

Lead-Based Paint Sampling Status

Lead in soil from lead-based paint has been raised as an issue at Department of Defense (DoD) base realignment and closure (BRAC) properties. As required by the FY99 Strom Thurmond National Defense Authorization Act Conference Report,¹ DoD must provide information about actions addressing potential lead-based paint soil contamination at DoD facilities.

Ingestion of lead or lead dust can cause serious adverse health effects in children and in adults. To protect DoD personnel, their families, and the public, DoD is committed to complying with all applicable requirements for addressing contamination resulting from previous use of lead-based paint. Requirements for lead-based paint at residential properties are defined by the Residential Lead-Based Paint Hazard Reduction Act (42 U.S.C. 4851), commonly known as Title X (of the Housing and Community Development Act of 1992, P.L. 102-550). Title X was established to reduce childhood lead poisoning resulting from exposures to lead-based paint hazards primarily from deteriorated lead-based paint on surfaces and in soil and dusts at target housing. It has specific requirements that must be considered in the

transfer of federally owned housing. The risks from soil contaminated by the normal weathering and peeling of lead-based paint at nonresidential property are unknown. EPA is planning a pilot study in FY99 to examine this problem. Until the results of the study are known, the U.S. Environmental Protection Agency (EPA) is requesting that DoD sample and remediate lead-based paint in soil using Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) standards.

The table below provides the information Congress requested regarding delays to the transfer of property because of additional lead-based paint soil sampling required by regulators at DoD facilities during fiscal year 1998. To understand the sampling concentrations in the table, please see the legend at the bottom of each page. Some of the delays in transfer resulting from negotiations over the appropriate statutory scheme, as well as sampling protocol, were difficult to quantify since these discussions occurred before the Finding of Suitability to Transfer (FOST) was submitted for formal review.

¹ A December 20, 1996, U.S. Environmental Protection Agency (EPA)

memorandum indicates that the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) may be applied to compel the cleanup of lead-contaminated soils on federal facilities. The conferees understand that, to date, EPA has only applied this interpretation of CERCLA at DoD sites. The conferees note that section 120(a)(1) and (2) of CERCLA provide that federal facilities are to comply with all guidelines, rules, regulations, and criteria “. . . in the same manner, and to the extent as such guidelines, rules, regulations, and criteria are applicable to other facilities.” Although the conferees recognize that there may be quantifiable human health risks that support response actions at certain sites with lead-based paint contamination, there is concern about consistency. The conferees are concerned about the possibility of disparate enforcement actions related to lead-based paint. The conferees direct that the Secretary of Defense include in the fiscal year 1998 annual report on environmental restoration (10 U.S.C. 2706(a)) a description of the sites, human health risks, costs, and delays, if any, related to the EPA enforcement of response action requirements for lead-based paint at DoD sites.

Delays To Transfer or Additional Response Action Necessary Due To EPA and/or State Requirement for Additional Sampling Or Work For Lead-Based Paint (LBP) At DoD Sites

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
CALIFORNIA							
Alameda Point	Residential and nonresidential structures. CPO Quarters and White Quarters (pre-1960), apartment, townhouses, & Capehart housing (1960–1978), Marina Village (1989)	The State's Department of Toxic Substances Control (DTSC) and EPA require that all soil, both residential and nonresidential, be remediated to less than 400 parts per million (ppm), the CERCLA residential preliminary remediation goal (PRG). DTSC and EPA comments on transfer documents indicate that agencies are concerned about the potential for lead contamination in soil from LBP at nonresidential sites.	EPA has indicated that it plans to sample soil randomly at nonresidential building sites prior to approval of any FOSTs. Navy soil sampling at residential areas indicated concentrations exceeding 400 ppm.	Navy maintains that evaluation and abatement of LBP in residential properties should be conducted in accordance with Title X and Title 17.	No delays have occurred as of this date, although if further evaluation and abatement to 400 ppm are required for the 1960–1978 housing and nonresidential sites, delays are likely.	Cost associated with abatement of soils to 400 ppm at the CPO and White Quarters was approximately \$30,000	Navy elected to abate the CPO and White Quarters soils to EPA's PRG of 400 ppm, to avoid any delays in transfer. The 1960-1978 housing will be transferred with disclosure. Resolution of nonresidential soil issues is pending.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Alameda Annex	Nonresidential structures	State DTSC and EPA comments on transfer documents indicate agencies are concerned about the potential for lead contamination in soil from LBP at the 31 existing nonresidential sites. The regulatory agencies have asked the Navy to address this issue prior to transfer.	No sampling has been conducted.	Navy is evaluating the regulator's position.	None yet	No additional costs yet	Resolution is pending.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
<p>Department of Defense Housing Facility, Novato</p>	<p>Five housing complexes at Novato: Spanish Housing (pre-1960), Rafael Village (pre-1960), Capehart housing (1960-1978), Knolls housing (1960-1978), and Hillside housing (post-1978)</p>	<p>DTSC and EPA will not concur on the FOST for Capehart housing, maintaining that if Navy elects not to abate to 400 ppm, the CERCLA PRG, the Navy must provide proof, in the form of a CERCLA risk assessment, that there would be no risk to future occupants as a result of soil exposures. DTSC and EPA rejected Navy's first attempt at a risk assessment as inadequate, insisting that risks must be evaluated using a CERCLA remedial investigation baseline risk assessment protocol.</p>	<p>Navy conducted composite soil sampling as part of the Navy-wide LBP inspection program. Sampling results indicated concentrations below 400 ppm at four of the five complexes. At Capehart, 3 of 88 total composite samples exceeded 400 ppm (1,221 ppm, 496 ppm, and 401 ppm). The Navy resampled this one area using EPA TSCA sampling protocol.</p>	<p>Navy's position is that Title X and State Title 17 are the appropriate statutory authorities for LBP in Capehart housing. Further, the housing was constructed between 1960 and 1978, and Title X only requires the Navy to disclose the results of the LBP assessment. In response to DTSC, the Navy conducted an abbreviated CERCLA-type risk assessment in 1997, using the California Lead-Spread Model. The assessment concluded that there were no predicted adverse health effects associated with lead in soil at the housing area.</p>	<p>None, pending agreement on the latest sampling results</p>	<p>Costs for the 1997 risk assessment exceeded \$150,000. The 1999 resampling and assessment cost approximately \$116,000. If additional work is required, there would be additional costs.</p>	<p>Navy has reevaluated risks using CERCLA baseline risk assessment requirements, as requested by DTSC and EPA, in addition to Title X and Title 17 requirements. Resolution of this issue is pending.</p>

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
<p>Department of Defense Housing Facility, Novato</p>	<p>Approximately 60 nonresidential structures used to support the housing area</p>	<p>DTSC and EPA require that all soils, both residential and nonresidential, be remediated to less than 400 ppm, the CERCLA residential PRG.</p>	<p>State (DTSC) and EPA conducted sampling at six nonresidential structures, including two one-story warehouses, a vacant lot (demolished building), a former theater, a child care facility, and bachelors officers' quarters. Soil-lead in samples ranged from 17 ppm to 1,120 ppm.</p>	<p>Navy resampled soils at the child care center, confirming a soil-lead average concentration of 503 ppm. Navy elected to abate all soil at the child care center to below 400 ppm.</p>	<p>None. By abating soil to the CERCLA residential PRG, Navy was able to avoid delays due to nonconcurrence and further study.</p>	<p>Sampling and remediation at former child care center cost approximately \$100,000.</p>	<p>Soils were abated to less than the CERCLA residential PRG, and the State and EPA approved the FOST.</p>

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Hunters Point	Nonresidential structures and residential structures	EPA insists that residential and nonresidential soil must meet the negotiated concentration of 221 ppm as established at an unrelated CERCLA Installation Restoration Program (IRP) site at Hunter's Point.	Navy performed sampling at the residential dwellings and a water tank. EPA has requested that Navy resample some of the residential areas to define the extent of contamination. Results indicated concentrations below 221 ppm. EPA also indicates that it plans to sample nonresidential areas prior to approval on FOST.	Navy contends that no further action is necessary at the residential areas, since concentrations were below 221 ppm. Further, the dwelling units will be demolished following transfer, and abatement is not required under either Title X or TSCA. Currently Navy has no plans to sample any of the 192 existing non-residential buildings prior to transfer.	None yet, although delays are anticipated if EPA and DTSC require abatement of soil in non-residential areas to 221 ppm.	No additional funds have been expended yet, except for costs associated with the re-sampling in the residential area. It is anticipated that the cost for the nonresidential area could exceed \$1 million, but this will depend on final sampling results.	Concurrence on the residential FOST is anticipated for the residential parcels. Resolution of the nonresidential issue is pending.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Mare Island Naval Shipyard	Building 930 (barracks intended for reuse as California Conservation Corps housing, a zero-bedroom dwelling)	EPA and DTSC state that Navy must address soils under CERCLA using the residential PRG for home grown vegetable production (130 ppm), or have a risk assessment performed or have a restriction placed in the Finding of Suitability to Lease (FOSL).	DTSC collected discrete soil samples from the Building 930 area. Results indicated that abatement to 400 ppm, the CERCLA residential PRG, was not required. DTSC indicated the sampling was required in order for the state to concur on the FOSL.	Barracks, zero-bedroom dwellings, are not regulated by Title X. Further, it is unlikely that the soils surrounding the barracks will be used for vegetable production during the period of lease.	None	None	Navy was able to avoid delays by including a restriction on vegetable production in the FOSL, as requested by DTSC.
Mare Island Naval Shipyard	Nonresidential buildings, a water tank, a golf course clubhouse, and a maintenance building. Proposed reuse for most of the nonresidential buildings will be by a university.	Since sites are located within areas defined by the Federal Facility Site Remediation Agreement (FFSRA), parcels require an area-wide Record of Decision (ROD) prior to FOST and transfer, and soils will be required to be abated to the CERCLA residential PRGs.	EPA and DTSC collected discrete soil samples from each of the areas scheduled to be reused as non-residential. Navy has not received the results of the sampling or indicated how the sampling will be used in decision making.	Sites are not within or associated with IRP sites, although the entire facility, fenceline-to-fenceline is defined by the FFSRA, and as such Navy will be required to address these sites as dictated by the regulatory agencies.	There are no current delays, although if abatement of soils is required, additional time may be needed to program additional funding not included in the current restoration budget.	No cost to Navy yet. It is estimated that soil cleanup to 400 ppm of the nonresidential buildings would cost approximately \$5 million.	Resolution is pending. It is anticipated that EPA and DTSC will insist that these non-residential structures be evaluated further/abated as part of the ROD under CERCLA and the IRP.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
<p>Mare Island Naval Shipyard</p>	<p>Roosevelt Terrace residential housing complexes, constructed in 1941, intended for residential reuse</p>	<p>DTSC and EPA did not concur on the FOST, insisting that lead in soil be further abated or evaluated in accordance with CERCLA.</p>	<p>Navy composite soil sampling as part of the Navy-wide LBP inspection program indicated some samples exceeded 400 ppm. Sampling performed by the Navy following abatement indicated the average soil concentrations were below 400 ppm, the CERCLA PRG, as well as the State's Title 17 criteria for children's play areas, and that only a few discrete samples exceeded 400 ppm.</p>	<p>Navy's position is that Title X, and state Title 17 should be used for residential LBP. Since the houses were built prior to 1960, soils were abated. Sampling performed by the Navy following abatement indicated that the average soil concentrations were below 400 ppm, the CERCLA PRG, as well as the state's Title 17 criteria for children's play areas, and that only a few discrete samples exceeded 400 ppm.</p>	<p>No delays have occurred. Navy declared the property excess, and the proposed purchaser of the property, encouraged by DTSC, performed additional abatement, at which point DTSC concurred with the FOST.</p>	<p>No additional costs</p>	<p>DTSC concurred on the FOST after the developer performed the additional abatement requested by DTSC.</p>

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
March Air Force Base	Basewide	DTSC stated that unless the Air Force screens for the presence of LBP and provides data relative to the level of lead on the structures and/or in the surrounding environment, DTSC cannot agree that the Air Force has adequately determined that all remedial actions have been completed.	The Air Force conducted an LBP survey of high-priority facilities at March AFB in June 1995; however, Building 659 was not surveyed. No sampling has been conducted.	The Air Force's position is that LBP is not actionable under CERCLA.	None	None	Resolution pending
Mather Air Force Base	100 non-residential structures and 668 acres	EPA and DTSC requested soil sampling for lead in soil from LBP in nonresidential areas, specifically, a water tower and a block of World War II-era wooden buildings scheduled for demolition by the county. EPA wanted both pre- and post-demolition samples.	No sampling was conducted.		None; LBP issues were addressed concurrently with other issues.	None	Air Force, with regulator concurrence, transferred the land to the county. The county is now responsible for complying with applicable LBP requirements.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
<p>Naval Communication Station Stockton</p>	<p>Five warehouses (nonresidential). Officer units and dwellings in Forrestal Village</p>	<p>EPA and DTSC have indicated that their concerns with soil concentrations at the single warehouse would be raised if the property were ever transferred. The regulatory agencies have not expressed any concern in regard to the residential structures.</p>	<p>DTSC conducted sampling at the five warehouses. Sampling results indicated that soil-lead concentrations are below 400 ppm at four warehouses and 800 ppm at one warehouse. Residential sampling indicated that 1 sample of 32 composite soil samples exceeded the CERCLA PRG.</p>	<p>Navy leased the warehouses to the Port of Stockton. The Port of Stockton will now receive the property under special legislation.</p>	<p>None, yet</p>	<p>No cost to Navy yet. If required, costs to abate soils at the single warehouse are estimated to be approximately \$10,000. If the other 235 existing non-residential structures must be addressed, it is anticipated that the cost for the nonresidential could be over \$600,000, but this will depend on final sampling results.</p>	<p>Port of Stockton has indicated that it will require the Navy to abate soil if the property is transferred to the port.</p>

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Naval Medical Center Oakland	Five non-residential buildings, the officer's club, and the CO/XO homes that are not intended for residential reuse	EPA and DTSC insist that soil in residential and non-residential areas be abated to less than the CERCLA residential PRG of 400 ppm or that a CERCLA risk assessment be performed to justify cleanup to concentrations in soil greater than 400 ppm, or they will not concur on the FOST or the FOSTs.	DTSC sampled the seven areas, using discrete sampling techniques. Concentrations exceeded 400 ppm in three of the areas. EPA and DTSC resampled two areas using proposed TSCA guidelines for composite sampling protocols. The average of the composites for each area was below 400 ppm.	Navy maintains that the applicable and appropriate requirement for evaluation and control of LBP in residential areas, including soils surrounding dwellings, is Title X and TSCA, and state implementation of Title X, which is Title 17 for LBP.	None. Navy was able to avoid delays by conceding to state and EPA's request to abate soils to 400 ppm at the former CO/XO homes.	Costs for abating soil surrounding the CO/XO homes were \$13,000 for removal and disposal of 3 cubic yards of soil.	The issues identified by the state and EPA, involving soils exceeding 400 ppm, were resolved by abating the soil surrounding the former CO/ XO homes to 400 ppm. Concerns at other sites were alleviated by follow-on TSCA/Title X sampling results. DTSC has indicated that it will now concur on the FOST.
Naval Medical Center Oakland	Housing areas: Johnson Circle (built before 1960) and the Barcelona/Santa Cruz housing complexes (built in 1974)	EPA and DTSC have insisted that Navy address soils in accordance with CERCLA, for property to be transferred, in which case soil must be abated to 400 ppm, or a CERCLA risk assessment must be performed.	Navy sampling indicated that concentrations in soil exceeded 400 ppm in the Barcelona/Santa Cruz housing.	Since housing was built between 1960 and 1978, LBP hazards are not required to be abated, only disclosed to the purchaser, in accordance with Title X.	None. Navy was able to avoid delays by conceding to state and EPA's demands to abate soils to 400 ppm at the Barcelona/ Santa Cruz housing area.	The cost for abating soil surrounding the dwelling units was \$140,000 for removal and disposal of soil.	Navy was able to avoid delays associated with a CERCLA risk assessment, as well as increased costs for the assessment, by abating soils to 400 ppm. Concurrence is anticipated on FOSTs.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Norton Air Force Base	32-acre recreation area, including camp ground, baseball field, and small office building (1,488 square feet) and a kennel	DTSC and EPA comments on transfer documents requested that LBP soil lead levels be evaluated. DTSC and EPA maintained that the presence of LBP poses a potential for a CERCLA release. DTSC also cited California emergency regulation Section 35036 of Title 17, Chapter 8, of the California Code of Regulations, "Accreditation Certification and Work Practices in Lead-Related Construction."	No sampling was conducted.		None	None	The transfer was completed. The DTSC and EPA comments were included in the transfer documents along with the Air Force's response and notification of the possible presence of LBP.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Point Molate	Nonresidential structures and residential structures	DTSC and EPA comments on transfer documents indicate that the agencies are concerned about the potential for lead contamination in soil from LBP at nonresidential sites, and will require some action on the part of Navy prior to transfer to address soil in nonresidential areas.	Navy sampling indicated concentrations exceeding 400 ppm in the residential area soils. Non-residential soils have not been sampled by either the Navy or the regulatory agencies.	Navy does not intend to abate residential soils exceeding state and EPA PRGs since the dwelling units will not be reused for residential purposes and the remaining property will be reused for non-residential purposes.	None, yet	No additional costs yet. It is anticipated that the cost for the non-residential structures could be over \$100,000, but this will depend on final sampling results, which currently do not exist.	Resolution is pending.
Presidio of San Francisco	Approximately 1,400 acres and 870 non-residential structures	EPA selected and sampled around a total of 21 structures. Intensive sampling was conducted at three structures. Less comprehensive sampling was conducted at the remaining 18 structures. All 21 structures were selected by EPA based on their potential to have high concentrations of soil lead from LBP. The sampling results generally show soil lead concentrations over 5,000 ppm.	The DTSC would not concur that all CERCLA actions have been completed because the Army did not evaluate LBP-contaminated soil in nonresidential areas.	LBP soil sampling in nonresidential areas is not a requirement under the Residential LBP Hazard Reduction Act of 1992 (Title X).	The Army's cleanup at the Presidio has not been delayed by the disagreement concerning LBP.	No additional Army costs yet	The property was transferred to the National Park Service. Resolution is pending.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Presidio of San Francisco	Approximately 290 acres and 477 residential buildings, day care facilities, schools, playgrounds, and associated buildings	The DTSC and EPA continue to request a CERCLA investigation for soil lead contamination.	Army sampled using Title X guidelines. Eighty-three percent of the buildings and all of the playgrounds had soil lead levels below 400 ppm. Soil lead concentrations exceeded 5,000 ppm at only four buildings. Fifty-six buildings had soil lead levels between 400 ppm and 5,000 ppm.	Army's policy is to comply with Title X (Residential LBP Hazard Reduction Act of 1992). The Army remediated its housing areas using the HUD guidance that was in effect when the transfer occurred.	No delay to the transfer	Remediation cost was approximately \$500,000.	The property was transferred to the National Park Service. Resolution of EPA's request for action on LBP under CERCLA is pending.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Treasure Island Naval Station	Nonresidential structures, including warehouses, training, and administrative facilities	Since representative samples were below the CERCLA residential PRG of 400 ppm, DTSC and EPA agree that no further action is required to address soil at other nonresidential sites at Treasure Island and have indicated that they will concur on future FOSTs or FOSLs.	DTSC conducted soil sampling in nonresidential areas listed. The yardwide average concentrations were all below 400 ppm.	Navy maintains that evaluation and abatement of LBP are not required under Title X or TSCA, since the population of concern, children, will have little opportunity for exposure. Navy also insists that abatement to CERCLA residential PRGs is not appropriate, but it will abate in favor of elimination of delays or protracted risk assessment studies.	None	No cost to Navy	Nonresidential soil at Treasure Island required no further action since concentrations were below the CERCLA residential PRG.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Treasure Island Naval Station	Housing areas for Treasure Island and Yerba Buena Island. All dwellings located on Treasure Island are within the boundaries of an Installation Restoration site, and lead in soil is being managed under the Navy's IRP program.	DTSC and EPA insist that all LBP be remediated to less than 400 ppm, the CERCLA residential PRG.	Navy conducted composite soil sampling as part of the Navy-wide LBP inspection program. Results indicated that some samples exceeded 400 ppm, the CERCLA PRG.	Navy evaluated the site in accordance with Title X. Navy re-sampled soils at Yerba Buena Island using the TSCA composite protocols. Sampling results indicated soil concentrations exceeding the State Title 17 criteria for non-play areas. Navy intends to abate soils, in accordance with Title X and State Title 17 criteria.	Delays are anticipated for negotiating soil cleanup requirements: CERCLA vs. Title X and State Title 17 criteria.	Additional funding will be required to abate soils to CERCLA PRGs.	Resolution is pending.
Treasure Island Naval Station	Yerba Buena Island: non-residential structures in close proximity to residential structures.	DTSC and EPA believe that non-residential structures located near residential areas should be considered in residential abatement programs.	DTSC conducted sampling for LBP at two areas. Average concentrations were 1,027 ppm and 748 ppm. Based on sampling results, DTSC and EPA concluded that further sampling of other nonresidential buildings is required and that evaluation or abatement is required.	Navy maintains that evaluation and abatement of LBP are not required under Title X or TSCA, since the population of concern, children, will have little opportunity for exposure even though these non-residential structures are located near residential structures.	None, yet	No additional cost to Navy yet. If the Navy decides to abate the eight units, additional cost would be approximately \$150,000.	The regulators' position is currently being evaluated by the Navy.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
COLORADO							
Lowry Air Force Base	536 acres and 160 facilities that include both residential and non-residential areas	The Colorado Department of Public Health and Environment and EPA stated that because hazards associated with LBP had not been fully evaluated, they did not believe the Air Force had adequate basis for determining that all remedial action necessary for protecting human health and the environment under CERCLA had been taken.	The Air Force contracted for a paint inspection of residential property in 1994. The inspection included soil samples at playground areas within the residential area. Soil lead concentrations ranged from 88 ppm to 760 ppm.	The Air Force did not concur that normal weathering of LBP constitutes a CERCLA release. As part of the transfer documents, the Air Force disclosed all available information on LBP. The playground where sampling found a soil lead concentration of 760 ppm is covered with grass. This vegetative cover is an acceptable interim control measure per HUD guidance.	None	None	The property was transferred. As part of the Economic Development Conveyance between the Air Force and the Local Reuse Authority (LRA), the LRA agreed to properly manage/abate all LBP hazards prior to unrestricted occupancy.
INDIANA							
Fort Benjamin Harrison	Housing units in Lawton Loop	The Indiana Department of Environmental Management and EPA insisted that the Army manage LBP in soil as a CERCLA release and clean up to 400 ppm.	Army sampled in the housing area and found soil lead levels over 2,000 ppm.	Army's policy is to comply with Title X (Residential LBP Hazard Reduction Act of 1992). Army remediated soil under the Residential LBP Hazard Reduction Act of 1992 (Title X).	A delay of approximately 90 days was caused by the disagreement on whether to use CERCLA or Title X and the dispute resolution proceedings that followed.		The state and EPA concurred with the FOST, and the property was transferred.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
Jefferson Proving Ground	1,200-acre central cantonment area that contains residential and nonresidential structures. Zoned for light industrial, residential, agricultural, and recreational reuse	The EPA and the state do not concur with the FOST because the possibility of the release of LBP to the environment was not evaluated.	No sampling has been conducted yet.	Army's policy is to comply with Title X (Residential LBP Hazard Reduction Act of 1992).	None, LBP issues are being addressed concurrently with other issues.	No additional costs yet	Resolution is pending.
OREGON							
Umatilla Chemical Depot	Nonresidential warehouses for industrial storage reuse	The EPA and state concurred with the FOSL for warehouse storage; however, the property cannot be transferred until a more complete LBP risk assessment is conducted.	Army analyzed 27 samples from around warehouses; results were below action level.	Army's policy is to comply with Title X (Residential LBP Hazard Reduction Act of 1992). Army's position is that LBP is not actionable under CERCLA.	None, LBP issues are being addressed concurrently with other issues.	No additional costs yet	Resolution is pending.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level

Installation	Description of Site	Regulatory Agency Action/Position	Sampling Activities*	Service/Installation Action/Position	Cause and Length of Delay	Additional Costs	Final Resolution
TEXAS							
Red River Army Depot	Nonresidential structures for industrial reuse	EPA did not concur with the property transfer because LBP information was not provided in the FOST application.	No sampling has been conducted yet.	Army's policy is to comply with Title X (Residential LBP Hazard Reduction Act of 1992). LBP soil sampling in nonresidential areas is not warranted because the current use and reuse of the property is industrial/commercial; however, the Army has agreed to the EPA's request so that the property can be transferred.	Delays have occurred because of the EPA's request for additional LBP soil sampling.	No additional costs yet	
UTAH							
Tooele Army Depot	1,700 acres of nonresidential property; 1,300 acres will be used as an industrial park and 400 will be developed for residential use	EPA and the state would not concur until the Army sampled for lead.	Army conducted sampling using 400 ppm as standard for residential reuse and 1,800 ppm for industrial reuse. Results were below the standards.	Army's policy is to comply with Title X (Residential LBP Hazard Reduction Act of 1992). Army conducted LBP soil sampling but does believe remediation is required in non-residential areas.	None, LBP issues were handled concurrently with other issues.	\$85,000 for sampling	Lead concentrations in soil were below action levels set by the state and EPA.

* Sampling Values: Title X/TSCA: 2000 parts per million (ppm) (proposed EPA Toxic Substances Control Act 403 standard)
 5000 ppm (HUD standard)
 CERCLA: 400 ppm residential soil screening level