

## Risk-Based Prioritization to Drive McClellan Cleanup

Since the basewide environmental cleanup effort started in the early 1980's, a tremendous amount of data has been collected on the 254 identified sites. Much is now known about the nature and extent of the contamination on base, as well as possible cleanup or remedial treatment alternatives that may be used to address the problem. Based upon this information, the Remedial Project Managers from the U.S. Environmental Protection Agency (EPA), California State Environmental Protection Agency (Cal-EPA), and McClellan AFB have developed a computerized Project Prioritization Model (PPM). The PPM evaluates sites on an individual basis and allocates resources to those sites considered to be the most highly contaminated. The PPM is a tool that assists McClellan in transitioning to a basewide risk-based approach for cleanup and remediation efforts. This approach provides the following benefits:

- 1. Improves Cleanup Process:** Enables "high risk" sites to be moved quickly toward remedial action, regardless of which geographic area they are associated with. This will accelerate progress on "higher risk" sites faster than the current schedules allow.
- 2. Eliminates Redundant Reports:** The transition to the basewide risk-based approach eliminates the need for developing repetitive Operable Unit Remedial Investigation/Feasibility Study reports.
- 3. Optimizes the Utilization of Resources:** This approach helps focus the limited resources (financial and personnel) of all parties on those actions that are associated with achieving the greatest risk reduction.

The bottom line is a more optimized cleanup process and utilization of the resources (financial and personnel) allocated to achieve cleanup. This PPM tool will be utilized by the Remedial Project Managers and the Public Representatives on McClellan's Technical Review Committee to help focus activities on doing the right things first.

The objective of the Priority Model is to address Risk-Based Goals, set by the remedial Project Managers from EPA, Cal-EPA, and

McClellan AFB (See figure 1). These five risk-based goals are:

- 1. Containment** - Containment means cutting off contaminant migration pathways such as groundwater or surface water. This includes preventing contaminated groundwater plumes from migrating offbase, or ensuring that rainwater does not wash surface contaminants into local creeks.
- 2. Hot Spot Removal** - In areas of the base requiring immediate remediation, these sites will have priority.
- 3. Cleanup VOC Contaminated Sites** - McClellan AFB initiated a "plug-in" approach to cleaning up sites with Volatile Organic Compound (VOC) contamination. The Soil Vapor Extraction (SVE) Engineering Evaluation/Cost Analysis (EE/CA) document defines the type of site and the contaminants that can be cleaned up using SVE. When a site matches these conditions, it is "plugged in" to the ongoing EE/CA action. This results in a quicker cleanup action for the site.
- 4. Demonstrate Innovative Treatment Technologies** - McClellan will continue to pursue new technologies that will allow for faster remediation at lower cost.
- 5. Investigation** - McClellan will continue to investigate any area on base with potential of contamination.

The 254 sites have been divided/prioritized based on risk to human health and the environment. This was determined by a mathematical matrix that assigns a ranking value to each site. The PPM and criteria (i.e. - Risk Calculation Factors) have been jointly developed with input and involvement from the regulatory agencies and public representatives on the McClellan Technical Review Committee. The **Funding Distribution** table in the Prioritization Model (figure 1) demonstrates the approximate allocation of funds for the remedial activity. Since the 254 sites are not all at the same point in the cleanup or evaluation process, they will be classified by one of the following four categories:

- 1. Site Inspection** - Activities involved when a site is assessed at the initial stage.
- 2. Remedial Investigation** - Activities required to evaluate

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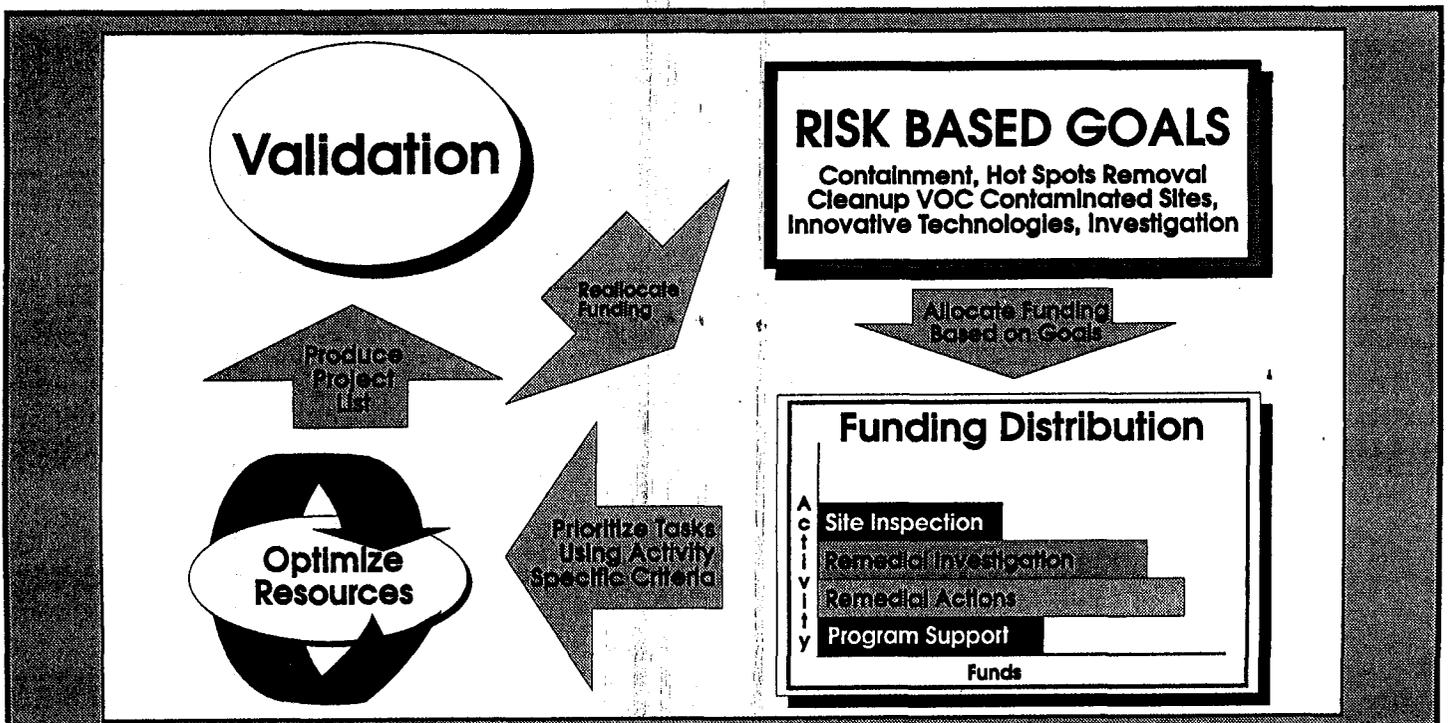


Figure 1: Priority Model

a site. Necessary for the development of a remediation strategy. Most sites at the base are in this stage.

3. **Remedial Action** - Activities directly related to cleanup.
4. **Program Support** - Activities not limited to a single site or that support the overall program goals, including, but not limited to, performing feasibility studies, treatability studies, and records of decision.

For each of the four categories, a separate priority matrix (see figure 2) is used to evaluate which sites are of greater importance relative to another. Every one of the 254 identified sites at McClellan will be prioritized by the appropriate matrix.

The following risk calculation factors are used for each site that falls under the **Site Inspection** matrix parameters:

1. **Risk - Site Specific:** Risk calculation is dependent on available data from a site. One of several risk models is used depending on where the site stands in the remedial process.
2. **Public Interest:** Input is solicited from the Public and Public Representatives concerning the sites in question.
3. **Technology Development:** A site that has potential for testing new, cost-effective remediation technology would receive an appropriate ranking value in this category.
4. **Project Cost:** The projected cost of the project is compared with the overall budget to see if funding is available for cleanup during that budget year.
5. **Base Mission Impacts:** Certain projects are sensitive to base needs. For example, if there is a site that the base needs for a construction project, then that site may receive a higher ranking.
6. **Groundwater Impacts:** Potential to contaminate groundwater.

The **Remedial Investigation** matrix includes all of the above risk factors in its matrix along with:

7. **Offbase migration:** Accounts for the possibility for any contaminant to migrate offbase.

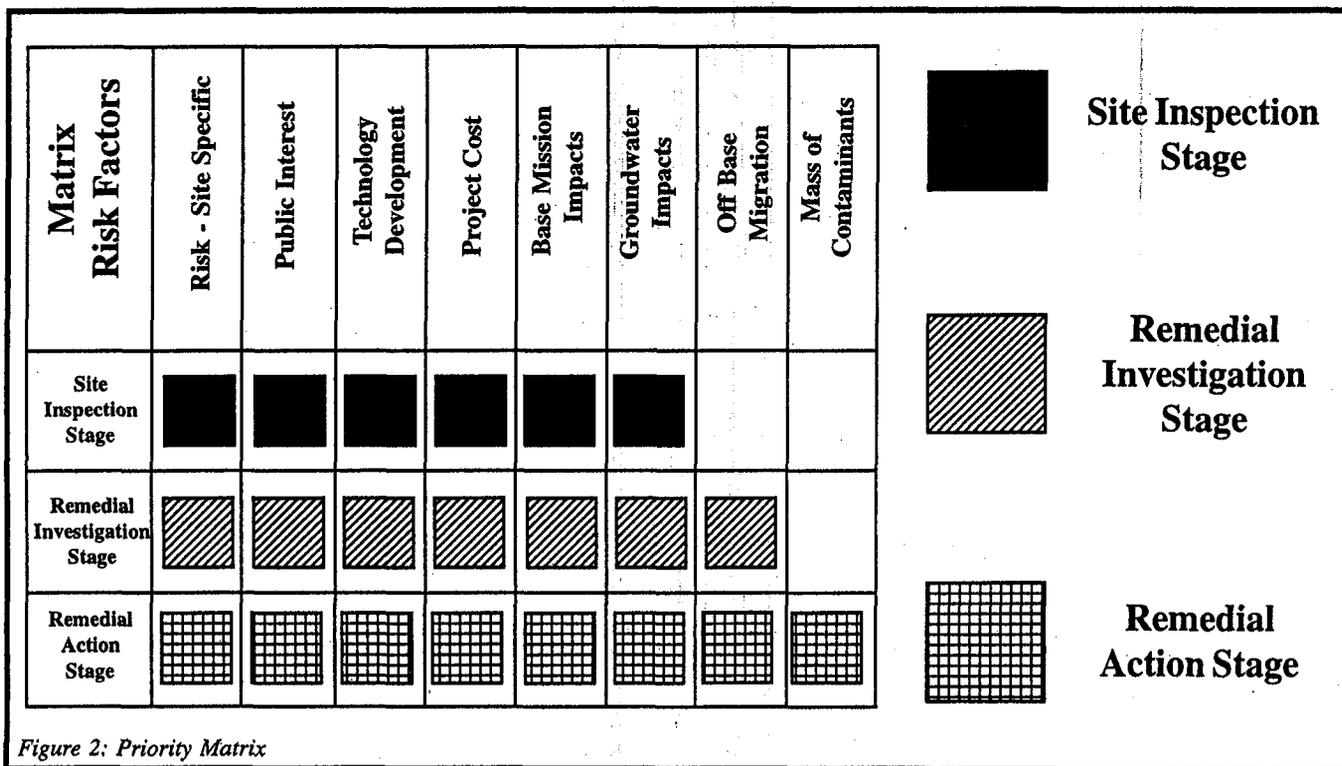
The **Remedial Action** category includes all of these risk factors in its matrix along with:

8. **Mass of Contaminants:** The total estimated amount of contaminants discovered at the site.

After being evaluated by the priority matrixes, the information obtained will be used to gain answers about actions to be pursued first. A prioritized project list will be developed based on this data. All available resources must then be optimized to make sure the project list can be adequately completed. If any discrepancies are found, all values are lowered proportionately and run through the model again.

The project list is then taken into the validation stage where the final evaluation is made. This evaluation assesses whether or not the high priority sites have adequate funding for complete remediation.

~~For further information, you can contact the Community Affairs Coordinators for the participating agencies: Dorothy Wilson of U.S. EPA at (415) 744-2179; Sue Sher of Cal-EPA/DTSC at (916) 255-3647; or Margaret Gidding of McClellan AFB Public Affairs at (916) 643-8950. You may also contact your Public Representatives: Jim Bryant, representing AFGE Local 1857 at (916) 422-0000; Burt Taylor, representing the County of Sacramento at (916) 422-0226; or Chuck Yarbrough, representing the City of Sacramento at (916) 422-0226 (days) or (916) 422-0226 (evening).~~



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