

Cross Reference of Facilities Identified in Appendices A-2, A-3, A-4, A-5 and A-8

The following table includes all the facilities listed in Appendices A2, A-3, A-4, A-5, and A-8. The appendices are listed in the columns to the left and the numbers listed in each column corresponds to the line number found in each of the appendices identified.

| APPENDIX | | | | | FACILITY NAME | CITY | COUNTY |
|------------|-------------|------------|------------|------------|--|----------------|----------------|
| A-2 GEO | A-3 DTSC | A-4 GOA | A-5 EPA | A-8 DOD | | | |
| 13 | | | | | Aerojet General Corp. (former) | Azusa | Los Angeles |
| 1 | 1 | 9 | | | Aerojet General Corp. | Chino Hills | San Bernardino |
| 2 | 2 | 1 | 20 | | Aerojet General Corp | Rancho Cordova | Sacramento |
| 14 | | | | | Aerojet General/ Space General (former) | El Monte | Los Angeles |
| 3 | | 11 | 21 | | Alpha Explosives | Lincoln | Placer |
| 4 | 3 | 12 | 1 | 2 | Beale Air Force Base | Marysville | Yuba |
| 6 | 5 | 13 | 22 | | Casmalia Resources | Casmalia | Santa Barbara |
| 7 | 6 | 14 | 2 | 3 | China Lake Naval Air Weapons Station | Ridgecrest | Kern |
| | | | 3 | 15 | Concord Naval Weapons Station | Concord | Contra Costa |
| 8 | | 5 | 24 | | County of San Bernardino (North Rialto Area) | Rialto | San Bernardino |
| 9 | 7 | 41 | | | Denova Environmental | Rialto | San Bernardino |
| | | 18 | 5 | 5 | Edwards AFB / Jet Propulsion Laboratory | Edwards AFB | Kern |
| 10 | 8 | 10 | 4 | 5 | Edwards AFB / Air Force Research Laboratory | Edwards AFB | Kern |
| 11 | 15 | 15 | 6 | 7 | El Toro Marine Corps Air Station | El Toro | Orange |
| 12 | 9 | 16 | | | Embee, Incorporated | Santa Ana | Orange |
| | | | 7 | | Fort Irwin | Fort Irwin | San Bernardino |
| | 10 | 42 | 8 | 8 | Fort Ord | Marina | Monterey |
| 15 | | 17 | | | G.E. Plastics | Santa Ana | Orange |
| | | | | | Highway 12 and Explosive Road SEE OEA | Fairfield | Solano |
| | 11 | | | | Holchem | Santa Ana | Orange |
| 17 | 12 | 19 | 18 | | Lawrence Natl Lab, DOE Experimental Site 300 | Tracy | San Joaquin |
| 19 | | 2 | 23 | | Lockheed Propulsion Company (Former) | Redlands | San Bernardino |
| 18 | 13 | 20 | | | Lockheed Propulsion Company | Beaumont | Riverside |
| | | 43 | | | M.P. Associates | Ione | Amador |
| | 14 | | | | Marquardt Company | Van Nuys | Los Angeles |

| APPENDIX | | | | | FACILITY NAME | CITY | COUNTY |
|------------|-------------|------------|------------|------------|--|-------------------------|----------------|
| A-2 GEO | A-3 DTSC | A-4 GOA | A-5 EPA | A-8 DOD | | | |
| | | 3 | 9 | | Mather Air Force Base | Rancho Cordova | Sacramento |
| 20 | 16 | 21 | 10 | | McClellan Air Force Base | Sacramento | Sacramento |
| 21 | 17 | 23 | | | McDonnell-Douglas and Aerojet Corporation | Rancho Cordova | Sacramento |
| | | 24 | | 14 | Morris Dam Naval Command, Control and Ocean Surveillance Center | Angeles National Forest | Los Angeles |
| 22 | 18 | 4 | 17 | | NASA / Jet Propulsion Laboratory | Pasadena | Los Angeles |
| 23 | | | | | Nation Construction Rentals (former Denova) | Rialto | San Bernardino |
| 24 | | 25 | | | National Semiconductor Corporation | Sunnyvale | Santa Clara |
| | | 44 | | | National Technical Systems | Saugus | Los Angeles |
| | | 46 | 13 | 19 | Naval Weapons Station Seal Beach | Fallbrook | Orange |
| | | | 11 | | Nike 14 Launcher Area SEE San Gabriel Valley #1 | South El Monte | Los Angeles |
| | | | | | North Rialto Area SEE San Bernardino County | Rialto | San Bernardino |
| 16 | | 26 | | | OEA Aerospace (formally Universal Propulsion) | Fairfield | Solano |
| 25 | | 6 | 25 | | Olin Safety Flare / Olin Corporation | Morgan Hill | Santa Clara |
| | | | | | Pratt & Whitney SEE United Technologies | San Jose | Santa Clara |
| 26 | | 45 | | | Purity Oil Delta Gunnite | Rancho Cordova | Sacramento |
| | | 27 | 12 | | Pyrite Canyon (FUDS) | Glen Avon | Riverside |
| | | 28 | 26 | | San Fernando Valley (Area 2) | Glendale | Los Angeles |
| | 19 | 29 | 27 | | San Gabriel Valley (Area 1), El Monte Operable Unit | El Monte | Los Angeles |
| | 19 | 30 | 27 | | San Gabriel Valley (Area 1), South El Monte Operable Unit (Includes Nike 14 Launcher Area) | El Monte | Los Angeles |
| | 19 | 7 | 27 | | San Gabriel Valley (Area 2), Baldwin Park Operable Unit | Baldwin Park | Los Angeles |
| | 19 | 31 | 27 | | San Gabriel Valley (Area 4), Puente Valley Operable Unit | City of Industry | Los Angeles |
| 5 | 4 | 32 | 19 | | Santa Susanna Field Laboratory Boeing - Rocketdyne (Dept. of Energy) | Canoga Park | Ventura |
| | | | | | SDI McCormick SEE Teledyne McCormick | Hollister | San Benito |
| 28 | | 34 | | | SDI/Special Devices Inc. | Newhall | Los Angeles |
| 27 | 20 | 33 | | | Sierra Army Depot | Herlong | Lassen |
| 29 | 21 | 35 | 28 | | Stringfellow Superfund Site | Glen Avon | Riverside |
| | | | | | TDY SEE Teledyne McCormick | Hollister | San Benito |
| 30 | | 22 | | | Teledyne McCormick Selph | Hollister | San Benito |

| APPENDIX | | | | | FACILITY NAME | CITY | COUNTY |
|------------|-------------|------------|------------|------------|---|-----------------------|---------------|
| A-2 GEO | A-3 DTSC | A-4 GOA | A-5 EPA | A-8 DOD | | | |
| | 22 | | | | Tourtelot (FUDS) | Benicia | Solano |
| | | | 14 | 21 | Travis Air Force Base | Fairfield | Solano |
| | | | | 22 | Tustin Marine Corps Air Station | Tustin | Orange |
| 32 | | 8 | 15 | 18 | U.S. Naval Air Station (San Nicholas Island) | San Nicholas | Ventura |
| | | 36 | | | United Defense-Ground System Div (was FMC) | Hollister | San Benito |
| 31 | 23 | 37 | 29 | | United Technologies Corporation | San Jose | Santa Clara |
| | | | | | United Technologies SEE National Semiconductor | Sunnyvale | Santa Clara |
| 33 | 24 | 38 | 16 | | Vandenberg AFB | Lompoc | Santa Barbara |
| 35 | 25 | 39 | 30 | | Whittaker Bernite (now Santa Clarita LLC) | Saugus, S. Clarita | Los Angeles |
| 34 | | 40 | 31 | | Whittaker Ordnance | Hollister | San Benito |

GEO = Geotracker

GAO = United States Government Accounting Office

DTSC = Department of Toxic Substances Control

EPA = United States Environmental Protection Agency

DOD = United States Department of Defense

| GEOTRACKER PERCHLORATE CONFIRMED CONTAMINANT SITE DETAILED REPORT | | | | | | | | | |
|---|------------------------------|---|---|----------------------------|---------------|--|---------------------|--------------------|---|
| <u>SITE NAME</u> | <u>PERCHLORATE CONFIRMED</u> | <u>PERCHLORATE SOURCE</u> | <u>PERCHLORATE SOURCE COMMENTS</u> | <u>MULTI-RP PLUME NAME</u> | <u>STATUS</u> | <u>INVESTIGATION STATUS COMMENTS</u> | <u>SWRCB REGION</u> | <u>DTSC REGION</u> | <u>CONTAMINANTS OF CONCERN</u> |
| 1. AEROJET GENERAL CHINO HILLS | YES | ORDNANCE | Ordnance testing facility. Perchlorate associated with the Upper A-12 Test | | 5C | Small localized plume | 8 | D4 | PER |
| 2. AEROJET GENERAL CORPORATION - RANCHO CORDOVA | YES | AEROSPACE | Rocket manufacturing and testing facility | | 5C | Large off site plume; major impact on local Mun. Supply Wells; onsite soils and gw in RI/FS phase | 5S | D1 | VOC,SVO,MET,PET, PCB,PER,DIO,PAH, PHC,TCE |
| 3. ALPHA EXPLOSIVES | YES | OTHER | source was manufacture of explosives, not necessarily for military use | | 7 | pilot study for insitu remediation underway | 5S | | PER,NITRATES |
| 4. BEALE AFB | YES | ORDNANCE | Explosives Ordnance Range Disposal Pit | | 3B | Investigation planned in FY 2002/03 or | 5 | D1 | PER |
| 5. BOEING/FORMER ROCKETDYNE (SANTA SUSANNA) | YES | OTHER,AEROSPACE | | | 3B | | 4 | | VOC,PER |
| 6. CASMALIA | YES | AEROSPACE | Hazardous waste landfill most likely | | 5C | RI/FS work plan in development; 4 of 6 landfills capped. | 3 | D1 | VOC,SVO,MET,CR, PET,PCB,ACD,PER, DIO,PAH |
| 7. CHINA LAKE NAVAL WEAPONS STATION | YES | AEROSPACE | Michelson Laboratory operable unit, series of drainage ditches, dry wells and industrial sewer system. China Lake is a research and development facility for development of | | 5C | Ongoing remedial investigation (RI) being conducted to delineate extent of contamination. | 6V | D1 | VOC,SVO,MET,PET, PCB,ACD,PHC,TCE, PCE,PER |
| 8. COUNTY OF SAN BERNARDINO | YES | ORDNANCE | Former munitions bunkers and surrounding property, including Mid-Valley Landfill (owned by San | RIALTO-COLTON | 5C | Plan for additional investigation of soil and ground water submitted by county. | 8 | D4 | PER |
| 9. DENOVA | YES | ORDNANCE,EXPLOSIVES - NOT SOLELY FOR MILITARY USE | Open Burn/Open Detonation Unit. Explosives storage. | RIALTO-COLTON | 2 | Facility closed as a result of DTSC enforcement action. Drafting Order for RCA closure and corrective action. Preliminary soil sampling shows perchlorate detected | 8 | D4 | PER,MET |

Information current as of 7/6/005

| GEOTRACKER PERCHLORATE CONFIRMED CONTAMINANT SITE DETAILED REPORT | | | | | | | | | |
|---|------------------------------|---------------------------|---|----------------------------|---------------|---|---------------------|--------------------|----------------------------------|
| <u>SITE NAME</u> | <u>PERCHLORATE CONFIRMED</u> | <u>PERCHLORATE SOURCE</u> | <u>PERCHLORATE SOURCE COMMENTS</u> | <u>MULTI-RP PLUME NAME</u> | <u>STATUS</u> | <u>INVESTIGATION STATUS COMMENTS</u> | <u>SWRCB REGION</u> | <u>DTSC REGION</u> | <u>CONTAMINANTS OF CONCERN</u> |
| 10. EDWARDS AFB | YES | ORDNANCE | Rocket test facility. Perchlorate detected in soil and ground water at Air Force Research Laboratory sites. | | 5R | Interim Remedial Action (IRA) consisting of pump & treat and ion exchange. | 6V | D1 | PER,VOC,PET,TCE, PCE |
| 11. EL TORO MCAS | YES | ORDNANCE | RCRA Open Burn/Open Detonation unit located within an explosive ordnance disposal range (designated as a CERCLA | OTHER | 5C | Additional investigations are being conducted to verify nature and extent. | 8 | D4 | VOC,PET,PCB,PER, PAH,PHC,PCE,TCE |
| 12. EMBEE, INC. | YES | OTHER | metals plating facility | OTHER | 5C | Facility Investigation - Phase I completed, facility is required to conduct additional soil and groundwater investigation to identify extent of impacts. Facility is also required to conduct interim measures. | 8 | D4 | VOC,MET,CR,PER,PCE,TCE |
| 13. FORMER AEROJET GENERAL (AZUSA) | YES | OTHER,AEROSPACE | | SAN GABRIEL | 7 | | 4 | | VOC,PER |
| 14. FORMER AEROJET GENERAL/SPACE GENERAL (SOUTH EL MONTE) | YES | OTHER,AEROSPACE | | | 1 | | 4 | | VOC,PER |
| 15. G. E. PLASTICS | YES | OTHER | used perchlorate to etch teflon chips & remove organics | | 2 | Just beginning. Plan fsubmitted for additional investigation & | 8 | D4 | PER |
| 16. HIGHWAY 12 AND EXPLOSIVE TECHNOLOGY ROAD | YES | OTHER | Testing and development of various explosive devices. | | 5C | Perchlorate impacts not fully characterized. Investigation is ongoing under regional board | 2 | | MET,PER |

GEOTRACKER PERCHLORATE CONFIRMED CONTAMINANT SITE DETAILED REPORT

| <u>SITE NAME</u> | <u>PERCHLORATE CONFIRMED</u> | <u>PERCHLORATE SOURCE</u> | <u>PERCHLORATE SOURCE COMMENTS</u> | <u>MULTI- RP PLUME NAME</u> | <u>STATUS</u> | <u>INVESTIGATION STATUS COMMENTS</u> | <u>SWRCB REGION</u> | <u>DTSC REGION</u> | <u>CONTAMINANTS OF CONCERN</u> |
|--|----------------------------------|-------------------------------|--|---|---------------|--|-------------------------|------------------------|---|
| 17. LAWRENCE LIVERMORE NATIONAL LABORATORY, SITE 300 | YES | | Explosives testing facility | | 7 | An Interim Record of Decision has been signed. The selected remedies for the areas with perchlorate include either groundwater extraction and | 5S | D2 | VOCs, RDX, Uranium, tritium, nitrate, perchlorate |
| 18. LOCKHEED PROPULSION CO. (BEAUMONT) | YES | AEROSPACE | Former rocket motor testing facility. | | 7 | DTSC Certified site in 1994; currently site is in O&M; 5-year review in progress. Perchlorate identified during the 5-year review. Lockheed is considering new alternative treatment | 8 | D4 | VOC,PER |
| 19. LOCKHEED PROPULSION CO. (CRAFTON/REDLANDS) | YES | AEROSPACE | Former Lockheed site | | 7 | remediation in progress | 8 | D4 | VOC,PER |
| 20. MCCLELLAN AIR FORCE BASE | YES | | | | | | 5 | D1 | |
| 21. MCDONNELL DOUGLAS/AEROJET INACTIVE | YES | AEROSPACE | Board issued CA Order for PER cleanup; Rest of site cleanup is DTSC lead | | 5C | Off site gw pump & treat system under construction. | 5S | D1 | VOC,PET,PCB,PER, DIO,PAH |
| 22. NASA/JET PROPULSION LABORATORIES (PASADENA) | YES | ORDNANCE,AEROSP ACE | Rocket testing facility | | 7 | Remedial Investigation complete, perchlorate plume characterized. | 4 | D3 | PER,VOC |
| 23. NATION CONSTRUCTION RENTALS | YES | | Suspected pyrotechnic material found during trenching activities | RIALTO- COLTON | 2 | | | D4 | PER,MET,SVO |
| 24. NATIONAL SEMICONDUCTOR CORPORATION | YES | AEROSPACE | Perchlorate source lies on former United Technologies Corp. property at 1050 East Arques Avenue. National Semiconductor assumed responsibility from UTC. | | 7 | Investigation completed in 2002. | 2 | | VOC, xylene, perchlorate |

Information current as of 7/6/005

| GEOTRACKER PERCHLORATE CONFIRMED CONTAMINANT SITE DETAILED REPORT | | | | | | | | | |
|---|------------------------------|--|---|----------------------------|---------------|--|---------------------|--------------------|---|
| <u>SITE NAME</u> | <u>PERCHLORATE CONFIRMED</u> | <u>PERCHLORATE SOURCE</u> | <u>PERCHLORATE SOURCE COMMENTS</u> | <u>MULTI-RP PLUME NAME</u> | <u>STATUS</u> | <u>INVESTIGATION STATUS COMMENTS</u> | <u>SWRCB REGION</u> | <u>DTSC REGION</u> | <u>CONTAMINANTS OF CONCERN</u> |
| 25. OLIN CORPORATION | YES | OTHER,FLARE MANUFACTURING | Perchlorate contamination attributed to the manufacture of signal flares using potassium perchlorate as an active ingredient. | | 5R | Currently assessing lateral and vertical extent of perchlorate plume and identifying domestic wells impacted; onsite remediation | 3 | D2 | PER |
| 26. PURITY DELTA GUNNITE | YES | OTHER | former oil recycling facility | | 1 | The Attorney General's Office has filed suit with potential responsible parties to do the | | D1 | SVO,MET,PET,PCB, ACD,PER,PAH,TCE, PCE,VOC |
| 27. SIERRA ARMY DEPOT | YES | ORDNANCE | Open Burn/Open Detonation. | | 5C | | 6T | D1 | |
| 28. SPECIAL DEVICES INC. | YES | EXPLOSIVES - NOT SOLELY FOR MILITARY USE,AEROSPACE | Aerospace Device Manufacturing | | 5C | RCRA Facility Investigation Workplan Phase | 4 | D3 | PER,MET,VOC,ACD ,SVO |
| 29. STRINGFELLOW | YES | ORDNANCE | Disposal Pits, Munitions Testing | | 5C | Perchlorate was recently identified in groundwater and soil and is still being characterized. | 8 | D4 | |
| 30. TDY INDUSTRIES | YES | ORDNANCE | Soil and groundwater at the site have been affected by releases of perchlorate from various | | 5R | Corrective Action Plan submitted and being reviewed by RB staff. | 3 | D2 | |
| 31. UNITED TECHNOLOGIES CORP | YES | AEROSPACE | Manufacture of rocket motors and solid rocket fuel | | 7 | Extent of perchlorate contamination has been fully characterized. | 2 | D2 | VOC,MET,PET,PCB, PER |
| 32. US. NAVAL AIR STATION (SAN NICHOLAS ISLAND) | YES | ORDNANCE | Navy missile test range | | 1 | Prelim investigation of one source area completed in 11/00. Draft Workplan for expanded | 4 | D3 | VOC,PER |

GEOTRACKER PERCHLORATE CONFIRMED CONTAMINANT SITE DETAILED REPORT

| <u>SITE NAME</u> | <u>PERCHLORATE CONFIRMED</u> | <u>PERCHLORATE SOURCE</u> | <u>PERCHLORATE SOURCE COMMENTS</u> | <u>MULTI- RP PLUME NAME</u> | <u>STATUS</u> | <u>INVESTIGATION STATUS COMMENTS</u> | <u>SWRCB REGION</u> | <u>DTSC REGION</u> | <u>CONTAMINANTS OF CONCERN</u> |
|---|----------------------------------|-------------------------------|--|---|---------------|---|-------------------------|------------------------|------------------------------------|
| 33. VANDENBERG AIRFORCE BASE (SITE 8 CLUSTER) | YES | AEROSPACE | Rocket launch area | | 3B | Detection made during screening of new monitoring wells installed as part of ongoing solvent plume investigation. Base personnel are initiating a comprehensive | 3 | D4 | PER |
| 34. WHITTAKER ORDNANCE INC. | YES | ORDNANCE | Ammonium perchlorate storage and milling operations. Wash-water discharged from buildings. Discharge of perchlorate from burning bldg. during hosing down of bldg.; test firing of explosives; | | 5R | Investigation completed and approved on May 16, 2001. Feasibility Study for Corrective Action Report was approved on October 31, 2002. | 3 | | VOC,MET,PER,CR,T CE |
| 35. WHITTAKER- BERMITE, SANTA CLARITA | YES | ORDNANCE | Fireworks, Explosives and Ordnance Manufacturing and Testing facility | | 5C | Site is still being characterized to determine vertical and horizontal extent of cont. in source areas on-site. Army Corp of Engineers is working on defining perchlorate distribution and characterizing | 4 | D3 | VOC,PER,MET,PCE, TCE |

DTSC Sites Under Remedial Investigation for Perchlorate Releases

| | Site Name | DTSC | City | County | Activities |
|----|------------------------------|--------|----------------|------------------------|----------------------|
| 1 | Aerojet (Rancho Cordova) | SM/HWM | Rancho Cordova | Sacramento | aerospace |
| 2 | Aerojet General Chino Hills | HWM | Chino Hills | San Bernardino | ordnance |
| 3 | Beale AFB | SM/HWM | Beale AFB | Yuba | ordnance |
| 4 | Boeing/NASA Santa Susana Lab | SM/HWM | Canoga Park | Ventura | aerospace |
| 5 | Casmalia | SM | Casmalia | Santa Barbara | landfill |
| 6 | China Lake Naval Weapon | SM/HWM | China Lake AFB | Inyo | ordnance |
| 7 | Denova (Rialto-Colton) | HWM | Rialto | San Bernardino | ordnance |
| 8 | Edwards AFB | SM/HWM | Edwards AFB | Kern | ordnance |
| 9 | Embee Metal Plating | HWM | Santa Ana | Orange | metal |
| 10 | Fort Ord | SM | Fort Ord | Monterey | DOD |
| 11 | Holchem | HWM | Santa Ana | Orange | solvent recycler |
| 12 | Lawrence Livermore Lab | SM | Tracy | Alameda San Joaquin | explosives |
| 13 | Lockheed(Beaumont) | SM | Beaumont | Riverside | aerospace |
| 14 | Marquardt Company | HWM | Van Nuys | Los Angeles | |
| 15 | MCAS El Toro Marine Corp | SM | | Orange | DOD |
| 16 | McClellan AFB | SM | McClellan AFB | Sacramento | DOD |
| 17 | McDonnell Douglas Inactive | SM | Rancho Cordova | Sacramento | aerospace |
| 18 | NASA/JET Propulsion Lab | SM | Pasadena | Los Angeles | aerospace |
| 19 | San Gabriel Superfund Site | SM | Baldwin Park | Los Angeles | Various |
| 20 | Sierra Army Depot | SM | Herlong | Lassen | DOD |
| 21 | Stringfellow Site | SM | Glen Avon | Riverside | Landfill |
| 22 | Tourtelot | SM | Benicia | Solano | FUDS firing range |
| 23 | United Technologies | HWM | San Jose | Santa Clara | explosives |
| 24 | Vandenberg AFB | SM | Vandenberg AFB | Lompoc | DOD |
| 25 | Whittaker (Bermite) | HWM | Santa Clarita | Los Angeles | ordnance |

SM = DTSC Site Mitigation and Brownfields Reuse Program

HWM = Hazardous Waste Management Program

DOD = Department of Defense Facility

FUDS = Former Used Defense Site

**United States General Accounting Office Report GAO-04-147
Facilities and Sites Where Perchlorate Was Found and
Concentration Levels, as of January 2005¹**

| Facility/Site Name | Highest Detection Reported | | |
|---|----------------------------|----------------|----------------|
| | Amount (ppb) | Media | Cleanup Status |
| Drinking Water | | | |
| Azusa Light and Water, Los Angeles County | 11 | Drinking water | |
| California State Polytechnical University Pomona, Los Angeles County | 6 | Drinking water | |
| California Water Service Company - Salinas, Monterey County | 22 | Drinking water | |
| California Water Service Company - Stockton, San Joaquin County | 5 | Drinking water | |
| California Water Service Company - Dominguez, Los Angeles County | 9 | Drinking water | |
| California Water Service Company - ELA, Los Angeles | 8 | Drinking water | |
| California Water Service Company - Suburban Los Altos, Santa Clara County | 5 | Drinking water | |
| Carmichael Water District, Sacramento County | 4 | Drinking water | |
| City of Anaheim, Orange County | 5 | Drinking water | |
| City of Bakersfield, Kern County | 8 | Drinking water | |
| City of Brawley, Imperial County | 5 | Drinking water | |
| City of Chino Hills, San Bernardino County | 4 | Drinking water | |
| City of Chino, San Bernardino County | 21 | Drinking water | |
| City of Colton, San Bernardino County | 8 | Drinking water | |
| City of Corona, Riverside County | 12 | Drinking water | |
| City of Escondido, San Diego County | 4 | Drinking water | |
| City of Garden Grove, Orange County | 4 | Drinking water | |
| City of Hemet, Riverside County | 7 | Drinking water | |
| City of Loma Linda, San Bernardino County | 5 | Drinking water | |
| City of Ontario, San Bernardino County | 12 | Drinking water | |
| City of Patterson, Stanislaus County | 4 | Drinking water | |
| City of Pomona, Los Angeles County | 10 | Drinking water | |
| City of Rialto, San Bernardino County | 21 | Drinking water | |
| City of Riverside, Riverside County | 42 | Drinking water | |
| City of San Bernardino, San Bernardino | 7 | Drinking water | |
| City of Santa Ana, Orange County | 4 | Drinking water | |
| City of Stockton, San Joaquin County | 19 | Drinking water | |
| City of Tracy, San Joaquin County | 21 | Drinking water | |
| City of Tustin, Orange County | 9 | Drinking water | |
| Coachella Valley Water District, Cove Community, Riverside County | 6 | Drinking water | |
| Cucamonga Water District, San Bernardino County | 9 | Drinking water | |

| Facility/Site Name | | Highest Detection Reported | | |
|--------------------|--|----------------------------|----------------|----------------|
| | | Amount (ppb) | Media | Cleanup Status |
| | Desert Water Agency, Riverside County | 6 | Drinking water | |
| | East Valley Water District, San Bernardino County | 16 | Drinking water | |
| | Eastern Municipal Water District, Riverside County | 8 | Drinking water | |
| | El Centro Naval Air Facility, Imperial County | 5 | Drinking water | |
| | Great Oaks Water Company, Incorporated, Santa Clara County | 4 | Drinking water | |
| | Imperial Valley College, Imperial County | 6 | Drinking water | |
| | Irvine Ranch Water District, Orange County | 6 | Drinking water | |
| | Jurupa Community, Riverside County | 5 | Drinking water | |
| | Lincoln Avenue Water Company, Los Angeles County | 5 | Drinking water | |
| | Metropolitan Water Dist. of Southern California, Los Angeles County | 7 | Drinking water | |
| | Monte Vista Water District, San Bernardino County | 4 | Drinking water | |
| | Pasadena Water Department, Los Angeles County | 35 | Drinking water | |
| | Rancho California Water District, Riverside County | 4 | Drinking water | |
| | Redlands City Municipal Utility District-Water Division, San Bernardino County | 67 | Drinking water | |
| | Riverside Highland Water Co., San Bernardino County | 5 | Drinking water | |
| | Rubidoux Community Services Dist., Riverside County | 10 | Drinking water | Under way |
| | San Fernando City Water Dept., Los Angeles County | 9 | Drinking water | |
| | San Gabriel Valley Water Co., Fontana, San Bernardino County | 15 | Drinking water | |
| | San Gabriel Water District, Los Angeles County | 4 | Drinking water | |
| | Santa Clarita Site Assessment, Los Angeles County | 47 | Drinking water | |
| | Santa Clarita Water Company, Los Angeles County | 4 | Drinking water | |
| | Sonoma County Site Assessment | 5 | Drinking water | |
| | South California Water Company, Orange County | 6 | Drinking water | |
| | South Pasadena City Water Department, Los Angeles County | 5 | Drinking water | |
| | Suburban Water Systems-San Jose, Los Angeles County | 7 | Drinking water | |
| | Trabuco Canyon Water District, Orange County | 5 | Drinking water | |
| | Tulare County Site Assessment | 11 | Drinking water | |
| | Vernon Water Department, Los Angeles County | 5 | Drinking water | |
| | West San Bernardino County Water District (formerly West Valley Water District), San Bernardino County | 8 | Drinking water | |
| | Drinking Water at Contaminated Site | | | |
| 1 | Aerojet General, City of Rancho Cordova | 260 | Drinking water | |
| 2 | Lockheed Propulsion Company (Former), City Redlands | 87 | Drinking water | Under way |
| 3 | Mather Air Force Base, City of Rancho Cordova | 120 | Drinking water | |
| 4 | NASA, Jet Propulsion Laboratory, City of Pasadena | 13,300 | Drinking water | Under way |
| 5 | North Rialto Area (multiple responsible 820 Drinking water Under way parties), City of Rialto | 820 | Drinking water | Under way |
| 6 | Olin Safety Flare, City of Morgan Hill | 15 | Drinking water | |

| Facility/Site Name | | Highest Detection Reported | | |
|--------------------|--|----------------------------|----------------|----------------|
| | | Amount (ppb) | Media | Cleanup Status |
| 7 | San Gabriel Valley (Area 2), Baldwin Park Operable Unit, City of Baldwin Park | 159 | Drinking water | |
| 8 | United States Navy Firing Range, San Nicholas Island, Ventura County | 20 | Drinking water | |
| | Groundwater | | | |
| 9 | Aerojet General, City of Chino Hills | 877 | Groundwater | |
| 1 | Aerojet General, City of Rancho Cordova | 640,000 | Groundwater | Under way |
| 10 | Air Force Research Laboratory, Edwards Air Force Base, Kern County | 4,550 | Groundwater | Under way |
| 11 | Alpha Explosives, City of Lincoln | 67,000 | Groundwater | |
| 12 | Beale Air Force Base, Yuba County | 492 | Groundwater | |
| 13 | Casmalia Resources, City of Casmalia | 58 | Groundwater | |
| 14 | China Lake Naval Weapons Center, Kern County | 921 | Groundwater | |
| 15 | El Toro Marine Corps Air Station, Orange County | 460 | Groundwater | |
| 16 | EMBEE, Incorporated, Orange County | 1900 | Groundwater | |
| 17 | G.E. Plastics, Orange County | 1,100,000 | Groundwater | |
| 18 | Jet Propulsion Laboratory, Edwards Air Force Base, Kern County | 160,000 | Groundwater | |
| 19 | Lawrence National Laboratories, Department of Energy Experimental Site 300, City of Tracy | 84 | Groundwater | Under way |
| 20 | Lockheed Propulsion Company, City of Beaumont | 141,000 | Groundwater | Planning |
| 3 | Mather Air Force Base, City of Rancho Cordova | 1,900 | Groundwater | |
| 21 | McClellan Air Force Base, Sacramento County | 15 | Groundwater | |
| 22 | McCormick, Selph (same as TDY industries), City of Hollister | 5,500 | Groundwater | Under way |
| 23 | McDonnell-Douglas and Aerojet Corporation, City of Rancho Cordova | 32,000 | Groundwater | Under way |
| 24 | Morris Dam Naval Command, Control and Ocean Surveillance Center, Los Angeles County | 65 | Groundwater | |
| 25 | National Semiconductor Corporation, Santa Clara County | 120 | Groundwater | Under way |
| 26 | OEA Aerospace (formally Universal Propulsion), Solano County | 350 | Groundwater | Planning |
| 6 | Olin Safety Flare, City of Morgan Hill | 1,000 | Groundwater | Under way |
| 27 | Pyrite Canyon, City of Glen Avon | 2,100 | Groundwater | |
| 28 | San Fernando Valley (Area 2), City of Glendale | 13 | Groundwater | |
| 29 | San Gabriel Valley (Area 1), El Monte Operable Unit, City of El Monte | 21 | Groundwater | Planning |
| 30 | San Gabriel Valley (Area 1), South El Monte Operable Unit (Includes Nike 14 Launcher Area), City of South El Monte | 17 | Groundwater | Under way |
| 7 | San Gabriel Valley (Area 2), Baldwin Park Operable Unit, City of Baldwin Park | 2,180 | Groundwater | Under way |
| 31 | San Gabriel Valley (Area 4), Puente Valley Operable Unit, City of Industry | 18 | Groundwater | Planning |
| 32 | Santa Susanna Field Laboratory, Boeing-Rocketdyne Division (Department of Energy), Los Angeles County | 750 | Groundwater | Under way |

| Facility/Site Name | | Highest Detection Reported | | |
|--------------------|---|----------------------------|-------------|----------------|
| | | Amount (ppb) | Media | Cleanup Status |
| 33 | Sierra Army Depot, Lassen County | 8 | Groundwater | |
| 34 | Special Devices Incorporated, City of Newhall, Los Angeles County | 82 | Groundwater | |
| 35 | Stringfellow Superfund Site, City of Glen Avon | 87,000 | Groundwater | Planning |
| 36 | United Defense (FMC Corporation), City of Hollister | 2,600 | Groundwater | |
| 37 | United Technologies Corporation, Santa Clara County | 1,282,000 | Groundwater | Under way |
| 38 | Vandenburg Air Force Base | 517 | Groundwater | Under way |
| 39 | Whittaker Bermite Ordnance, City of Santa Clarita | 6,400 | Groundwater | |
| 40 | Whittaker Ordnance, City of Hollister | 510,000 | Groundwater | Under way |
| | Soil | | | |
| 41 | Denova Environmental, San Bernardino County | 460 | Soil | |
| 15 | El Toro Marine Corps Air Station, Orange County | 1,600 | Soil | |
| 42 | Fort Ord, Monterey County | 35 | Soil | |
| 18 | Jet Propulsion Laboratory, Edwards Air Force Base, Kern County | 2,100,000 | Soil | |
| 43 | MP Associates, Incorporated, City of Lone, Amador County | 957,000 | Soil | |
| 44 | National Technical Systems, Los Angeles County | 320 | Soil | |
| 45 | Purity Oil Delta Gunnite, City of Rancho Cordova | 13,000 | Soil | |
| 46 | Seal Beach Naval Weapons Station, Orange County | 2,460 | Soil | |

¹ Excerpt from United States General Accounting Office Report GAO-04-147, *A System to Track Sampling and Cleanup Results Is Needed*, dated May 2005

Known Perchlorate Releases in the U.S. - March 25, 2005

Disclaimer: The detections shown do not represent the entire universe of perchlorate releases in the United States. This represents the extent of perchlorate detection data currently known to the EPA as reported from various sources. The values displayed represent the highest values that have been reported. Subsequent sampling may have identified lower levels of perchlorate in the affected media.

| | |
|--|--|
| Legend: BRAC = Base Realignment and Closure N (in BRAC Column) = Site is not BRAC Facility Y (in BRAC Column) = Site is a BRAC Facility NPL = National Priorities List N (in NPL Column) = Site is not on the NPL F (in NPL Column) = Site is on the Final NPL DW Conc = Drinking Water Concentration GW Conc = Groundwater Concentration | SW Conc = Surface Water Concentration Soil Contam = Soil Contamination ppb = parts per billion Y (in Soil Contam Column) = Perchlorate has been detected in soil -- = denotes EPA is not aware that perchlorate has been detected in that particular medium at that specific facility [], { } = Data was obtained from DOD (see footnotes 3 & 6) N/A - Data is currently not available |
|--|--|

| | Facility/Site Name | City/County | BRAC | NPL | Highest DW Conc (ppb) | Highest GW Conc (ppb) | Highest SW Conc (ppb) | Highest Soil Contam | Initial Detection Date |
|--|--|--------------------|------|-----|-----------------------|-----------------------|-----------------------|---------------------|------------------------|
| DOD FACILITIES | | | | | | | | | |
| 1 | Beale AFB ³ | Marysville | N | N | -- | [Y] | -- | -- | N/A* |
| 2 | China Lake | Ridgecrest | N | N | {720} | -- | -- | -- | N/A |
| 3 | Concord Naval Weapons Station | Concord | N | F | 2 | -- | -- | -- | 06/2003 |
| 4 | Edwards AFB/Air Force Research Laboratory | Edwards | N | F | -- | 4550 | -- | -- | N/A |
| 5 | Edwards AFB/Jet Propulsion Laboratory ⁵ | Edwards | N | F | -- | 160000 | -- | {2100000} | 07/1997 |
| 6 | El Toro MCAS | El Toro | Y | F | -- | {398} | -- | -- | 10/1998 |
| 7 | Fort Irwin - UCMR | | N | N | 10 | -- | -- | -- | 08/17/2004 |
| 8 | Fort Ord | Marina | Y | F | -- | -- | -- | {106} | N/A |
| 9 | Mather AFB ¹ | Rancho Cordova | Y | F | 120 | 1800 | -- | -- | 03/1997 |
| 10 | McClellan AFB | Sacramento Cty. | Y | F | -- | 15 | -- | -- | N/A |
| 11 | Nike 14 Launcher Area (FUDS) ³ | | N | N | -- | [Y] | -- | -- | N/A* |
| 12 | Pyrite Canyon (FUDS) ⁶ | Glen Avon | N | N | -- | {81} | -- | -- | N/A |
| 13 | Seal Beach Naval Weapons Station ⁶ | Seal Beach | N | N | -- | -- | -- | {2460} | N/A |
| 14 | Travis AFB ³ | Fairfield | N | F | -- | [Y] | -- | -- | N/A* |
| 15 | U.S. Navy Firing Range | San Nicolas Isl. | N | N | 16 | -- | -- | -- | 09/23/1998 |
| 16 | Vandenberg AFB ³ | Lompoc | N | N | -- | {517} | -- | [Y] | N/A* |
| OTHER FEDERAL AGENCY FACILITIES | | | | | | | | | |
| 17 | Jet Propulsion Laboratory (NASA) | Pasadena | | F | 54 | n/a | -- | -- | N/A |
| 18 | Lawrence Natl Lab, DOE Experimental Site 300 (DOE) | Tracy | | F | -- | 84 | -- | -- | N/A |
| 19 | Santa Susana Field Lab, Rocketdyne Division (DOE) | Santa Susana | | N | -- | 750 | -- | -- | N/A |
| PRIVATE SITES | | | | | | | | | |
| 20 | Aerojet General Corp. - Rancho Cordova ² | Rancho Cord. | | F | 260 | 640000 | -- | -- | N/A |
| 21 | Alpha Explosives | Lincoln | | N | -- | 67000 | -- | -- | N/A |
| 22 | Casmalia Resources | Casmalia | | F | -- | 58 | -- | -- | N/A |
| 23 | Lockheed Propulsion Company (Former) ² | Redlands | | N | 87 | -- | -- | -- | N/A |
| 24 | North Rialto Area (multiple responsible parties), City of Rialto | Rialto | | N | 811 | -- | -- | -- | N/A |
| 25 | Olin Safety Flare | Morgan Hill | | N | 15 | 167 | -- | -- | N/A |
| 26 | San Fernando Valley | Glendale | | F | -- | 13 | -- | -- | N/A |
| 27 | San Gabriel Valley | | | F | 159 | 2180 | -- | -- | N/A |
| 28 | Stringfellow | Glen Avon | | F | -- | 682000 | -- | -- | N/A |
| 29 | UTC | San Jose | | N | -- | 180000 | -- | -- | N/A |
| 30 | Whittaker Bermite | S. Clarita, Saugus | | N | 47 | -- | -- | -- | N/A |
| 31 | Whittaker Ordnance | Hollister | | N | 810 | 810 | -- | -- | N/A |

| | |
|---|--|
| Legend: BRAC = Base Realignment and Closure | SW Conc = Surface Water Concentration |
| N (in BRAC Column) = Site is not BRAC Facility | Soil Contam = Soil Contamination |
| Y (in BRAC Column) = Site is a BRAC Facility | ppb = parts per billion |
| NPL = National Priorities List | Y (in Soil Contam Column) = Perchlorate has been detected in soil |
| N (in NPL Column) = Site is not on the NPL | -- = denotes EPA is not aware that perchlorate has been detected in that particular medium at that specific facility |
| F (in NPL Column) = Site is on the Final NPL | [], { } = Data was obtained from DOD (see footnotes 3 & 6) |
| DW Conc = Drinking Water Concentration | N/A - Data is currently not available |
| GW Conc = Groundwater Concentration | |

| | Facility/Site Name | City/County | BRAC | NPL | HighestD W Conc (ppb) | Highest GW Conc (ppb) | Highest SW Conc (ppb) | Highest Soil Contam | Initial Detection Date |
|--|--|-------------------|------|-----|-----------------------------|-----------------------------|-----------------------------|---------------------------|------------------------------|
| UCMR DETECTIONS (http://www.epa.gov/ogwdw/data/ucmrgetdata.html) Facility list is current as of 3/25/5 | | | | | | | | | |
| CA | Azusa Light and Water - UCMR | Los Angeles C. | | | | | | | |
| CA | California State Polytechnical University - Pomona - | Los Angeles C. | | | | | | | |
| CA | California Water Service - Stockton - UCMR | Santa Clara Cty. | | | | | | | |
| CA | California Water Service Co. - Dominguez - UCMR | Los Angeles C. | | | | | | | |
| CA | California Water Service Co. - Ela - UCMR | Los Angeles C. | | | | | | | |
| CA | Carmichael Water District - UCMR | Sacramento Cty. | | | | | | | |
| CA | City of Anaheim - UCMR | Orange County | | | | | | | |
| CA | City of Bakersfield - UCMR | Kern County | | | | | | | |
| CA | City of Brawley - UCMR | Imperial County | | | | | | | |
| CA | City of Chino - UCMR | San Bern. Cty. | | | | | | | |
| CA | City of Chino Hills - UCMR | Chino | | | | | | | |
| CA | City of Colton - UCMR | Colton | | | | | | | |
| CA | City of Corona - UCMR | Riverside Cty. | | | | | | | |
| CA | City of Escondido - UCMR | San Diego Cty | | | | | | | |
| CA | City of Garden Grove - UCMR | Orange County | | | | | | | |
| CA | City of Hemet - UCMR | Riverside Cty. | | | | | | | |
| CA | City of Loma Linda - UCMR | San Bern. Cty. | | | | | | | |
| CA | City of Ontario - UCMR | San Bern. Cty. | | | | | | | |
| CA | City of Pasadena Water Dept. - UCMR | Los Angeles C. | | | | | | | |
| CA | City of Patterson - UCMR | Stanislaus County | | | | | | | |
| CA | City of Rialto - UCMR | San Bern. Cty. | | | | | | | |
| CA | City of Riverside - UCMR | Riverside Cty. | | | | | | | |
| CA | City of San Bernardino - UCMR | San Bern. Cty. | | | | | | | |
| CA | City of Santa Ana - UCMR | Orange County | | | | | | | |
| CA | City of South Pasadena Water Dept. - UCMR | Los Angeles C. | | | | | | | |
| CA | City of Stockton - UCMR | San Joaquin Cty. | | | | | | | |
| CA | City of Tracy - UCMR | San Joaquin Cty. | | | | | | | |
| CA | City of Tustin - UCMR | Orange County | | | | | | | |
| CA | Coachella VWD: Cove Community - UCMR | Riverside Cty. | | | | | | | |
| CA | Cucamonga CWD - UCMR | San Bern. Cty. | | | | | | | |
| CA | CWSC Los Altos Suburban - UCMR | Santa Clara Cty. | | | | | | | |
| CA | CWSC Salinas - UCMR | Monterey County | | | | | | | |
| CA | Desert Water Agency - UCMR | Riverside Cty. | | | | | | | |
| CA | East Valley WD - UCMR | San Bern. Cty. | | | | | | | |
| CA | Eastern Municipal WD - UCMR | Riverside Cty. | | | | | | | |
| CA | Fort Irwin - UCMR | | | | | | | | |
| CA | Great Oaks WC, Inc - UCMR | Santa Clara Cty. | | | | | | | |
| CA | Imperial Valley College - UCMR | Imperial County | | | | | | | |
| CA | Irvine Ranch Water District - UCMR | Orange County | | | | | | | |
| CA | Jurupa Community - UCMR | Riverside Cty. | | | | | | | |
| CA | Lincoln Avenue Water Co. - UCMR | Los Angeles C. | | | | | | | |
| CA | Metropolitan Water District of Souther Calif - UCMR | Los Angeles C. | | | | | | | |
| CA | Monte Vista CWD - UCMR | San Bern. Cty. | | | | | | | |
| CA | Pomona City Water Dept. | Pomona | | | | | | | |
| CA | Rancho California Water District - UCMR | Riverside Cty. | | | | | | | |
| CA | Redlands City Mud-Water Div - UCMR | San Bern. Cty. | | | | | | | |
| CA | Riverside Highland Water Co. - UCMR | San Bern. Cty. | | | | | | | |
| CA | Rubidoux Community SD - UCMR | Riverside Cty. | | | | | | | |
| CA | San Fernando City Water Dept. - UCMR | Los Angeles C. | | | | | | | |
| CA | San Gabriel CWD - UCMR | Los Angeles C. | | | | | | | |
| CA | San Gabriel Valley WC-Fontana - UCMR | Los Angeles C. | | | | | | | |
| CA | Santa Clarita Water Co. - UCMR | Los Angeles C. | | | | | | | |
| CA | South Pasadena City Water Dept. - UCMR | Los Angeles C. | | | | | | | |
| CA | Southern California WC - West Orange - UCMR | Los Angeles C. | | | | | | | |
| CA | Southern California WC - Barstow - UCMR | | | | | | | | |
| CA | Suburban Water Systems - San Jose - UCMR | Los Angeles C. | | | | | | | |
| CA | Trabuco Canyon Water District - UCMR | | | | | | | | |
| CA | Vernon City Water Dept - UCMR | Los Angeles C. | | | | | | | |
| CA | West Valley Water District - UCMR | San Bern. Cty. | | | | | | | |

| | |
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|---|--|

| Facility/Site Name | City/County | BRAC | NPL | HighestD W Conc (ppb) | Highest GW Conc (ppb) | Highest SW Conc (ppb) | Highest Soil Contam | Initial Detection Date |
|--------------------|-------------|------|-----|-----------------------------|-----------------------------|-----------------------------|---------------------------|------------------------------|
|--------------------|-------------|------|-----|-----------------------------|-----------------------------|-----------------------------|---------------------------|------------------------------|

* - EPA was not able to obtain detection for several facilities as is denoted by the "n/a." All of the detection data for these facilities were obtained from DOD responses to Congressional inquiries as is denoted by a "[]" (see footnote 3) and/or a "{ }" (see footnote 6) and as is detailed in the legend.

| | |
|--|--|
| <p>Legend: BRAC = Base Realignment and Closure N (in BRAC Column) = Site is not BRAC Facility Y (in BRAC Column) = Site is a BRAC Facility NPL = National Priorities List N (in NPL Column) = Site is not on the NPL F (in NPL Column) = Site is on the Final NPL DW Conc = Drinking Water Concentration GW Conc = Groundwater Concentration</p> | <p>SW Conc = Surface Water Concentration Soil Contam = Soil Contamination ppb = parts per billion Y (in Soil Contam Column) = Perchlorate has been detected in soil -- = denotes EPA is not aware that perchlorate has been detected in that particular medium at that specific facility [], { } = Data was obtained from DOD (see footnotes 3 & 6) N/A - Data is currently not available</p> |
|--|--|

| Facility/Site Name | City/County | BRAC | NPL | HighestD W Conc (ppb) | Highest GW Conc (ppb) | Highest SW Conc (ppb) | Highest Soil Contam | Initial Detection Date |
|--------------------|-------------|------|-----|-----------------------------|-----------------------------|-----------------------------|---------------------------|------------------------------|
|--------------------|-------------|------|-----|-----------------------------|-----------------------------|-----------------------------|---------------------------|------------------------------|

Footnote 1 - Source of contamination believed to have originated from adjacent Boeing Test Site at Rancho Cordova

2 = 1998 Department of Defense Information Request

3 = Data was obtained from DOD's *Perchlorate Sampling Since 2001* and *NPL Facilities Perchlorate Sampling* documents included in response to inquiries from Senators Boxer, Feinstein and Reid and Representatives Dingell and Solis as indicated by "[]."

4 =DOD detected perchlorate at McAlester in one sample at 0.6 ppb. However, this detection was a "J" value, meaning it was an unvalidated sample.

5 = TCEQ - Texas Commission on Environmental

6 = Data was obtained from DOD's *DoD Perchlorate Survey: Service Site Summaries - Environmental Restoration - Cleanup, Other* and *DOD Perchlorate Survey: Service Site Summaries - UCMR and Drinking Water* as indicated by "{ }."

Sources:

| | |
|--|--|
| I. Region 9 Memo, May 1998; Kerr McGee's 104(e) Re | VII. Texas Commission of Environmental Quality |
| II. American Pacific Non -CBI 104(e) response | VIII. Utah Department of Environmental Quality |
| III. U.S. EPA Regions 1, 3, 4, 6, 7, 9, 10 | IX. West Virginia Division of Environmental Protection |
| IV. California Department of Health Services | X. Suffolk County, New York, Department of Health Services |
| V. Arizona Department of Environmental Quality | XI. US Department of Energy |
| VI. New Mexico Environmental Department | XII. UCMR |

Unregulated Contaminant Monitoring Rule (UCMR) Detections in California

| Public Works System Name | County | Concentration Range (ppb) | Total Detects | Detects \$ 6 ppb | Detects \$10 ppb |
|--|----------------|---------------------------|---------------|------------------|------------------|
| anaheim, city of | Orange | 4.1-5.3 | 7 | | |
| azusa light and water | Los Angeles | 10.0-11.0 | 2 | 2 | 2 |
| bakersfield, city of | Kern | 7.6 | 1 | 1 | |
| brawley, city of | Imperial | 4.2-5.2 | 2 | | |
| calif state polytechnical univ - pomona | Los Angeles | 4.2-6.2 | 5 | 1 | |
| california water service - stockton | San Joaquin | 4.8 | 1 | | |
| california water service co. - dominguez | Los Angeles | 9.2 | 1 | 1 | |
| california water service co. - ela | Los Angeles | 6.2-7.7 | 4 | 4 | |
| carmichael water district | Sacramento | 4.1 | 1 | | |
| chino hills, city of | San Bernardino | 4.4 | 1 | | |
| chino, city of | San Bernardino | 4.0-21.0 | 23 | 21 | 13 |
| coachella vwd: cove community | Riverside | 5.9 | 1 | | |
| colton, city of | San Bernardino | 5.6-7.7 | 2 | 1 | |
| corona, city of | Riverside | 4.0-13.0 | 41 | 26 | 7 |
| cucamonga valley water district | San Bernardino | 4.0-9.0 | 22 | 10 | |
| cwsc los altos suburban | Santa Clara | 4.7 | 1 | | |
| cwsc salinas | Monterey | 4.4-22.3 | 2 | 1 | 1 |
| desert water agency | Riverside | 4.0-6.6 | 14 | 2 | |
| east valley wd | San Bernardino | 4.0-16.0 | 24 | 17 | 6 |
| eastern municipal wd | Riverside | 5.2-7.5 | 2 | 1 | |
| escondido, city of | San Diego | 4.2-4.3 | 2 | | |
| garden grove, city of | Orange | 4.0-4.4 | 2 | | |
| great oaks wc, inc. | Santa Clara | 4.4 | 1 | | |
| hemet, city of | Riverside | 4.7-7.2 | 4 | 2 | |
| imperial valley college | Imperial | 4.5-6.2 | 2 | 1 | |
| irvine ranch water district | Orange | 6 | 1 | 1 | |
| jurupa community sd | Riverside | 4.6 | 1 | | |
| lincoln avenue water co. | Placer | 4.0-10.0 | 4 | 1 | 1 |
| loma linda, city of | San Bernardino | 5 | 1 | | |
| metropolitan water dist. of so. cal. | Los Angeles | 4.1-6.7 | 12 | 3 | |
| monte vista cwd | San Bernardino | 4.2-4.4 | 2 | | |
| ontario, city of | San Bernardino | 4.5-12.0 | 9 | 5 | 2 |
| pasadena-city, water dept. | Los Angeles | 4.0-35.0 | 18 | 13 | 6 |
| patterson, city of | Stanislaus | 4.1-4.4 | 2 | | |

| Public Works System Name | County | Concentration Range (ppb) | Total Detects | Detects 6 ppb | Detects 10 ppb |
|----------------------------------|----------------|---------------------------|---------------|------------------|-------------------|
| pomona- city, water dept. | Los Angeles | 4.2-12.0 | 20 | 12 | 3 |
| rancho california water district | Riverside | 4.4 | 1 | | |
| redlands city mud-water div | San Bernardino | 4.0-67.0 | 47 | 33 | 21 |
| rialto-city | San Bernardino | 5.6-33.0 | 5 | 4 | 2 |
| riverside highland water co | San Bernardino | 5.2 | 1 | | |
| riverside, city of | Riverside | 4.0-42.0 | 42 | 38 | 26 |
| rubidoux community sd | Riverside | 7.8-10.3 | 6 | 6 | 2 |
| san bernardino city | San Bernardino | 6.8 | 1 | 1 | |
| san fernando-city, water dept. | Los Angeles | 8.9 | 1 | 1 | |
| san gabriel valley wc - fontana | Los Angeles | 4.0-15.0 | 10 | 9 | 3 |
| san gabriel y wd | Los Angeles | 4.2 | 1 | | |
| santa ana, city of | Orange | 4.4 | 1 | | |
| santa clarita water co. | Los Angeles | 4.2 | 1 | | |
| so ca water co - barstow | San Bernardino | 4.7 | 1 | | |
| south pasadena-city, water dept. | Los Angeles | 4.5 | 1 | | |
| southern calif wc - west orange | Los Angeles | 4.0-6.2 | 7 | 1 | |
| stockton, city of | San Joaquin | 4.0-19.0 | 13 | 10 | 6 |
| suburban water systems-san jose | Los Angeles | 7.2 | 1 | 1 | |
| trabuco canyon water district | Orange | 5 | 1 | | |
| tracy, city of | San Joaquin | 21 | 1 | 1 | 1 |
| tustin, city of | Orange | 4.2-8.9 | 7 | 6 | |
| us army fort irwin | San Bernardino | 9.7 | 1 | 1 | |
| vernon-city, water dept. | Los Angeles | 4.4-5.4 | 2 | | |
| west valley water district | San Bernardino | 4.3-7.5 | 9 | 3 | |

399 241 102

GEOTRACKER Sites Listed by the Perchlorate Source Activity

| TYPE | NAME | CITY | COUNTY |
|----------------------------------|---------------------------------------|---------------------|----------------|
| AEROSPACE | Aerojet General | Chino Hills | San Bernardino |
| | Aerojet General | Rancho Cordova | Sacramento |
| | Casmalia | Casmalia | Santa Barbara |
| | China Lake Naval Weapons Station | China Lake | Kern |
| | Lockheed Propulsion Co. | Beaumont | Riverside |
| | Lockheed Propulsion Co. | Redlands | San Bernardino |
| | McDonnell Douglas/Aerojet INACTIVE | Rancho Cordova | Sacramento |
| | National Semiconductor Corporation | Sunnyvale | Santa Clara |
| | United Technologies Corporation | San Jose | Santa Clara |
| | Vandenberg Air Force Base | Lompoc | Santa Barbara |
| | Special Devices Inc. | Newhall | Los Angeles |
| | NASA/Jet Propulsion Laboratories | Pasadena | Los Angeles |
| | Aerojet General (FORMER) | Azusa | Los Angeles |
| | Boeing/Former Rocketdyne | Canoga Park | Ventura |
| | ORDNANCE | Denova | Rialto |
| Beale Air Force Base | | Marysville | Yuba |
| County of San Bernardino | | Rialto | San Bernardino |
| Edwards Air Force Base | | Edwards AFB | Kern |
| El Toro MCAS | | Santa Ana | Orange |
| Sierra Army Depot | | Herlong | Lassen |
| Stringfellow | | Glen Avon | Riverside |
| TDY Industries | | Hollister | San Benito |
| US. Naval Air Station | | San Nicholas Island | Ventura |
| Whittaker Ordnance Inc. | | Hollister | San Benito |
| Whittaker-Bermite | | Saugus | Los Angeles |
| NASA/Jet Propulsion Laboratories | | Pasadena | Los Angeles |
| Aerojet General | | Chino Hills | San Bernardino |
| OTHER | Alpha Explosives | Lincoln | Placer |
| | Embee, Inc. | Santa Ana | Orange |
| | G. E. Plastics | Santa Ana | Orange |
| | Highway 12 AND Explosive | Fairfield | Solano |

| TYPE | NAME | CITY | COUNTY |
|--|---|----------------|----------------|
| | Technology Road | | |
| | Purity Delta Gunnite | Rancho Cordova | Sacramento |
| | Aerojet General/Space General | South El Monte | Los Angeles |
| | Lawrence Livermore National Laboratory Site 300 | Tracy | San Joaquin |
| | McClellan Air Force Base | Sacramento | Sacramento |
| | Nation Construction Rentals | Rialto | San Bernardino |
| EXPLOSIVES - NOT SOLELY FOR MILITARY USE | Special Devices Inc. | Newhall | Los Angeles |
| | Denova | Rialto | San Bernardino |
| FLARE MANUFACTURING | Olin Corporation | Morgan Hill | Santa Clara |

DRAFT

<http://www.dodperchlorateinfo.net/efforts/sites/ca/sites/>

United States Department of Defense Site-Specific Summaries of Perchlorate Sampling Results at DoD Sites

California

1. Air Force Plant 42, Palmdale, California

Facility and Location

Air Force Plant 42 is located in Palmdale, CA. The facility produces spare parts for military aircraft, supports aircraft maintenance and modification for the B-2 bomber and F-117 stealth fighter, and produces the Global Hawk and other unmanned aircrafts. Air Force Plant 42 includes multiple high bay buildings, airfield access with flyaway capability, and one of the heaviest load-bearing runways in the world. Plant 42 has also been the location where all the individual parts and systems for the Space Shuttle have been assembled and tested. Upon completion, the spacecraft was turned over to NASA for transport overland from Palmdale to Edwards AFB.

Media Sampled and Findings

The Air Force has sampled and analyzed groundwater for perchlorate at AF Plant 42 because the solid rocket boosters used by the Space Shuttle contain perchlorate.

Groundwater – The Air Force collected and analyzed 18 groundwater samples for perchlorate between December 1999 and September 2002. The samples were collected from drinking water wells, fire wells, and monitoring wells. Perchlorate was not detected in any of the samples.

Cleanup Status

More sampling is being conducted under the California Prioritization Protocol.

2. Beale Air Force Base, California

Facility and Location

Beale AFB, CA, opened in October 1942 as Camp Beale, a training site for the 13th Armored and the 81st and 96th Infantry Divisions. In 1948, the camp transferred from the Army to the Air Force, and bombardier and navigator training was conducted. In 1951, the Beale Bombing and Gunnery Range was reactivated for aviation engineer training. From 1959 until 1965, Beale AFB housed and supported three Titan I missile sites. The U.S. Army Corps of Engineers oversaw the construction of mechanical, pneudraulics, cryogenic,

propulsion, and liquid oxygen shops to support the missile systems. Explosive ordnance was disposed of on-site via open burn/open detonation (OB/OD) activities. The base is currently home to the 9th Reconnaissance Wing.

Media Sampled and Findings

The Air Force collected and analyzed drinking water and groundwater samples for perchlorate because prior site activities had the potential for environmental releases of perchlorate.

Drinking Water – The Air Force conducted sampling at wells #s 1, 2, 3, 4, 6, 7, 8, and 9 in 1997 and 2000, and at well #5 in 2001 under the Unregulated Contaminant Monitoring Rule of the Safe Drinking Water Act. None of the samples indicated the presence of perchlorate.

Groundwater – As part of the base wide groundwater monitoring program, the Air Force collected and analyzed groundwater samples from groundwater monitoring wells down gradient of the Site 16 Explosive Ordnance Disposal (EOD) area for perchlorate in 2001. Perchlorate was detected in concentrations ranging from 4.53 to 492 ppb.

3. China Lake Naval Air Weapons Station (NAWS), California

Facility and Location

China Lake NAWS is located 150 miles northeast of Los Angeles on the western edge of the Mojave Desert encompassing 1.1 million acres of land. The facility provides warfare systems and life-cycle support; performs research, logistics, and in-service support for guided missiles, free-fall weapons, targets, support equipment, crew systems, and electronic warfare, integrates weapons and avionics on tactical aircraft; and operates land and sea range test and evaluation complex.

Media Sampled and Findings

The Navy tested drinking water and groundwater for perchlorate between 2001 and 2004 under the Safe Drinking Water Act and Installation Restoration Program.

Drinking Water – The Navy tested 10 drinking water samples for perchlorate. Perchlorate was not detected in any of these samples.

Groundwater Samples – The only current accurate method for measuring perchlorate is for finished tap water. However, the Navy tested 12 groundwater samples for perchlorate for qualitative information. Perchlorate was detected in all of the groundwater samples ranging from 15 to 720 ppb.

Cleanup Status

The Navy is currently conducting Remedial Investigation/Feasibility Studies at all the sites where perchlorate was detected in groundwater. These studies will help

the Navy to determine the nature and extent of environmental concerns at each site and will help the Navy evaluate cleanup alternatives.

4. Crows Landing Flight Facility (Former), California Facility and Location

NASA Crows Landing Flight Facility was commissioned in May 1943 as Naval Auxiliary Landing Field (NALF), Crows Landing. The former NALF has served primarily as an auxiliary air field for operations from Naval Air Station (NAS), Moffett Field and other Navy facilities in the general area, as well as serving other federal and state agencies, including the National Aeronautics and Space Administration (NASA), Ames Research Center, located at Moffett Field. NALF Crows Landing was retained as a federal facility for use by NASA in July 1994, and the facility is now known as the NASA Crows Landing Flight Facility. The former NALF Crows Landing is located in Stanislaus County, California, approximately 80 miles southeast of San Francisco. It covers approximately 1,520 acres in the northwestern part of the San Joaquin Valley between the towns of Patterson and Crows Landing. Much of the facility property and most of the surrounding area is used for agriculture.

In October 1999, NASA was authorized by legislative act of the 106th Congress of the United States of America to transfer the facility to Stanislaus County

Media Sampled and Findings

Groundwater – The Navy collected and analyzed 25 groundwater samples for perchlorate in 2003 and 2004. There were no detections of perchlorate above the perchlorate reporting limit of 4 ppb.

Cleanup Status

No detections. Not applicable.

5. Edwards Air Force Base, California

Facility and Location

Edwards AFB occupies 470 square miles and contains approximately 301,000 acres of largely undeveloped land in the Mojave Desert near Rosamond, CA. It is used predominantly for aircraft test ranges and maintained and unmaintained landing sites. Due to ideal weather conditions and its location, Edwards AFB is a practical location to test aircraft and serves as an ideal landing site for space-shuttle flights. The site contains natural playas (Rogers and Rosamond dry lakebeds) that serve as runways for many flight-test programs. Both lakebeds have been used for emergency and test landings of aircraft for more than 40 years.

The Jet Propulsion Laboratory (JPL) spent years at North Base, developing and testing solid fuel propellants for use in rocket and missiles systems. The solid propellant testing that occurred in the 1950s and 1960s is suspected as the source of perchlorate contamination in groundwater at North Base. The Air

Force Research Laboratory also conducted testing of solid rocket motors at several locations on the base not associated with the JPL sites.

Media Sampled and Findings

The Air Force has conducted and analyzed drinking water, groundwater, and soil samples for perchlorate at Edwards AFB due to the facility's site activities and history including its involvement in the production, maintenance, and testing of solid propellant for rocket or missile motors.

Drinking Water – To verify that no drinking water supplies have been affected by perchlorate, Edwards AFB collected over 30 samples from the drinking water system and analyzed them. No detections of perchlorate were reported, and no aquifers currently used for drinking water are threatened.

Groundwater – The Air Force has detected perchlorate contamination at the installation in shallow groundwater which also contains high levels of naturally-occurring total dissolved solids (TDS). Groundwater samples were collected from Site 282, North Base, JPL; AOC 422, North Base, JPL; Site 116, AFRL; Site 120, AFRL; Site 133, AFRL; Site 162/313, AFRL; Site 177, AFRL; Site 178, AFRL; and Site 325, AFRL. Of the approximately 364 groundwater samples collected, 272 samples have indicated the presence of perchlorate at concentrations ranging from non-detect to a maximum of 30,700 ppb. The maximum detection of 30,700 ppb was found at the Jet Propulsion Laboratory Site 285 at North Base as a result of the propulsion research that was conducted at the site.

Soil – The Air Force has collected and analyzed soil samples at Site 285 North Base for perchlorate. Of the 37 samples collected, all indicated the presence of perchlorate, with a maximum detection of 2,100,000 ppb. Elevated levels of perchlorate at this location is attributed to the propulsion research at JPL.

Cleanup Status

Edwards AFB has been working closely with a local Restoration Advisory Board (RAB), and approved a Treatability Study for Site 285 in 2001. After receiving permission from the Deputy Assistant Secretary of the Air Force (Environment, Safety, and Occupational Health), Edwards AFB implemented the Treatability Study to evaluate the effectiveness of an innovative ion-exchange technology at removing perchlorate from contaminated Site 285 groundwater. An ion-exchange system works like a magnet by capturing a perchlorate ion onto a positively charged resin and releasing a harmless chloride ion in its place. Since its initial operation in May 2003, over 11.2 million gallons of groundwater have been treated, with a little more than 41 pounds of perchlorate removed.

6. El Centro Naval Air Facility, California

Facility and Location

El Centro NAF is located in the Imperial Valley of California 10 miles east of the town of Imperial. NAF El Centro provides realistic training to active and reserve

aviation units and activities of the Navy's operating and training forces. Squadrons visit NAF El Centro to practice gunnery, bombing, carrier landings and air combat. The facility maintains and operates aviation facilities for gunnery, bombing, carrier landings and air combat training, provides services and material to support operations of aviation activities, operation forces and other activities.

Media Sampled and Findings

Drinking Water – El Centro NAF tested one drinking water sample in 2001 for perchlorate under the Unregulated Contaminant Monitoring Rule as part of the Safe Drinking Water Act. Perchlorate was detected at 5 ppb in the sample, which meets California's public health goal of 6 ppb for perchlorate in water.

Cleanup Status

No plans for remediation at this time.

7. El Toro Marine Corps Air Station (Former), Orange County, California

Facility and Location

This facility was commissioned in 1943. It supported the Fleet Marine Forces in the Pacific Ocean, serving as the major west coast jet fighter facility. The Station was closed in 1999 under the Base Realignment and Closure Act. El Toro provided materials and support for aviation activities of the Marine Corps and housing for Marine Corps personnel. Of approximately 4670 acres total, approximately 3700 acres were sold by public auction, approximately 900 acres were transferred to the Federal Aviation Administration (FAA), and approximately 70 acres are retained by Navy at Installation Restoration Program (IRP) Site 1, Explosive Ordnance Disposal (EOD) Range. Of approximately 3700 acres sold (public sale parcels), 921 acres will be retained under the control of the Navy in Lease In Furtherance of Conveyance status until on-going investigations and remediation are complete. IRP Site 1 is located at the far northeast corner of the station and remains under the Navy's ownership. Site 2 is located in a 900-acre area designated as a wildlife habitat that has already been transferred by the Navy to the FAA.

Since 1998, the Navy has been monitoring for perchlorate at the base as part of the regular groundwater monitoring program. The low detections of perchlorate within the boundaries of the former base were found to be consistent with concentrations identified at monitoring well locations off-station. Subsequent station-wide sampling studies confirm the scattered presence of low perchlorate concentrations in groundwater beneath the public sale parcels as well as off-station property sampled by Orange County Water District. The perchlorate levels detected within the public sale parcels are within the range that regulatory agencies have found acceptable. The Navy, U.S. Environmental Protection Agency (USEPA), California Department of Toxic Substances Control (DTSC), and California Regional Water Quality Control Board (RWQCB) reviewed all

available environmental data, including perchlorate, and determined with the July 2004 Finding of Suitability to Transfer (FOST) that the property to be transferred in the public sale parcels is suitable for residential or other proposed uses. The regulatory agencies all agreed with the July 2004 Final FOST.

Media Sampled and Findings

Groundwater – Perchlorate has been detected in groundwater at IRP Site 1, the former EOD range, and within the IRP Site 2, Magazine Road Landfill area. Of the 230 samples taken from Site 1, perchlorate detections ranged from .99 to 460 ppb. Of the 260 samples taken from Site 2, perchlorate detections range from 1.2 to 20.7 ppb.

Soil – Perchlorate has been detected in soil samples taken at Site 1. The Navy collected 224 samples. Perchlorate was detected between 22 ppb to 1,600 ppb. No soil samples have been collected at Site 2.

Cleanup Status

The Navy is conducting an environmental investigation {also referred to as a remedial investigation (RI)} at IRP Site 1. The RI is being conducted to further characterize the conditions at the site, determine the nature and extent of contaminants, and assess risk to human health and the environment. The RI will address perchlorate detected down gradient of IRP Site 1 within the IRP Site 2 area. Groundwater cleanup decisions at these sites are being evaluated by the Navy and federal and state regulatory agencies.

8. Fort Ord, Monterey Bay, California

Facility and Location

Fort Ord is located near Monterey Bay in central California, approximately 80 miles south of San Francisco. Since its formation in 1917, the installation has served primarily as a training and staging facility for infantry troops. Fort Ord, from 1947 to 1975, was a basic training center. After 1975, the installation trained a Light Infantry Division, operating without heavy tanks, armor, or artillery. Fort Ord was selected in 1991 for closure under the Base Realignment and Closure (BRAC) process. Troops were reassigned in 1994 when the post formally closed. Although Army personnel still operate approximately 5 percent of the base, active Army divisions are not stationed at Fort Ord. EPA identified Fort Ord as a Superfund site in 1990 due to groundwater contamination. A Multi-Range Area (MRA) located in the south-central portion of Fort Ord is expected to have the highest density of ordnance and explosives (OE), such as bombs and warheads; guided and ballistic missiles; artillery and mortar; containerized and uncontainerized explosives and propellants.

Media Sampled and Findings

The Army has tested soil at Fort Ord for perchlorate because of prior range operations, open burn/open detonation (OB/OD) activities, and its prior use of

perchlorate-containing munitions for training purposes. The Army used Method 314.0 for analysis.

Soil – The Army tested 432 samples from the Site 39 -Multi-Range Area. Of these, 41 samples detected perchlorate ranging from 13 ppb to 106 ppb. The Army also tested ten soil samples from Site 39—Range 36A. Perchlorate was not detected in any of these samples.

9. Lemoore Naval Air Station, California

Facility and Location

Lemoore Naval Air Station maintains and operates facilities and provides services and materials to support operations of aviation activities.

Media Sampled and Findings

Drinking Water – Lemoore took 4 drinking water samples as part of the Safe Drinking Water Act requirement in 2003. No perchlorate was detected in any of the samples.

Cleanup Status

No detections. Not applicable.

10. Mare Island Naval Shipyard, Solano County, (San Francisco) California

Facility and Location

The Mare Island Naval Shipyard (MINS) was the first United States Naval Station established on the Pacific Coast. It is located in Solano County, California, and approximately 25 miles northeast of San Francisco. The Napa River (Mare Island Strait) separates the peninsula shipyard from the City of Vallejo. The Navy purchased the original 956 acres of MINS in 1853 and commenced shipbuilding operations on September 16, 1854. In the early 1920s, the Navy initiated construction and maintenance of submarines at MINS. During World War II, MINS reached peak capacity for shipbuilding, repair, overhaul, and maintenance. Following the War, MINS was considered to be one of the primary stations for construction and maintenance of the Navy's Pacific fleet of submarines. It is presently over 5,200 acres, and was responsible for construction of over 500 naval vessels and overhauling thousands of other naval vessels. In addition to shipyard operations, ordnance manufacturing and storage was another key mission at MINS for nearly the same time period—including those used prior to the Civil War.

MINS was identified for closure during the Base Closure and Realignment (BRAC) process of 1993. Naval operations ceased and the facility was decommissioned on April 1, 1996. The California Conservation Corps, Touro University, and numerous commercial and industrial businesses are currently

leasing property aboard the former naval shipyard. In May 2000, the Navy completed the transfer of a former housing area called Roosevelt Terrace using an economic development conveyance. An economic development conveyance is a method to accelerate the transfer of BRAC facilities back to civilian communities for their economic benefit. The Navy is also transferring property at the shipyard to other government agencies such as U. S. Fish and Wildlife Service refuge, a U. S. Forest Service office building, an Army Reserve Center, a Coast Guard communications facility, and a Department of Education school.

Media Sampled and Findings

Groundwater – The Navy tested 9 groundwater samples at the facility for perchlorate in 2003. No perchlorate was detected in these samples. The Navy took 18 additional groundwater samples in 2004 from the same wells using a more accurate detection method. Two of the 18 samples detected the presence of perchlorate. Both were at levels below the 1 ppb action level agreed to by the Navy and regulatory agencies.

The Navy continues to test for perchlorate on a quarterly basis at a landfill on site where the Navy is undertaking environmental restoration efforts under the Resource Conservation & Recovery Act (RCRA).

Cleanup Status

Not applicable/required.

11. Marine Corps Air to Ground Combat Center (MAGTCC), Twentynine Palms, California

Facility and Location

Twentynine Palms is the home to the world's largest Marine Corps Base. It is the premier training facility in the world for Marine operations and draws military personnel from all over the world for Combined Arms Exercises. The Combat Center at Twentynine Palms is located in California and occupies 932 square miles, or 596,000 acres of the southern Mojave Desert. The Combat Center is three-quarters the size of Rhode Island. Such a sizable land area is essential to the conduct of realistic air/ground combat training exercises.

The two-fold mission of the Marine Air Ground Task Force Training Command [MAGTFTC] is to operate the Marine Corps Air Ground Combat Center for live fire combined arms training that promotes readiness of operating forces; and provide facilities, services, and support, responsive to the needs of tenant commands, Marines, Sailors and their families. The population served for the Combat Center is 9,723 Active Duty members, 8,588 dependents, and approximately 1,398 civilians.

Twentynine Palms is the premier live-fire base in the Marine Corps. Each year roughly one-third of the Fleet Marine Force and Marine Reserve units -- some

50,000 Marines in all -- participate in the base's training exercise program. These training exercises involve every weapons system in the Marine Corps' arsenal, from small arms to attack aircraft. They are absolutely essential to maintaining high levels of readiness of the U.S. Marine Corps to fight and defend U.S. National interests.

Media Sampled and Findings

Drinking Water – The Marine Corps tested 34 drinking water samples for perchlorate between 1997 to 2002 as part of the Safe Drinking Water Act requirement. None of the samples detected the presence of perchlorate.

Cleanup Status

No detections. Not applicable.

12. Marine Corps Base (MCB) Camp Pendleton, California

Facility and Location

Camp Pendleton operates an amphibious training environment that promotes the combat readiness of operating forces by providing facilities, services, and support to Marines, Sailors, and their families. The facility provides training facilities, logistical support and administrative support, and housing to Fleet Marine Corps units, both active-duty and reserves, as well as Army and Navy units, national, state, and local agencies. Located 38 miles north of downtown San Diego, Camp Pendleton covers over 125,000 acres and approximately 200 square miles of terrain. The stretch of shoreline along the base-- 17½ miles -- is the largest undeveloped portion of coastal area left in Southern California.

Media Sampled and Findings

Drinking Water – Camp Pendleton tested 170 drinking water samples between 2002 and 2003 as part of the Safe Drinking Water Act requirement. No perchlorate was detected in any of the samples.

Cleanup Status

No detections. Not applicable.

13. Marine Corps Logistics Base (MCLB) Barstow, California

Facility and Location

MCLB Barstow originally conducted industrial operations. It currently provides logistics support for Marine Corps forces in the western U.S. and Asia/Pacific arena. It maintains repairs, rebuilds, stores and distributes supplies and equipment.

Media Sampled and Findings

Drinking Water – The Marine Corps tested 11 drinking water samples from 2001 to 2004 as part of the Safe Drinking Water Act requirement. No perchlorate was detected in any of the samples.

Cleanup Status

No detections. Not applicable.

14. Morris Dam Naval Command, Control and Ocean Surveillance Center, California

Facility and Location

This facility is located in the Angeles National Forest, Los Angeles County, about 4.5 miles northeast of the City of Azusa along State Hwy 39. It occupies 20 acres of leased land divided into two parcels: the first parcel is owned by the U.S. Department of Forestry; the second parcel is owned by the Metropolitan Water District (MWD) of Southern California. The dam was constructed in the 1930s. Prior ownership of the land is unknown. The Navy first leased the land from MWD in 1945. The torpedo testing facility was constructed in 1943 and the California Institute of Technology (Caltech) operated the facility from 1943-1950 as an annex to Naval Weapons Station, China Lake. The facility's primary research concentrated on the hydrodynamic aspects of torpedoes and a sonar system for detecting underwater objects.

Media Sampled and Findings

Recently, the Navy has discovered documents that indicate that some explosives may have been stored or used at the facility that contain perchlorate. As a result, the Navy has conducted 3 rounds of groundwater sampling at the facility. Groundwater –The Navy has analyzed 13 groundwater samples for perchlorate. The maximum level of perchlorate detected in these samples was 65 ppb.

Cleanup Status

Based on these groundwater sampling results, the Navy is working with California regulators to develop a sampling plan to determine the nature and extent of perchlorate contamination at the site. This sampling effort will include the collection of soil, surface and water samples to support the development of a conceptual site model and to assess the potential for drinking water impacts.

15. Naval Weapons Station (NWS) Seal Beach Detachment Concord, California

Facility and Location

The Seal Beach Detachment Concord is located approximately 35 miles northeast of San Francisco, CA near the confluence of the San Joaquin and Sacramento Rivers in Suisun Bay. The Detachment's primary purpose is the

loading and unloading of large quantities of weapons and equipment from cargo and pre-positioning ships. This differs substantially from most other naval weapons stations and detachments, where weapons are loaded aboard combatants, amphibious vessels or replenishment ships one at a time or in very small groups. Base infrastructure is uniquely suited for bulk quantity operations. During wartime conditions, Detachment Concord has the capability to load over 4,000 tons of munitions per day.

Media Sampled and Findings

Groundwater – The Navy tested 24 groundwater samples for perchlorate between 2003 and 2004. Perchlorate was not detected in any of these samples above the reporting limit of 4 ppb.

Cleanup Status

Not applicable.

16. North Island Naval Air Station, California**Facility and Location**

North Island Naval Air Station maintains and operates facilities and provides services and materials to support operations of aviation activities. It is homeport for three aircraft carriers and the Deep Submergence Rescue Vehicles.

Media Sampled and Findings

Ground Water –North Island NAS took 5 ground water samples in 2003 as part of its clean-up program. No perchlorate was detected in any of the samples.

Cleanup Status

No detections. Not applicable.

17. Port Hueneme Construction Battalion Center, California**Facility and Location**

Port Hueneme provides support to Naval Consturction Force, fleet units, and assigned organizational elements.

Media Sampled and Findings

Drinking Water – Port Hueneme took one ground water sample as part of its clean-up program in 2003. No perchlorate was detected in the sample.

Cleanup Status

No detections. Not applicable.

18. San Nicolas Island Navy Outlying Landing Field (NOLF), California

Facility and Location

San Nicolas Island is the most northwesterly of the four southern Channel Islands. The NOLF Supports C-5's on a 10,000 foot runway. The facility is located on the edge of a 500-foot mesa. The Barge Landing Area is used to barge cargo to large or bulky aircraft. Cargo can be off-loaded and trucked to the main compound or one of the many project areas.

Media Sampled and Findings

The Navy tested drinking water, surface water, and soil for perchlorate at the facility between 2000 and 2004.

Drinking Water – The Navy tested 13 drinking water samples for perchlorate in 2004. Perchlorate was detected in 9 of these samples. The highest perchlorate detection was 13 ppb.

Surface Water – The Navy tested 58 surface water samples for perchlorate in 2000. Perchlorate was detected in 53 of these samples ranging from 2,300 ppb to 3,000 ppb.

Soil – The Navy tested 13 soil samples for perchlorate in 2000. Perchlorate was detected in all of these samples. The highest perchlorate detection in soil has been 192,570 ppb.

Cleanup Status

The water is no longer used as a source of drinking water.

19. Seal Beach Naval Weapon Station (NAVWPNSTA), Seal Beach, California**Facility and Location**

The Naval Weapon Station at Seal Beach is located within the city of Seal Beach in northwest Orange County about six miles southeast of Long Beach and 25 miles southeast of Los Angeles. The site houses the Weapons Station and Naval Ordnance Center Pacific Division headquarters and various DOD tenants, and contains waterfront, storage and production facilities. Naval Weapons Station Seal Beach is the major Southern California ammunition storage and distribution point for the Pacific Fleet. This installation receives, stores, maintains and issues conventional ordnance and guided missiles; maintains and operates an ordnance systems component rework facility; and maintains, stores and issues materials for units of the U.S. Pacific Fleet and Department of Homeland Security.

Media Sampled and Findings

The Navy wanted to have a qualitative knowledge of where perchlorate may be throughout the Facility despite the fact that the only current EPA approved method for detecting perchlorate is for finished tap water. The Navy has tested groundwater and soil for perchlorate.

Groundwater – The Navy tested six groundwater samples from the facility for perchlorate. Perchlorate was not detected in any of these samples.

Soil – The Navy tested seven soil samples at the facility for perchlorate. Perchlorate was detected in these samples from below the detection limit of 4 ppb to 2,460 ppb. The average perchlorate detection in soil was 797 ppb.

Cleanup Status

No detections. Not applicable.

20. SERE Camp Warner Springs, California**Facility and Location**

Camp Warner Springs is a survival training camp.

Media Sampled and Findings

Drinking Water – Camp Warner Springs took 6 drinking water samples in 2003 as part of the Safe Drinking Water Act requirement. No perchlorate was detected in any of the samples.

Cleanup Status

No detections. Not applicable.

21. Travis Air Force Base, Fairfield, California**Facility and Location**

Travis AFB is located in Fairfield, CA. It is home to the 60th Air Mobility Wing (AMW), which is the largest airlift organization in the Air Force. The Wing flies the Lockheed C-5 Galaxy and the KC-10 Extender tanker. Sometimes referred to as the Gateway to the Pacific, Travis AFB handles more cargo and passenger traffic through its aerial port than any other military air terminal in the United States. Additionally, the base has had a long history of supporting humanitarian airlift operations at home and around the world. Travis C-5's were cornerstone to the effort in rapidly deploying American forces for Operations Enduring Freedom and Iraqi Freedom, and forward-deployed KC-10's refueled the first combat aircraft to strike enemy targets.

Media Sampled and Findings

The Air Force collected and analyzed drinking water and groundwater samples for perchlorate in 2001 because of the state's concerns about the potential for perchlorate contamination in drinking water supplies.

Drinking Water – The Air Force sampled groundwater that is used for drinking water supplies from three wellheads in 2001. Perchlorate was not detected in any of the samples. As a result, in September 2002, the California Department of Health Services (DHS) waived further requirements to sample for perchlorate.

Groundwater – The Air Force sampled groundwater that is used for drinking water supplies from three wellheads in 2001. Perchlorate was not detected in any of the samples. As a result, in September 2002, the California Department of Health Services (DHS) waived further requirements to sample for perchlorate.

Cleanup Status

No detections. Not applicable.

22. Tustin Marine Corps Air Station, Tustin, California

Facility and Location

MCAS Tustin closed in 1997, as a result of 1991 Base Realignment and Closure (BRAC) decisions. Tustin Marine Corps Air Station (MCAS) is located in southern California near the center of Orange County. The installation is approximately 40 miles south of downtown Los Angeles, approximately 100 miles north of the California-Mexico border, and seven miles from MCAS El Toro. The installation occupies approximately 1,383 acres of land, of which approximately 30 percent is currently used for agriculture. The remaining area surrounding the facility is residential and light manufacturing.

Marine Corps Air Station (MCAS) Tustin was initially established as a Navy lighter-than-air (LTA) base and commissioned in September 1942. The station was used to support observation blimps and personnel that were necessary to conduct antisubmarine patrols off the Southern California coast during World War II. The facility served as an LTA base until June 1949, when it was decommissioned. With the Korean conflict, the station was reactivated in May 1951, and commissioned as Marine Corps Air Facility Santa Ana. The name was changed to Marine Corps Air Station (Helicopter) Santa Ana in September 1969 and finally MCAS Tustin in June of 1985. It was the country's first air facility developed solely for helicopter operations. The station is bordered by the cities of Tustin, Santa Ana, and Irvine. MCAS Tustin encompasses 1,569 acres. About 4,500 residents live on the base and nearly 5,000 military personnel and civilians are employed by the base. In addition to providing military support, MCAS Tustin leases 530 acres to farmers for commercial crop development. For many years, agricultural lands surrounded the facility. However, over the last 20 years, residential and light industrial/manufacturing areas have developed adjacent to the station.

Operational closure occurred in July 1999. Of the approximately 1600 acres, approximately 1300 acres were conveyed to the City of Tustin, private developers, and public institutions for a combination of residential, commercial, educational, and public recreational and open-space uses. When environmental cleanup is complete, the remaining approximately 300 acres will be conveyed to

other federal agencies, the City of Tustin, and public institutions for the same uses.

Media Sampled and Findings

MCAS Tustin is located within five miles of drinking water supply wells using the underlying aquifer of the Irvine Pressure Sub-basin area. Perchlorate is not known to have been stored or disposed of on site. Since Tustin does not supply drinking water, the Marine Corps has not tested drinking water. Even though there is currently not an EPA-approved method for testing perchlorate in groundwater, the Navy wanted to gather some qualitative information on where perchlorate may be found in groundwater at the facility.

Groundwater – The Navy has tested 61 groundwater samples for perchlorate. The highest perchlorate detection from these samples was 4.2 ppb, which is slightly above the reporting limit of 4 ppb for finished drinking water.

Cleanup Status

At two other sites, the Navy will continue to test for perchlorate monthly from the influent (water going into groundwater treatment system) and weekly at the effluent to the groundwater treatment units to comply with the substantive requirements of a National Pollutant Discharge Elimination System (NPDES) permit. The facility met all NPDES permit requirements during 2004.

DRAFT

Known Suspected Perchlorate Manufacturers/Users in US.-As of April 0

| State | Facility | City | BAC | NPL | Manufacturer | User |
|-------|----------|------|-----|-----|--------------|------|
|-------|----------|------|-----|-----|--------------|------|

FACILITIES

| | | | | | | |
|----|---|--------------------|---|---|--|---|
| CA | Sierra Army Depot ** | Herlong | Y | N | | Y |
| CA | Space Warfare Systems Center, San Diego ** | San Diego | N | N | | Y |
| CA | Vandenberg AFB ** | Vandenberg AFB | N | N | | Y |
| CA | Weapons Support Facility, Seal Beach, Concord Detachment ** | Concord | N | F | | Y |
| CA | Weapons Support Facility, Seal Beach, Fallbrook ** | Fallbrook | N | N | | Y |
| CA | Naval Air Weapons Station, China Lake ** | China Lake | N | N | | Y |
| CA | Edwards AFB/Dryden Flight Research Center ** | Edwards | N | F | | Y |
| CA | U.S. Navy Firing Range - San Nicolas | San Nicolas Island | N | N | | Y |
| CA | Mather AFB ** | Rancho Cordova | N | F | | Y |
| CA | El Toro MCAS | El Toro | Y | N | | Y |

Other Federal Agency Facilities

| | | | | | | |
|----|--|--------------|--|---|--|---|
| CA | Santa Susana Field Lab, Rocketdyne Division | Santa Susana | | N | | Y |
| CA | Lawrence Natl Lab, DOE Experimental Site 300 | Tracy | | F | | Y |
| CA | Jet Propulsion Laboratory (NASA) | Pasadena | | F | | Y |

Non-Federal Entities

| | | | | | | |
|----|---|----------------|--|---|--|---|
| CA | Alpha Explosives | Lincoln | | N | | Y |
| CA | Pratt & Whitney Space Propulsion (UTC) ** | San Jose | | N | | Y |
| CA | Aerojet General Corp. | Azusa | | N | | Y |
| CA | Lockheed Propulsion Company (Former) ** | Redlands | | N | | Y |
| CA | Aerojet General Corp. -Rancho Cordova (also 95670) ** | Rancho Cordova | | N | | Y |
| CA | Hi-Shear Industries | Torrance | | N | | Y |
| CA | Hi-Shear Technology Corp. | Saugus | | N | | Y |
| CA | M.P. Associates | Imperial | | N | | Y |
| CA | Mason Holodyne | Applegate | | N | | Y |
| CA | McKesson Chemical Co. | Riverside | | N | | Y |
| CA | Mojave Pyrotechnics (address unknown, approx. zip code) | Barstow | | N | | Y |
| CA | Odee Mfg. Co. | Llano | | N | | Y |
| CA | Olin Corporation | Morgan Hill | | N | | Y |
| CA | Reynolds Systems Inc. /FMC | Middletown | | N | | Y |
| CA | Starflight Space Technologies | Windsor | | N | | Y |
| CA | TOPTH Inc. | Gardena | | N | | Y |

Known Suspected Perchlorate Manufacturers/Users in US.-As of April 0

| State | Facility | City | BAC | NPL | Manufacturer | User |
|-------|--|----------------|-----|-----|--------------|------|
| CA | TOPTH Inc. | Long Beach | / | / | N | Y |
| CA | US Rocket | Pomona | / | / | N | Y |
| CA | Western Electrochemical (no longer exists) | Culver City | / | / | N | Y |
| CA | Whittaker Ordnance | Hollister | / | / | N | Y |
| CA | Astro Pyrotechnics | Rialto | / | / | N | Y |
| CA | Kinetech Corp | Rancho Cordova | / | / | N | Y |
| CA | Rocket Research | Pleasant Hill | / | / | N | Y |
| CA | Trojan Fireworks | Palmdale | / | / | N | Y |
| CA | Zimney Corp. Magazine Site | Mojave | / | / | N | Y |
| CA | Teledyne McCormick | Hollister | / | / | N | Y |
| CA | Bermite Division., Whittaker corp. | Saugus | / | / | N | Y |
| CA | Dynamic Propellant | Ontario | / | / | N | Y |
| CA | FMC | Hollister | / | / | N | Y |
| CA | G.G. Industries | Alisa Viejo | / | / | N | Y |
| CA | B.F. Goodrich Aerospace & Defense Products | Rialto | / | / | N | Y |
| CA | Whittaker Bermite | Santa Clarita | / | / | N | Y |
| CA | San Fernando Valley | Glendale | / | / | N | Y |
| CA | San Gabriel Valley | | / | / | N | Y |
| CA | UTC | San Jose | / | / | N | Y |
| CA | Stringfellow | Glen Avon | / | / | N | Y |
| CA | Casmalia Resources | Casmalia | / | / | N | Y |
| CA | Olin Safety Flare | Morgan Hill | / | / | N | Y |

| | | |
|-----------------|--|--|
| Sources: | I. Region 9 Memo, May 1998; Kerr McGee's 104(e) Response | VII. Texas Commission of Environmental Quality |
| | II. American Pacific Non -CBI 104(e) response | VIII. Utah Department of Environmental Quality |
| | III. U.S. EPA Regions 1, 3, 4, 6, 7, 9, 10 | IX. West Virginia Division of Environmental Protection |
| | IV. California Department of Health Services | X. Suffolk County, New York, Dept. of Health Services |
| | V. Arizona Department of Environmental Quality | XI. US Department of Energy |
| | VI. New Mexico Environmental Department | XII. UCMR |

** = 1998 Department of Defense Information Request

DoD & California Priority List of Sites for Perchlorate Sampling

To date, DoD has monitored for perchlorate through the Safe Drinking Water Act's Unregulated Contaminant Monitoring Rule (UCMR), the Clean Water Act, and the Defense Environmental Restoration Program. However, data gaps still remain regarding possible perchlorate releases at some DoD sites in CA. The jointly developed California Prioritization Protocol was intended to aid DoD and the State in prioritizing perchlorate investigations at DoD sites where sampling was unplanned and unbudgeted. The Department of Defense and State of California have now finalized the list of priority DoD sites for perchlorate sampling. DoD and the state evaluated 84 DoD facilities and 227 Formerly Used Defense Sites (FUDS) under the Protocol. The priority list of DoD sites includes 24 facilities and 14 FUDS. Next, the State agencies and DoD will work cooperatively to define sampling requirements for each of the prioritized sites. Each DoD facility will then develop a sampling plan and schedule to address the data gaps.

Air Force Plant #16 (J09CA0025)¹, FUDS
 Air Force Plant #42, Palmdale, AF
 Azusa Dump Site OWL 4X PL (J09CA0025), FUDS
 Bridgeport MCMTWTC, USMC
 Camp Haan, Site Y (J09CA0279), FUDS
 Castle Air Force Base, AF
 China Lake Randsburg W. Gun Line, NAVY
 China Lake Randsburg Wash #1, NAVY
 Corona Annex (J09CA112), FUDS
 D-Q University (J09CA1180), FUDS
 Fallbrook Naval Weapons Station (FNWS), NAVY
 Fort Irwin, ARMY
 George Air Force Base, AF
 Hamilton, ARMY Airfield BRAC, ARMY
 Hamilton, ARMY Airfield NEX Gas Station (Hamilton Novato DoD Housing), NAVY
 Hayward, ARMY Airfield (ANG), AF
 LA DEF Area Nike BTRY 96, ARMY
 Lockheed Air Terminal (J09CA0447), FUDS
 March Air Force Base, AF
 March Air Reserve Base, AF
 Marquardt Ram Jet Div Facility (J09CA0122), FUDS
 McClellan Air Force Base, AF
 MCRC Pasadena, USMC
 Mira Loma Quartermaster Depot (J09CA0489), FUDS
 Naval and Marine Corps Reserve Center - NMCRC, Alameda, NAVY
 Nike Battery Los Pinetos (J09CA3702), FUDS
 Norton Air Force Base (J09CA0514), FUDS
 Norton Air Force Base, AF

DoD & California Priority List of Sites for Perchlorate Sampling

Ontario, ARMY Airfield (J09CA0531), FUDS
Parks Reserve Forces Training Area, ARMY
Point Mugu NAWS, NAVY
Point Ozol DESC
Pomona NIROP, NAVY
Pomona Ordnance Depot (J09CA0548), FUDS
Presidio of San Francisco, ARMY
Sacramento, ARMY Depot (SADA), ARMY
San Bernardino CWS PL (J09CA0587), FUDS
San Diego Naval Station, NAVY
Sierra AD - Main Base, ARMY
Skaggs Island, NAVY
Stockton NCS, NAVY
Van Nuys AAF (J09CA0179), FUDS

DRAFT

Available at: <http://www.dodperchlorateinfo.net/efforts/sites/ca/protocol/list.html>

¹ These numbers are property numbers assigned by DOD and are used to identify properties that were formerly owned, leased, possessed, or operated by DOD; such properties are known as Formerly Used Defense Sites (FUDS).

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