the remaining contamination is above 25 ppm, excavation will continue. Periodic sampling will be undertaken to determine when excavation can cease. As summarized in Section VIII, Summary of Site Risks--Risk Assessment, the 25 ppm level is based on the Risk Assessment undertaken for this site and the EPA PCB spill clean-up policy. This level, in conjunction with the treatment and containment technologies to be used, will adequately protect human health and the environment.

Material Processing

The excavated highly contaminated material will be processed by the use of mechanical screening apparatus. The particular screening equipment used will be determined in the pilot study. The material which can be processed down to approximately a two inch size will then be treated in the fixation process.

Soil Fixation

To further reduce the ability of the PCBs to migrate from the site, the processed material will be mixed with an additional substance which binds the PCBs and soils. The exact mixture of the fixation material will be determined through the pilot study discussed above. The mixture will probably consist of a combination of cement, lime or fly ash and possibly a proprietary binding ingredient.

The processed materials will be mixed with the fixing agent and water to form a slurry. After thorough mixing the slurry will be placed in specially prepared depressions or forms where it will solidify into a hardened slab or block.

Some or all of the material separated from the soil during the screening operation will be encased in the stabilized matrix by placing the oversize material in the slurry before it solidifies.

Once the fixed material has hardened, any remaining oversized contaminated materials will be placed over and/or near the solidified mass. A soil cap will then be constructed over this. A layer of clean soil will be placed in areas outside the cap where excavation has occurred. As with the On-Site Containment alternative, a bottom clay liner will be constructed, as necessary. This will be determined during Remedial Design by determining the thickness of existing clay below the proposed unit. Where insufficient native material exists, construction of a clay bottom liner will be necessary.

A graded filter of clayey sand will be placed on the top and exposed sides of the remaining intermixed silt and scrap, if any, and on the top and exposed sides of the consolidated and treated soils. A low permeability clay cap will be placed on the top and exposed sides of the unit followed by a drainage layer and topsoil. Upon completion of the cap construction, the site will be restored to final contours that minimize erosion and control surface water runoff. Seeding or other remedies will also be implemented to reduce erosion. The final design of the cap will be contingent upon the amount of material treated; the greater the amount of treatment, the lower the dependency on the cap will be. Figure 6 shows a cross section of the treated material, consolidated material, liner, and cap.

Very large materials which cannot practically be reduced in size for containment within the cap (car bodies, buses, etc.) will be steam cleaned and tested to determine if the PCB materials are still present. Upon satisfactory clean-up, the large material will either be placed on-site or removed from the site. The decontamination water will be used as the water source for the fixation process, thus eliminating the need for disposal of all or part of the wash water.

The material processing and fixing equipment will require fugitive dust controls to minimize the release of airborne contaminated materials. Dust suppression may require hoods or other equipment. Specific control measures will be established in the pilot study.

Operation and Maintenance

Additional well(s) will be constructed to monitor the groundwater for contamination. The specific number, location, and depth of these wells will be established during the Remedial Design. During design the need for continued use of existing wells will be established. Those wells no longer needed, will be taken out of service during remedial action. Operation and maintenance will include groundwater monitoring analysis, semi-annual or annual, and cap inspection annually for cracks, erosion or other signs of failure for thirty years. Any problems revealed during these inspections will be mitigated. If groundwater contamination is verified, additional site characterization will be required, and possibly groundwater treatment.

ON-SITE CONTAINMENT

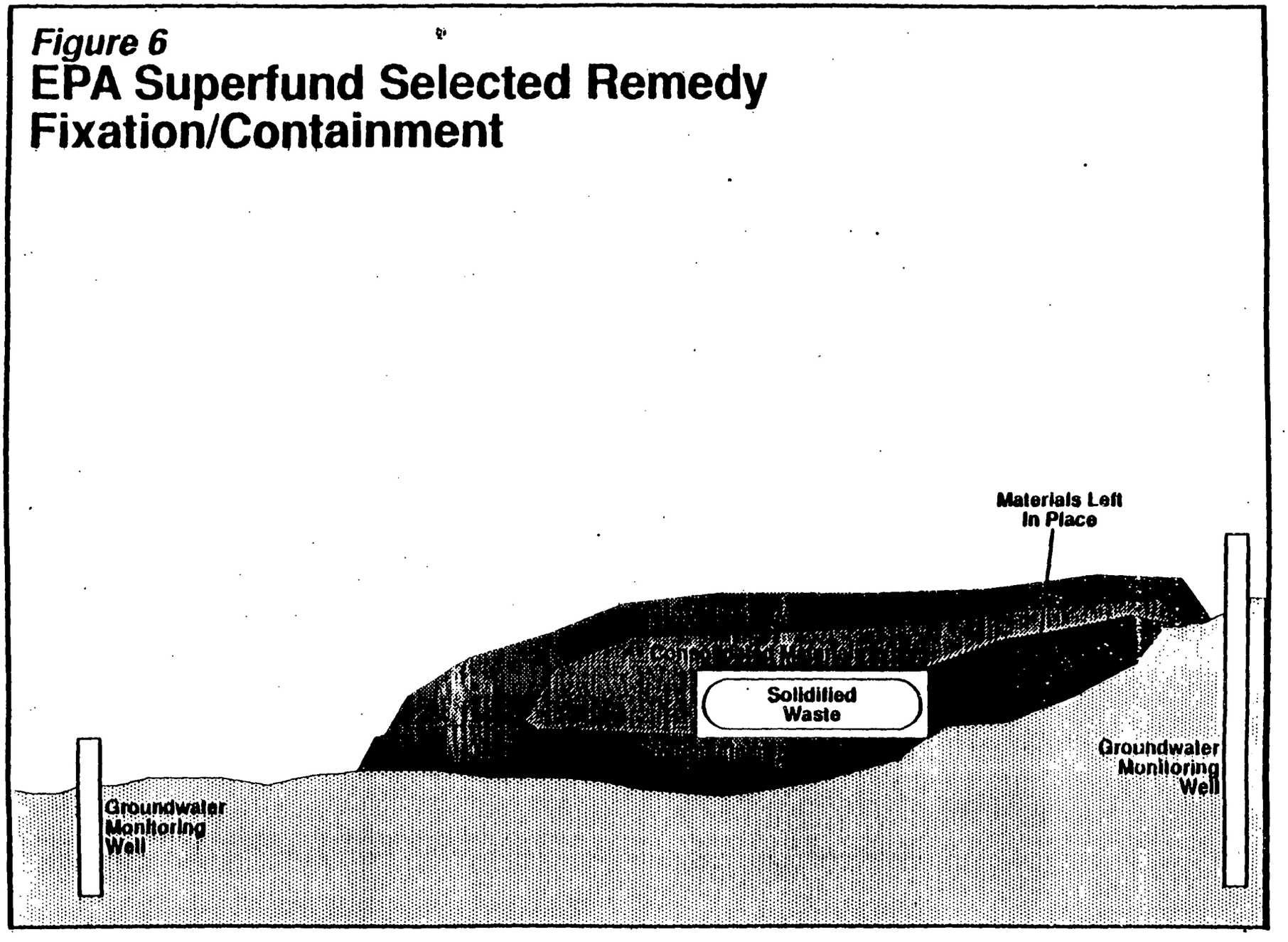
If the fixation technology is found to be impracticable, on-site containment will be implemented as the final Remedial Action for this site.

Liner Construction

The on-site containment facility would be constructed over the south sidewall of the pit. All contaminated intermixed silt and scrap, as well as additional excavated soils, would be consolidated in this area. Low permeable clay would be placed underneath any areas where contaminated materials would be placed where insufficient clay fill is present.

Figure 6

EPA Superfund Selected Remedy Fixation/Containment



Excavation and Cap Construction

No excavation of intermixed silt and scrap would be required along the south sidewall of the pit due to the fact that the cap would be constructed over this area. All intermixed silt and scrap contaminated areas outside the pit, on the bottom of the pit, and in the north pit sidewall would be excavated and placed on the clay liner.

The contaminated soils requiring consolidation only outside the pit, near the office, and in the bottom of the pit will be excavated and consolidated as outlined in the fixation/containment description. Dust control measures for these areas will also be undertaken as described in the fixation/containment section.

The intermixed silt and scrap and excavated soils will then be placed on the clay liner in relatively horizontal lifts, 12 to 18 inches thick and compacted. Adequate compactive effort would be required to minimize settlement within this material and subsequent shifting of the low permeability cap to be placed over this material. A graded filter of clayey sand will be placed on the top and the exposed sides of all intermixed silt and scrap and excavated soils, including the material remaining in the south sidewall. Subsequently, a low permeability cap consisting of a minimum or 3 feet of clay will be placed on the top and exposed side of the facility followed by a one-foot thick drainage layer and topsoil. A soil cover outside the cap area will be placed in all areas excavated as outlined in the fixation/containment description.

Upon completion of construction of the cap, the site would be restored to final contours that minimize erosion and control surface water runoff. Seeding or other remedies will be implemented to reduce erosion. Abandonment of unneeded existing wells will be undertaken as described in the fixation/containment alternative.

Operation and Maintenance

Operation and maintenance will be the same as that outlined in the fixation/containment alternative with the exception of groundwater monitoring. On-Site containment will require semi-annual groundwater monitoring whereas fixation/containment may have annual groundwater monitoring.

B. STATUTORY DETERMINATIONS

The selected remedy was evaluated in terms of the statutory requirements for CERCLA Remedial Actions. Below is a summary of the determinations.

Protection of Human Health and the Environment

The selected remedial alternative meets all statutory requirements, particularly those of CERCLA as amended by SARA. The highest priority is the protection of human health and the environment. The use of the fixation/containment remedy protects human health and the environment by permanently immobilizing contaminated materials in a solidified matrix, and isolating the remaining materials from the environment in a unit which is permanently above maximum groundwater elevations. Continued protection is assured through groundwater monitoring, site maintenance, access restrictions, and deed restrictions.

Assurance that implementation of the remedy will not pose unacceptable short-term risks to workers or the public is provided through the pilot study. The pilot study will, in part, quantify the air-borne releases of contaminants caused by implementation of the remedy. An evaluation of the release estimates with respect to health based criteria will establish whether excavation and processing can be undertaken without excessive contaminant releases. If it is found that airborne releases are excessive and that revised practices and/or equipment cannot adequately lower these releases, the remedy will require capping of the entire area of concern as outlined in the On-Site Containment Alternative. Protection of human health and the environment will also be obtained with the capping alternative.

Attainment of Applicable or Relevant and Appropriate Requirements

The selected remedy will meet all ARARs as specified below.

1. Relevant and appropriate portions of the TSCA land disposal requirements (40 CFR 761.60(a)(4)) will be met by accounting for these regulations during remedial design.

2. In the event that additional PCB capacitor(s) are discovered during remedial action, TSCA transportation (40 CFR 761.65) and disposal (40 CFR 761.75 and 40 CFR 761.60(b)(2)) regulations will be followed.

3. Relevant and appropriate portions of the RCRA regulations pertaining to hazardous waste landfill closure and groundwater monitoring (40 CFR Subpart F, 40 CFR 264.310) will be accounted for during detailed design of the cap and groundwater monitoring program.

4. Worker protection standards for employees involved in operations at CERCLA sites will be ensured by the application of the applicable OSHA regulations (29 CFR Subpart 1910.120).

5. National primary and secondary air quality standards will be met by application of the National Ambient Air Quality Standards for Particulate Matter (40 CFR 50.6).

6. Relevant and appropriate portions of the State of Idaho wel construction standards will be met by accounting for these regulations during remedial design.

7. State of Idaho fugitive dust control (16.01.1251,52) and toxic emission (16.01.1011.01) standards will be met by fugitive dust control measures and assistance in the final design of the air monitoring program by the state of Idaho Air Quality Bureau.

To be considered:

8. EPA Cancer Assessment Group, EPA Office of Toxic Substances, and EPA Office of Health and Environmental Assessments Carcinogenic Potency Factors for PCBs in the development of the final pilot test plan and remedial action air monitoring program.

9. American Conference of Governmental Industrial Hygienists recommended PCB exposure levels in the development of the final pilot test plan and remedial action air monitoring programs.

Cost Effectiveness

The final selected remedy meets the requirements of cost-effectiveness as this alternative provides for permanent treatment and contaminant release minimization for a cost significantly less than other alternatives exhibiting a similar level of protection. The estimated present worth range of the selected remedy is $1.33 to $1.89 million, in comparison to $2.88, $4.11, $8.44, and $24.15 million. Additional cost of these is the result of excavation and processing of larger volume of material, transportation and off-site landfilling, and more costly technologies such as incineration.

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable.

The selected remedy is specifically designed to determine the maximum extent to which the permanent alternative treatment technology, fixation, can be used. This will be accomplished through the pilot study wherein a determination will be made as to what portion of the contaminated soil can be practicably treated (See Description of Selected Remedy). When compared to all alternatives, the selected remedy provides the best balance in terms of long-term effectiveness and permanence, reduction in toxicity, mobility, or volume, short-term effectiveness, implementability, cost, consideration of the statutory preference for treatment as a principal element, and state of Idaho and community input. The selected remedy provides the best balance of the above criteria by the use of a treatment technology which will effectively isolate the waste in a permanent matrix. Implementability and cost are best addressed in the remedy through the pilot study which will establish which portions of the waste materials can be practicably treated.

Preference for Treatment as a Principal Element

The statutory preference for treatment that permanently and significantly reduces the toxicity, mobility, or volume of hazardous substances as a principal element is met by the use of the fixation technology. Fixation will be used to the maximum extent practicable on contaminated soils. The use of this technology provides a permanent reduction in mobility of the wastes. Fixation in conjunction with the containment, monitoring, and maintenance will provide a remedy which will effectively isolate the contaminants from the environment.

A pilot study will be undertaken to determine which portions of the contaminated materials can be treated. If the pilot test shows that fixation is not practicable for any of the contaminated materials, an on-site containment remedy will be implemented. The on-site containment approach will not include treatment as a principle element.

APPENDIX I

INDEX TO ADMINISTRATIVE RECORD

Administrative Record Index not included.

APPENDIX II

MC CARTY'S/PACIFIC HIDE AND FUR RESPONSIVENESS SUMMARY

Overview

McCarty's/Pacific Hide and Fur, a recycling and scrap material yard, is located on the outskirts of Pocatello. The site is bordered by Highway 30 on the north and Union Pacific Railroad mainlines on the south.

In 1983, Idaho Department of Health and Welfare (IDHW) investigated the site after receiving a complaint about improper disposal of capacitors containing PCBs. EPA was called in, further investigations were undertaken, and an emergency removal action was done in March 1983. At that time EPA removed 593 capacitors, 30 cubic yards of contaminated soil and 21 drums containing hazardous waste. In September 1983, the McCarty's/Pacific Hide and Fur was listed on the National Priorities List. This is a list of hazardous waste sites across the nation designated for long-term study and if necessary, cleanup. In 1986, community interviews were taken for the community relations plan. Work on the Remedial Investigation/Feasibility Study (RI/FS) began in 1987 by the Potentially Responsible Parties (PRPs) with EPA and IDHW oversight. The RI/FS is the comprehensive study of site conditions, hazards, possible exposure pathways, and cleanup alternatives. The RI/FS produced by the PRPs required revisions before it was acceptable for release. Specifically, an additional alternative was evaluated and the risk assessment was elaborated upon. The revised RI/FS included EPA and IDHW additions.

The summary will discuss the comments and concerns raised by the local community, regarding the problems at the site and the recommended alternative for cleanup.

The PRP's at the site are the McCarty family, Pacific Hide and Fur Depot and the Idaho Power Company. Negotiations are in progress between EPA, IDHW, and the PRP's to have the PRP's run and finance the remedial design and remedial action.

The citizen's concerns about this site are the cost and how it will effect the PRP's. There are also concerns about past and potential contamination, and the quality of the alternatives reviewed.

Background on Community Involvement and Concerns

In 1983 the Idaho Department of Health and Welfare, Division of the Environment (IDHW) received a complaint about improper disposal of PCBs at the site. EPA began an investigation and ordered an emergency removal of the PCB containing capacitors, contaminated soil and drums containing hazardous waste. PCB's have been known to cause cancer in laboratory animals, and is a potential human carcinogen.

The community became aware of the site during this action. Then, in September 1983, McCarty's/Pacific Hide and Fur was listed on the National Priorities List. The local newspaper covered the listing and continues to follow the story.

In 1986, EPA conducted community interviews and a community relations plan was developed. The following concerns were expressed to EPA and IDHW during the interviews:

- Community expressed concern that the Superfund process was too complex and takes too long. Officials and public needed to be kept informed and involved throughout the process.
- Community members expressed concern over possible health threats during the study from either PCBs or other unknown contaminants.
- The area has "more than its share" of hazardous waste sites or other environmental problems.
- Economic impact on the community.

SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD

Comments and questions raised during the McCarty's/Pacific Hide and Fur comment period on cleanup alternatives are summarized below. The public comment period was held from April 15, 1988 to May 13, 1988. The comments are grouped and categorized by subject. Comments from the PRP's are listed at the end of the comment from the public.

As part of the comment period, a public meeting was held on April 19, 1988 with approximately 30 people attending. The meeting consisted of about 45 minutes of presentation followed by a question and answer and comment period. EPA and IDHW made the presentations on EPA's role and an overview of the Superfund process, IDHW's role and applicable laws and regulation, and reviewed the alternatives considered, and EPA/IDHW proposed plan.

Questions from the audience centered around the cost of the EPA/IDHW preferred alternative, technology concerns, contamination concerns, and questions about the Superfund process. A transcript is available in the information repositories and the administrative record.

COST CONSIDERATIONS

1. How is the Superfund process funded and who decides how much the Potentially Responsible Parties are going to pay?

EPA RESPONSE:

Superfund is funded by a tax on chemical and petroleum industries. Any work done that is paid for by Superfund, the EPA will attempt to cost over from the PRP's for costs incurred. Generally, the PRP's decide among themselves how much each party will pay toward the cleanup.

2. If the PRP's can not or will not pay, and EPA pays the cost of the cleanup, how much does the state contribute to the cost of the project?

EPA RESPONSE:

If EPA were to completely fund this site, the state would contribute 10% of the total cost of the remedial action.

3. How much has been spent on the site to date?

EPA RESPONSE:

The cost plus interest is about $800,000. This is the cost of the initial emergency removal action plus interest from that time, but does not include EPA or IDHW or PRP costs incurred during the RI/FS phase.

4. How can EPA choose a remedy that it so costly when the contamination at this site was taken care of during the emergency removal in 1983?

EPA RESPONSE:

The emergency removal action was undertaken to reduce the immediate hazard created by the contamination on-site. Extensive soil contamination remains which constitutes a long term risk to human health and the environment. The proposed remedy is designed to reduce or eliminate this long term risk in the most cost effective manner.

TECHNOLOGY ISSUES AND QUESTIONS

1. Has the solidification process that EPA is recommending been proven at other sites?

EPA RESPONSE:

Solidification has been used for many years on inorganic waste. In the past several years study on this technology has been expanded to include solidification of organic wastes, including PCBs. These studies have shown that it is feasible to immobilize organic materials in a solidified mass, provided the proper proportion of materials are maintained and material handling is closely controlled.

Nine Superfund site remedies selected during the last year include solidification as part of the remedy. One Superfund site remedial action which is approximately 60% complete, includes fixation of soils contaminated with PCBs and metals with placement of the fixated material below the water table.

The research undertaken in the past as well as the widespread use of this technology indicates that fixation is a proven technology.

2. What if this technology fails after five or ten years?

EPA RESPONSE:

Every five years the remedy will be re-evaluated to determine if failure is possible, probable or has occurred. This check is done in addition to the ongoing monitoring and maintenance at the site. If a failure does occur, EPA will do additional work to correct the situation as needed.

3. How long will the stablized material last before it begins to deteriorate as all cement materials do?

EPA RESPONSE:

Past research has shown that solidified materials can hold up well under severe conditions. The remedial design will include testing to determine the best combination of materials for use with the site soils. Tests will be run to estimate how long the material will last. The final product should exhibit many of the characteristics of concrete. In addition, the material will be under a cover that will protect it from the weatherization process.

CONTAMINATION QUESTIONS AND CONCERNS

1. Some of the initial groundwater tests showed some traces of contaminants yet EPA indicated that the tests may be questionable, why? Have other tests shown any contamination?

EPA RESPONSE:

Groundwater sampling results done in 1983 were questionable due to poor sampling and/or laboratory procedures. Sampling and analysis done since then during the remedial investigation strictly followed standard protocol. Results showed no PCB contamination in the groundwater samples above detection limits.

Due to these results and the quality of the sampling analysis procedures used during the remedial investigation, EPA has concluded that there is no PCB contamination in the site groundwater at the present time.

2. If PCB's show up in the aquifer at any time, would additional steps be taken to correct the problem?

EPA RESPONSE:

Yes. The first step would be additional testing to determine the levels and extent of PCB. If the levels were above health based standards, additional corrective measures would be implemented.

3. Is there any potential for surface water contamination, or would flooding of the Portneuf River impact the site, causing the river to become contaminated?

EPA RESPONSE:

The contaminated soils are outside of the 100 year flood plain. Therefore any storm event less than or equal to the 100 year flood would not cause the Portneuf River to inundate the site. There are no other surface water contamination routes. In addition, all the alternatives, except the no-action alternative, will cover the site with clean soil or remove the contaminated materials, covering the contamination and preventing either surface water or groundwater contamination.

4. Because the work includes moving soils and scrap around, won't the potential for airborne contamination increase?

EPA RESPONSE:

EPA is planning a small scale pilot study to determine just how much soils can be moved around without increasing the airborne dust levels at the site above health based limits. In addition, equipment and work practices will be used to reduce the amount of dust raised during the pilot study and the final work. If the pilot study shows fixation to be infeasible because of excessive dust emissions, then excavation will be limited to that required for capping.

5. Are there other contaminants at the site besides the PCBs?

EPA RESPONSE:

Various types of debris and waste existed on-site in the past. The site was used as a scrap yard disposal area from the 1950's to 1979. During the emergency removal action, drums of hazardous wastes and contaminated soils were removed. Presently, various types of debris remain. Although PCBs are the only remaining contamination identified during the remedial investigation, it is possible although not probable that additional wastes will be discovered.

6. Have all the PCB contaminated capacitors been removed from the site?

EPA RESPONSE:

We believe that most, if not all, have been removed. However, when work continues at the site, we may find more. Any that remain will be removed and properly disposed of.

7. Since 1983, have there been any indications of groundwater contamination?

EPA RESPONSE:

Samples during the remedial investigation (1987) showed no PCBs above the detection limit. (See question 1 of this Section also.)

8. Has there been any off-site migration of PCBs?

EPA RESPONSE:

There has probably been some airborne releases of PCB due to wind erosion on the site. However, the amount has not been measured.

9. When the wells were drilled, were they properly sealed so that contamination would not migrate to the groundwater?.

EPA RESPONSE:

The older wells were constructed in a manner which would be unacceptable if used today. However, groundwater data shows that the wells are not providing a conduit for PCB migration into the groundwater. During design of the remedy, the older wells will be re-evaluated to determine which ones should be kept for long term groundwater monitoring. The remainder will be properly sealed. The wells put in during the remedial investigation were constructed in a manner which prevents contaminant migration through the well. The answer provided in the public meeting regarding well construction was in reference to the newer wells.

ALTERNATIVES REVIEWED

1. Why has EPA chosen an alternative that moves everything around. Why not explore containing the material wherever it is and capping it there?

EPA RESPONSE:

The selected remedy is the one that best meets the criteria established by EPA for the site. It is true that during the remedial action, contaminated materials will be moved and separated. The pilot study is specifically designed to determine how dust emissions can be minimized and if the emission levels are below health based standards. If excavation, separation and treatment can be undertaken without excessive risk to workers or to the public, this alternative will provide an added assurance that the PCBs are immobilized in a solid matrix. If the pilot study proves that PCB and dust emission are excessive, then the waste will be capped in place with only a minimal amount of material movement.

2. If EPA's preferred alternatives does not work, what is the second choice?

EPA RESPONSE:

The selected alternative includes on-site containment or capping, if the fixation process proves to be infeasible.

OTHER ISSUES OF CONCERN

1. Regarding Technical Assistance Grants, would it be appropriate for the owners of the site to put up the 35% match?

EPA RESPONSE:

It has never been done, although owners of other sites have given money to community groups to provide technical assistance.

2. Does EPA agree with the RI/FS conclusion that there is no imminent hazard to the people of Pocatello?

EPA RESPONSE:

EPA believes there exists a potentially long term risk to both human health and the environment due to PCB contamination remaining on-site in its present condition. The acute hazard at the site was taken care of during the removal action in 1983. However, the long term potential risk still exists.

3. Was the site placed on the National Priorities List because of groundwater contamination and what was its score?

EPA RESPONSE:

Groundwater, surface water, and air contamination and the resultant exposures, or potential exposures, are evaluated in the ranking process. In this case potential groundwater exposure was the predominant factor. The Hazard Ranking Score was 42.25. A score of 28.5 is required for inclusion on the list. The RI/FS provided additional information on the potential migration routes and exposures.

4. PCB's are classified as a potential human carcinogen yet have been in production for over sixty years by the Monsanto Company; has Monsanto ever done any studies on their employees to document PCB as a cancer causing agent?

EPA RESPONSE:

Monsanto Corporation has done studies on health effects on Monsanto plant workers. These studies showed no statistically significant increases in adverse health effects in Monsanto plant workers exposed to PCBs. Minor dermal irritations were noted, but these were attributed to poor hygiene rather than PCB exposure. (Personal communication, Dr. John Craddock, Product and Environmental Safety Director, Monsanto Corporation.)

5. If government standards change or have not been established for particular levels of allowable contamination, how will this affect the planned cleanup alternative?

EPA RESPONSE:

Any cleanup standards which are not ARARS, will be established using EPA's risk assessment analysis. Any standards promulgated after the ROD is signed, that would impact activities on site will be evaluated to determine whether they are ARARS and therefore need to be addressed on site.

6. Is there any litigation pending on the site, and if so, how will this affect the cleanup efforts?

EPA RESPONSE:

The EPA is presently in litigation with the Potentially Responsible Parties for cost recovery of the emergency removal costs and interest on that sum. The litigation should have no substantive impact on the remedial action.

7. What roles does the federal court have in the decision over which plan is ultimately decided upon?

EPA RESPONSE:

There is no provision for pre-enforcement judicial review in the Superfund law. Once the Record of Decision is made, the only time the Potentially Responsible Parties can address the issue in court would be in cost recovery action, or if EPA were to request the court to enforce action required under an Order.

8. Were alternatives which separately treated the hotspot areas evaluated?

EPA RESPONSE:

Yes. Treatment of hotspot contamination was evaluated to determine if it could be used in conjunction with other remediation activities. Treatment of all hotspots and treatment of only the known hotspots were both evaluated.

Because of the scrap and silt volume and small hotspot size, locating all the hotspots throughout the material would require extremely extensive soil sampling. Large numbers of samples would be necessary to identify hotspots on a statistical basis. This effort would not be cost effective and would be time consuming. Safety concerns would also be present due to the fact that extensive material sampling would be necessary. Because of these factors, it is the Agency's belief that treatment of all hotspots is not practicable.

During the Remedial Investigation, surface and subsurface soil samples were obtained using a grid system. The sample locations were staked but were not tied into a known benchmark. Disruption of the sample locations occurred after sample collection when the investigation team continued excavation in their efforts to characterize the geology and search for any remaining capacitors. Because of the small size of the hotspots, the disruption of the sample location and stakes and the fact that surveying to establish sample location was not undertaken, relocating the known hotspots is not possible using existing information. Additional soil sampling would be required. As with any attempt to locate all hotspots, this effort would require extensive sampling and analysis, with the results being identification of only a fraction of the total number of hotspots. This would not be cost effective, would not address the entire problem, and would be very time consuming. Because of these factors, it is the Agency's belief that separate treatment of the known hotspots is not practicable.

The following comments in summary and responses are in response to a letter received from the Potentially Responsible Parties' consultant, for the complete text of the comments, see the Administrative Record.

1. RCRA landfill closure and monitoring requirements do not apply to this site, and there is no legal authority for that applicability.

EPA RESPONSE:

TSCA regulations do not include requirements for PCB landfill closure, including capping. Therefore, portions of the RCRA landfill closure regulations are used at PCB landfill sites. Closure (capping) of this site should resemble closure of a PCB landfill and should, therefore, follow relevant and appropriate portions of the RCRA closure regulations.

The RCRA groundwater monitoring and post-closure requirements are designed in part to:

1. Ensure contamination is detected if present in the groundwater, and

2. Maintain hazardous waste landfill cap integrity.

Because the groundwater monitoring and post-closure programs for the McCarty's/Pacific Hide and Fur site will be designed and implemented with these same objectives in mind, it is appropriate to use portions of the RCRA groundwater monitoring and post-closure regulations as a reference. Therefore, portions of these regulations are relevant and appropriate.

2. On-site containment provides a signficant added measure of security as compared to the fixation/containment alternative due to the fact that substantially less excavation is necessary, and therefore less dust emissions produced.

EPA RESPONSE:

The chosen remedy specifically addresses the dust emission issue by the use of a pilot study (see Decision Document, Section X). If dust emissions turn out to be a significant health hazard which cannot be adequately lowered through changes in work practices, the selected remedy allows for on-site containment as the remedy to be implemented.

3. The added measure of security provided by the fixation/containment alternative as compared to on-site containment with regard to environmental effects (adverse impacts on the adjacent environment including lakes, rivers, wildlife habitats, etc.,) is negligible because both remedies provide adequate barriers along the groundwater pathway. Also, the site is located outside the 100 year flood plain of the nearest river and will therefore not impact the rivers.

EPA RESPONSE:

Immobilizing the contamination in a solidified matrix will further reduce the potential for migration when compared to capping alone. The reduced migration potential in both the groundwater and air routes dictates that the fixation/containment alternative be ranked higher under this criteria than the on-site containment remedy. The EPA did not attempt to quantify this difference.

4. The on-site containment alternative that is preferred by the PRPs, provides for handling all suspected containment soils and, therefore, there is no risk that a hotspot would not be remediated associated with this alternative.

EPA RESPONSE:

Both the fixation/containment alternative, and the on-site containment alternative provide for handling of the same volume of material. Therefore, neither option would allow contaminated soil to not be remediated.

5. In comparing the on-site containment alternative to the fixation/containment alternative, it is found that fixation/containment will require additional measures for prevention of direct contact by on-site workers. This will significantly increase the time and cost of this alternative.

EPA RESPONSE:

The additional cost and time have been taken into account and are reflected in the anticipated schedule and cost estimates provided in the RI/FS package. The agency feels that the incremental increase of time and money is offset by the increased protectiveness of the remedy.

6. Because the on-site containment alternative has substantially less excavation and material handling and no material processing, it provides a significant "added measure of security" over the fixation/containment alternative with respect to failure of the dust control procedures.

EPA RESPONSE:

One of the primary tasks of the pilot test is to determine what reliable methods can be employed to control airborne emissions during remedial action. In addition to the use of reliable safety practices and procedures, an air monitoring program will be implemented during remedial action to ensure that emissions are kept below pre-established health based limits. In the event these limits are exceeded, the activity causing the emissions will cease until such time as additional methods or practices can be implemented which will lower the emission rate.

7. The type of soils (silt) at the site are easily airborne under the right conditions, making the project vulnerable to excessive airborne releases. The dry climate in the region also increases the likelihood of airborne releases of dust during excavation and processing. Additionally, the prevailing wind direction is from the southwest toward the majority of the population of Pocatello. The amount of dust released during the remedial investigation was significant, as shown in the video tapes of these activities.

EPA RESPONSE:

The potential for airborne releases is recognized and appreciated by EPA. Therefore one of the first tasks in the pilot test is to determine if the air emissions would be excessive. Without the results of this testing, a fully informed decision on the practicability of excavation and processing cannot be made. It is for this reason that a pilot test is required.

8. Spraying water to control dust will not be effective at this site due to the fact that the casting and loading techniques required during excavation will cut below the surface of the material and thus release the dryer soils beneath the wetted surface. Additionally, hooded processing equipment does not contain the dust generated during loading and unloading operations. Hooding practices also do not contain the dust produced during excavation unless the entire area to be excavated is enclosed in a temporary structure with appropriate air handling equipment such that the exhaust air is filtered prior to release. Enclosing the entire area is totally impractical for the site given the vertical and horizontal clearances required by excavation equipment and the topography of the area to be excavated.

EPA RESPONSE:

Wetting the excavation site may be used in conjunction with other dust control measures (e.g., wind fences) to limit the emissions during excavation. Specific fugitive dust control practices and/or equipment will be evaluated during the pilot test to determine if excavation and processing is practicable in terms of limiting fugitive dust releases. Emissions produced during the loading and unloading of the processing equipment will be part of the total emissions for which the pilot test monitoring program will be designed. EPA agrees that encapsulating the entire excavation and processing area within a temporary structure is not feasible due to the factors listed by the PRPs above, nor is it within the scope of the selected remedy.

9. Fixation/containment provides for solidification of a portion of the contaminated silt and scrap which may be deemed treatment. This alternative appears to rate higher than on-site containment in the reduction in toxicity, mobility, or volume criteria as defined in the Feasibility Study. However, this is impossible to quantify due to several factors. First, the technology has no track record with respect to PCBs. While it has been applied to a PCB site recently, its long-term performance and effectiveness has not been demonstrated. Additionally, with only one implementation, the impact of variable field conditions cannot be assessed. Secondly, the magnitude of the volume of material to be fixed cannot be determined. Various estimates can be generated based upon the results of pilot scale field demonstration of excavation, material processing and fixation operations. However, the actual volume treated can only be determined after completion of the remedial alternative given the extreme variability of conditions and contaminant levels within this fill unit.

EPA RESPONSE:

The relative difference in the two alternatives based on this criteria is believed to be significant due to the fact that past research as well as feasibility studies for other Superfund sites and the remedial action using fixation as a treatment technology for PCB contaminated soils (see comment 1) all indicate that fixation is a viable treatment technology for PCB contaminated soils. Past testing designed to simulate long-term durability has shown that fixated materials can be designed to withstand extreme weathering conditions. Technology evaluations undertaken for other Superfund

sites have reached similar conclusions with regard to the use of fixation technologies. Also, practical implementation has proved viable at another Superfund site in which the fixation remedy is well underway. The degree of reduction in toxicity, mobility, or volume will be determined in the pilot test, thus firmly establishing whether or not the site specific conditions are amenable to the use of the fixation technology.

10. On-site containment must be rated above fixation/containment with respect to demonstrated performance and reliability and, therefore, with respect to reducing long-term risks.

EPA RESPONSE:

The revised Feasibility Study ranked on-site containment above the median and fixation/containment below the median in terms of demonstrated performance and reliability. Extensive research has been done and this technology is presently in use (see comment 1). However, because long term data was specifically what this criteria was designed to evaluate, the below the median ranking is justified because long-term data on this technology is not available.

The reduction in long-term risk is addressed under several other criteria as well as this criteria, making a conclusion on long-term risk based solely on demonstrated performance inappropriate. However, it should be noted that the pilot test will be designed to measure the performance of the fixated materials under extreme conditions simulating long-term weathering. The results of this testing will provide ample information on long-term reliability of the site specific fixated matrix.

11. Implementability criteria were established to evaluate the alternatives with respect to undertaking the Remedial Action Plan. Both the EPA and the PRPs agree that On-Site Containment rates above Fixation/Containment in terms of Technical Feasibility, Availability and Constructability. Additionally, both agree that there is only minor variation in rating the alternatives with respect to Timeliness, Operation and Maintenance and Administrative Feasibility. Therefore, it can be concluded that On-Site Containment rates above Fixation/Containment overall with respect to implementability criteria.

EPA COMMENTS:

The revised Feasibility Study produced by EPA indicates that On-Site Containment can be ranked slightly higher than Fixation/Containment in overall implementability. However, when looking at the entire criteria set and relative rankings as provided in the revised Feasibility Study, Fixation/Containment is shown to rank higher overall than On-Site Containment.

12. A pilot scale field demonstration is required to determine the implementability of the Fixation/Containment alternative in addition to a bench scale demonstration to design the mix and demonstrate the performance and reliability of the technology. Preliminary consideration of the demonstration programs indicate there are five decision points. Any of these decision points would prove fixation is not practicable but all of which must be decided positively for the fixation technology to be feasible:

1. The first decision point is associated with the ability to excavate the entangled silt and scrap. Based upon this decision, a determination can be made as to how much material can practicably be excavated.

2. The second decision point is associated with the success of screening to reduce the particle size for application of the fixation process.

3. The determination of the amount of material excavated and the amount generated by screening amendable to treatment combine to form a third decision point based upon the comparison on how much can practicably be fixed.

4. The excavation and material processing phases of the demonstration program can be used to assess the risk of fugitive dust emissions and the effectiveness of dust control techniques to reduce this short-term risk to acceptable levels.

5. During the bench scale demonstration, the success of fixation can be assessed with respect to decreasing the mobility of PCBs. Additionally, fixed samples can be submitted to repeated freeze/thaw and wet/dry cycles to model the long-term reliability of the technology.

EPA RESPONSE:

Criteria similar to these will be incorporated in the pilot test to establish feasibility of fixation for the McCarty's/Pacific Hide and Fur Superfund site. (See Section X of the Decision Summary.)

APPENDIX III

ARARs

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Chemical-specific	40 CFR 761.60 (a) (4)	Requires that soils contaminated over 50 ppm of PCBs be handled as a TSCA regulated material.
	EPA ambient water quality criteria	Establishes a human lifetime cancer risk due to ingestion of water containing PCBs and aquatic life containing PCBs of 0.079 mg/l at the 10^{-6} risk.
		Establishes aquatic life criteria for PCBs for acute effects (2 ug/l) and chronic effects (0.014 ug/l).
Location-specific	None	
Action-specific	CERCLA Section 121	Establishes procedures to be observed when a CERCLA response is undertaken involving off-site storage, treatment, or disposal of CERCLA waste. Procedures are outlined in EPA Revised Procedures for Implementing Off-Site Response Actions.
	TSCA regulations	
	40 CFR 761.60(a)(4)	Requires that soils contaminated at greater than 50 ppm be disposed of in a TSCA regulated incinerator or chemical waste landfill (off-site disposal, landfill design)
	40 CFR 761.60(b)(2)	Requires that all small PCB capacitors that contain more than 500 ppm of PCBs shall be incinerated unless a determination is made that no incineration capacity exists.

APPENDIX III

ARARs

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
(CONTINUED)

40 CFR 761.75	Establishes the standards for landfills used for disposal of PCBs.
40 CFR 761.70	Establishes the standards for incinerators used for disposal of PCBs.
40 CFR 761.65	Establishes requirements for PCB storage for disposal facilities, including vehicles used for PCB transport.
RCRA regulations	
40 CFR 264 Subpart F	Establishes requirements for addressing releases from solid waste management units (landfill design).
40 CFR 264.310	Establishes hazardous waste landfill closure standards (landfill design).
OSHA regulations	
29 CFR Subpart 1910.120	Establishes worker protection standards for employees involved in operations at CERCLA sites.
National Ambient Air Quality Standards for Particulate Matter	
40 CFR 50.6	Establishes national primary and secondary ambient air quality standards for particulate matter.

APPENDIX III

ARARs

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
(CONTINUED)

State of Idaho Standards

Non-point Sources IDAPA 16.01.2050.06 & 16.01.2300.02 & 04	Prohibits the violation of water quality standards from point and non-point sources and requires the application of best management practices to maintain beneficial use of surface waters.
16.01.2200.01, 02 and 07	Prohibits the discharge to waters of the state of hazardous materials in concentrations found to adversely affect beneficial use.
16.01.2850.01, 02, 03, and 04	Requires that releases of hazardous materials to state waters be cleaned up.
16.01.1011.04	Regulates the burning of materials containing more than 5 ppm PCBs.
16.01.2301.01,02 &03	Allows short term violation of water quality for activities which result in overall enhancement of water quality.
16.01.2300.05	Defines best management practices for non-point sources.
Well construction Standards	Establishes the standards for well construction.
16.01.1251, 52	Establishes fugitive dust control standards.
16.01.1011, 04	Establishes standards for PCB incineration.
16.01.1501, 02, 03	Establishes incineration emission limits.
IDAPA 16.01.1011.01	Prohibits the air emission of toxic substances which could unreasonably affect human life.

APPENDIX III

ARARs

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
(CONTINUED)

To Be Considered

EPA Cancer Assessment Group (CAG)	Determined the Carcinogenic Potency Factor (CPF) for human exposure through ingestion to be 4.34 $mg/kg/day^{-1}$.
	Classified PCB as a Group B2 Carcinogen. Adequate animal study information is available to link PCB exposure to cancer, but inadequate epidemiological information to link PCB exposure to cancer in humans. (Probable Human Carcinogen).
American Conference of Governmental Industrial Hygienists Threshold Limit Values	Provides recommended Short and long-term worker exposure values for PCBs