Fort Ord Environmental Cleanup

# Community Bulletin #7

Fort Ord BRAC Office

September 2007

## *Highlights of the 2006 Fire*

- The prescribed burn cleared vegetation on 80 acres, including areas where 150-foot fuel breaks were cleared
- The prescribed burn lasted about three hours
- Air monitoring showed that particulate (PM10) in the smoke from this fire was below state health standards at monitoring stations (see information on page 5)
- The fire management program was generally considered to be highly successful

***Army Provides Community With Report of Successful Effort***

# Evaluation of the Fall 2006 Prescribed Burn

On October 19, 2006, the Army conducted a prescribed burn on a former military training area known as Munitions Response Site 16 (MRS-16). A prescribed burn is an intentionally set fire, ignited under carefully controlled conditions. The purpose of the fire was to remove vegetation on the 80-acre site so that, after the fire, cleanup workers could safely remove unexploded munitions and explosives left on or near the surface of the ground.

Following the October 2006 prescribed burn the Army completed a series of reports — known as "after-action reports" — that evaluated how the fire was conducted, the community notification and voluntary temporary relocation program, air monitoring, and security during the fire. This report {available at www.FortOrdCleanup.com) to the community summarizes these findings.

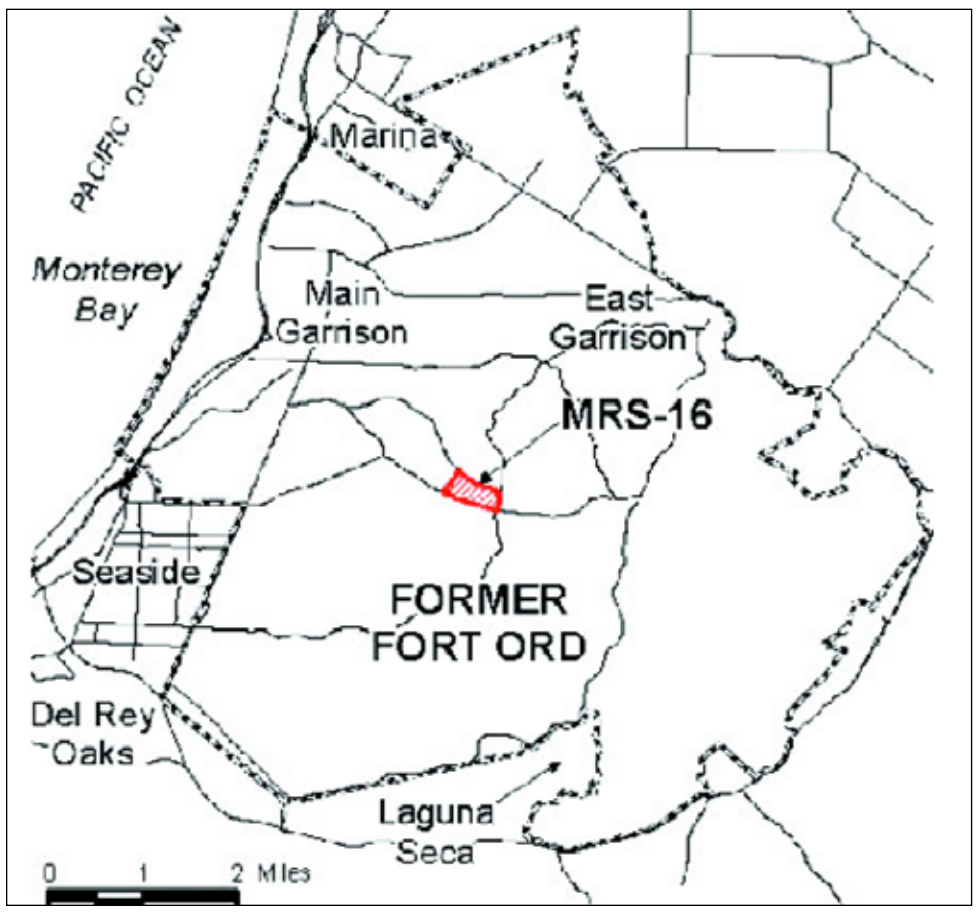
***Para obtener una copia del boletin de la communidad en Espanol, contacte (800) 852-9699.***

# Why the Army Conducted the Burn

During the era when Fort Ord was a military training facility, MRS-16 was a rocket training range. Thousands of rockets were fired. Inevitably a small percentage never detonated. Many of these unexploded munitions or explosives (known as "munitions and explosives of concern") lie on or near the surface of the land and may be triggered if someone encounters them. Although the area is fenced off, people occasionally trespass on the land, and those who do so are in danger of being maimed or killed if they set off the explosives. The Army is legally responsible for cleaning up the land and readying it for reuse as protected public lands.

Prior to the prescribed burn, MRS-16 was covered with heavy brush, known as central maritime chaparral. Because of the heavy brush, it was unsafe for cleanup workers to enter the site because they could not see the ground and might accidentally trigger the explosives. The Army needed to remove the vegetation to make it safe for cleanup workers to remove the munitions and explosives of concern.

Several years ago the Army, in consultation with the U.S. Environmental Protection Agency (EPA) and the California Department of Toxic Substances Control (DTSC), conducted extensive studies and concluded that prescribed burns were the safest way to remove the vegetation at this site. In addition, prescribed burns play a useful role in habitat management (maritime chaparral habitat is rejuvenated by fire). Prescribed burns also reduce the amount of fuel that could burn in the event of a wildfire.




Since the October 2006 prescribed burn, the Army has removed munitions and explosives of concern that were lying on the surface of the land. 51 munitions and explosives of concern were found on the surface. The Army then conducted a program to remove munitions and explosives of concern below the ground surface, removing 158 UXO items.

Until all phases of the removal are completed, the site will be secured and access will be restricted to project personnel and accompanying safety escorts. The intended reuse for this land is as a habitat reserve, managed by the Bureau of Land Management.

# Short History of Fort Ord's Prescribed Burns

During the period from 1917 to 1994, when Fort Ord was a major military training facility, fires were a fairly frequent occurrence. Some were prescribed burns, and some were set off by firing of munitions and explosives during training exercises. Fort Ord was closed as a training facility in 1994, as part of the base closure and realignment program that followed the end of the Cold War.

Fort Ord has continued to conduct prescribed burns as part of the cleanup program. In 2002, following several years of study, publication of numerous reports, and an extended public involvement process, the Army, in consultation with EPA and DTSC, concluded that prescribed burns would be used to clear vegetation on three high-priority sites, Ranges 43-48, MRS-16, and Range 30A. As part of the decision to use prescribed burns at these three sites, the Army agreed to offer a voluntary temporary relocation program under which the Army would pay reasonable cost of meals, lodging, and transportation for Monterey County residents who chose to leave the area during the period of the fire.

A prescribed burn was conducted at Ranges 43-48 in 2003. This fire escaped the primary containment lines and burned additional acreage that was scheduled for cleanup at a later time. Nearly 1,000 people chose to relocate from the area during the 2003 fire as part of the Army's temporary relocation program. An extensive air monitoring program showed temporary smoke impacts to the surrounding communities; however, and evaluation by the Agency for Toxic Substances and Disease Registry (ATSDR), a federal health agency, found that the smoke from the prescribed burn was not a public health hazard.

In 2006 the Army announced that it would be conducting a prescribed burn at MRS-16.

# Goals for the 2006 Prescribed Burn

The overall goal for the 2006 prescribed burn was to remove 80-90% of the vegetation (ground cover) on MRS-16 so that the Army could safely conduct a remedial action on that site.

There were also goals for how the fire itself was to be conducted. These included:

- o Complete prescribed burn operations with no injuries to fire personnel or impacts to the surrounding communities.
- o Hold the burn within the established primary containment lines located around the MRS-16 perimeter.
- o Minimize smoke impacts

Considerable planning goes into ensuring worker and public safety during the fire. This includes deciding how firefighting staff will be deployed, what equipment will be needed, and how the burn itself will be ignited. Prior to the fires the Army ensures that the area to be burned is surrounded by both primary, secondary, and tertiary containment lines. Primary containment lines consist of fuel breaks and roads around the immediate area to be burned. Secondary and tertiary containment lines are roads or fuel breaks that surround larger geographic areas. Fire planners also have to protect against "spot-overs." Spot-overs are small smolders or fires that occur when an ember is carried over a containment line by wind. Fire-fighting resources have to be deployed for immediate response and control of any spot-overs.

**Area begins to recover after the burn.**

Vegetation removal has to be accomplished while still minimizing the smoke impacts on surrounding communities. The primary means by which smoke from a prescribed burn can be minimized are: (1) conduct prescribed burns under atmospheric conditions which allow the smoke to rise in a column to above 1,500 feet and then dissipate in the upper atmosphere and (2) use fire management techniques that reduce smoke from the burn.

The worst conditions for smoke are if the smoke is held near the ground where it impacts people living nearby. In the Monterey Bay area, the meteorological conditions that avoid this problem occur only occasionally from the late summer to early winter. In addition, fires cannot be conducted until July 1, to protect animal and plant species. The window of opportunity for a prescribed burn ends with the onset of the rainy season.

These desired weather conditions are hard to predict. Once the appropriate conditions occur, they usually last for only a few hours until the afternoon breezes start coming in from the ocean.

Firefighters also have to consider the availability of backup/emergency firefighting teams and equipment. If there are fires occurring elsewhere in the state, firefighting teams and equipment might be already committed and could not be called upon if something went wrong with the prescribed burn. So it is possible to have a day with ideal atmospheric conditions but still be unable to ignite the prescribe burn because of fires elsewhere in the state.

# Who Managed the Prescribed Burn

The successful prescribed burn was the culmination of months of planning by the Army with federal, state and local agencies as well as engineers, scientists, and community members.

The prescribed burn was supervised by the Presidio of Monterey Fire Department. The burn team consisted of personnel from the Presidio of Monterey Fire Department (POMFD), meteorologists from the Naval Postgraduate School (NPS), and a contracted fire behavioral analyst/burn boss. The burn team coordinated closely with local and state air district personnel throughout the planning and execution of the MRS-16 burn. This included development of a "prescription" for the meteorological conditions that needed to exist before the fire would be ignited.

# Pre-Burn Preparations

In preparation for the prescribed burn, the Army established 150-foot wide fuelbreaks around the outer perimeter of MRS-16. This involved cutting vegetation around the perimeter of the fire which, when combined with well-established roads, provided a cleared area 150 feet wide. These fuel breaks were three times wider than the 2003 fuel breaks.

Surrounding roads were inspected to ensure all roads were drivable by fire apparatus in the event they needed to be used for fire fighting. The secondary and tertiary fuel breaks were also confirmed.

**Brush cleared for fuel breaks. Combined cut vegetation and paved roads provided 150-foot fuel break.**

A helicopter base was established on a range near the prescribed burn. Three 5,000 gallon helicopter dip tanks and two 5,000 gallon fold-a-tanks were set up in strategic locations around the area to be burned to ensure an ample supply of on-site water. The local community was notified of the upcoming prescribed burn.

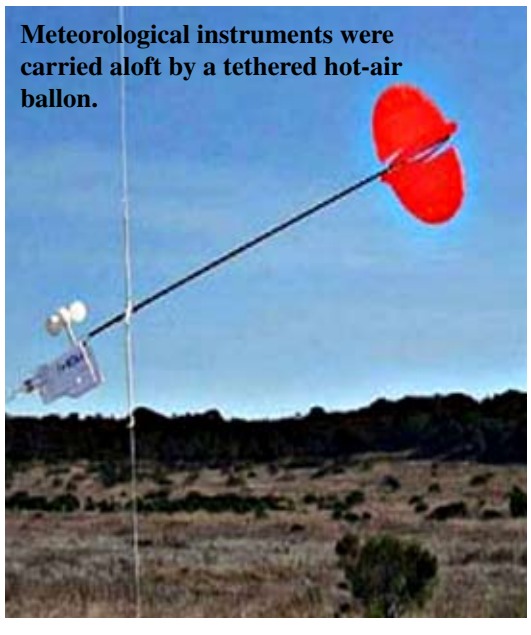
# Fire Fighting Equipment Used

**Helicopter loads water at on-site fold-a-tank then delivers water during mop-up operations.**

During the fire, a total of four helicopters were used to manage the burn operations. One helicopter was used for ignition. A second helicopter was used for observation for the burn boss and Monterey Bay Unified Air Pollution Control District (MBUAPCD) personnel monitoring smoke management. Two other helicopters were used for fire suppression. All four helicopters had suppression capabilities.

The Presidio of Monterey Fire Department provided five fire engines, four command vehicles, a terra torch, and a water tender. The California Department of Forestry (CDF) provided three fire engines as contingency resources on scene.

**Meteorological instruments were carried aloft by a tethered hot-air ballon.**



# Short Chronology of the Prescribed Burn

Here's a quick summary of the actual burn:

❑ On October 17, 2006 the decision was made — based on meteorological conditions — to mobilize resources for a possible burn on October 19. Fire equipment arrived at the former Fort Ord on October 18.

❑ Meteorological instruments, carried aloft by a tethered hot-air balloon, were launched at 7:19 a.m. on October 19. The first readings showed a strong wind from the east at about 200 feet above the ground. Such winds can blow the smoke horizontally, holding the smoke close to the surface where it bothers surrounding communities. So ignition of the burn was postponed. However, about 9:45 a.m., meteorologists from the Naval Postgraduate School and the Monterey Bay Unified Air Pollution Control District concluded that this wind was weakening and that a test burn could be conducted by 10:00 a.m.

❑ Based on the behavior of the smoke from the test burn, the main fire was ignited by two teams of ground crews-


*Wind gusts transported hot fire brands across Eucalyptus Road and started a spot fire just south of the road. The spot-over burned approximately ¼ acre.*

They used drip torches and hand-projected ignition devices to ignite the fire beginning at the western perimeter. A helicopter dropped alumagel to ignite the fire beginning at the containment line and working inward.

❑ At 10:45 a.m. a spot-over (a smolder or small fire started by a burning ember carried by the wind) was reported across Eucalyptus Road. Fire engines were located nearby and were able to respond quickly, putting out the fire. The spot-over was so small it had no impact on operations and there was no threat of additional spot-overs or escapes.

❑ At 1:30 p.m. the prescribed burn was considered complete and the burn team began mop-up operations, with fire suppression continuing until nightfall. The area was patrolled carefully during the night, and mop-up operations continued the next morning until 12 p.m.

For a more detailed description of how the fire was managed, download the after-action report at www.fortordcleanup.com/adminrec/ar%5Fpdfs/AR%2DOE%2DO613E/

# Air Quality

The Army set up seven air quality monitoring stations around the former Fort Ord to collect air samples over the 24-hour period that included the prescribed burn. The monitoring was designed to evaluate whether concentrations of particulate matter less than 10 microns in size (PM10) downwind of the prescribed burn were within human health-protective regulatory screening levels. The monitoring results would also help refine the burn prescription for future prescribed burns.

The positioning of these monitoring systems was determined in consultation with EPA, DTSC, and the Monterey Bay Unified Air Pollution Control District. Five of the monitoring locations were placed at pre-selected sites including schools that might be impacted by smoke. The location of the two additional monitoring stations was based on models of smoke dispersion run the day before the prescribed burn.

The State of California has established a health-protective screening level for particulate matter (PM10). The Army found that, except for the sample from the Speckels School, PM10 was not found at any of the stations at readings higher than the screening level.

***Location of Monitoring Stations***

- Marshall Elementary School
- Manzanita School
- Ingham School
- Salinas Rural Fire Departments (Portola and Laureles)
- Spreckels School
- Del Rey Woods Elementary

The particulate matter monitored at the Spreckles School station probably did not result from the Fort Ord prescribed burn because smoke from the Fort Ord prescribed burn was not blowing towards Spreckles School. There was smoke from an agricultural prescribed burn on the same day as the Fort Ord prescribed burn that was blowing in the direction of Spreckles School and likely contributed to the levels of particulate in the samples taken at the Spreckles School air monitoring station.

For more information on the air monitoring program and results, download the after-action report at www.fortordcleanup.com/adminrec/ar%5Fpdfs/AR%2DOE%2DO613E/

# Notification and Relocation Program

The Army initially proposed to terminate the voluntary temporary relocation program. The reason had to do with revisions to the burn plan designed to minimize smoke, coupled with air monitoring from previous prescribed burns showing that smoke was not a health hazard.

For the 2003 prescribed burn the Army attempted to predict meteorological conditions. This allowed the Army to notify people to relocate the night before the prescribed burn. But this effort to predict meteorological conditions led to problems. The predicted meteorological conditions did occur, but several hours later than predicted. The result was more smoke that affected nearby communities.

The Army concluded that for the 2006 prescribed burn it would measure atmospheric conditions and not ignite the prescribed burn until the prescribed conditions were already present. If the required conditions did not occur when predicted, the Army would postpone the fire until the next day. The fire could continue to be postponed for several days. But when the right conditions were present, the fire would be ignited shortly thereafter. Because there was no certain date on which day the prescribed burn would be ignited, the Army would not be able to give people the go-ahead to relocate until the fire was already ignited.

Following a public comment period and consultation with regulatory agencies, the Army decided it would offer voluntary temporary relocation during the MRS-16 prescribed burn despite the short notification. To accommodate the short notification period, though, the Army had to make several changes in the relocation program. These included:

- The public would be notified when fire management equipment was mobilized on the site, but the public had to understand that this equipment might be standing by for several days before a fire was ignited
- The enrollment period for the relocation program would last for approximately 30 days, from June 12 to July 14, 2006. The July 14 date allowed the Army sufficient time to provide advance funds for families with financial hardship in the event the fire occurred during the later part of July.
- After July 14 the Relocation Office was open by appointment only, and applications for families with financial hardship were reviewed on a case-by-case basis to determine if advance payment could be made.
- The relocation period began the day of the burn, not the night before.

**Relocation enrollment at the Fort Ord Relocation Office.**

The Army engaged in a number of activities to publicize the relocation program including:

## BEGINNING OF BURN SEASON

The Army sent out flyers to community groups, placed full page ads in several local newspapers, issued a press release, sent a notice to people enrolled in previous relocation programs, and sent a letter to local elected officials describing the relocation program.

## NOTIFICATION OF MOBILIZATION

On October 18, the Army issued a notice announcing that the firefighting equipment had been mobilized and a prescribed burn was imminent. This notice was sent out to the media as a press release, and was sent by e-mail or telephone autodialer to anyone who had signed up for relocation or had requested notification. The notice was also posted on www.FortOrdCleanup.com.

## NOTICE OF IGNITION

As soon as the fire was ignited on October 19, another notice was sent by e-mail and telephone autodialer notifying people that the fire was started and that the relocation period had officially begun. The media was also informed and a notice was posted on the Fort Ord Cleanup Program website www.FortOrdCleanup.com.

## NOTICE OF COMPLETION

About 2 p.m. on October 19, the Army used the same methods to notify people that the burn was completed. On October 20, the Army issued a final notice that the burn was completed and that the relocation period had ended.

The Relocation Office was open for extended hours from 8 a.m. to 7 p.m.

from October 17 through 19. There were four hotline operators dedicated to answering questions on the hotline during those hours. During the week of the prescribed burn, there were 1,489 calls. A typical month has about 100 calls to the hotline.

By the July 14 deadline, 655 families applied for relocation. Applications continued to come in after the July 14th deadline, and by the time the prescribed burn occurred in October, a total of 899 families (each with several family members) had completed applications.

On October 23, the Army sent out reimbursement packages, containing all the necessary forms and instructions on how to request reimbursement. This packet was sent to everybody who had signed up for relocation and expected subsequent reimbursement.

All completed reimbursement packages were processed within 30 days from the time that they were received by the Army Corps of Engineers. For more information on the relocation program, download the after-action report at www.fortord-cleanup.com/adminrec/ar%5Fpdfs/AR%2DOE%2D0613E/.

# Site Security During the Burn

The Presidio of Monterey Police Department (POM PD) coordinated planning for site security and maintenance of site security during the prescribed burn. The POM PD worked with a Corps of Engineers' specialist on munitions and explosives of concern. The Corps specialist was responsible for security within the MRS-16 burn area, with support from the Presidio of Monterey Police Department. All elements of the site security plan were subject to the approval of the Chief of Fire and Emergency Services, Presidio of Monterey Fire Department, who was the overall Incident Commander.

The steps taken to ensure site security included increasing security patrols, posting warning signs at all major roads and trails, and patrolling roads within and surrounding the burn area. Safety escorts accompanied media representatives to and from a designated media overlook.

No security problems were reported during the fire and there was no need to initiate contingency plans. Security operations were terminated with the "all clear" signal from the Incident Commander.

# Evaluation of the Prescribed Burn

Below is a quick summary of the Army's evaluation of how well the prescribed burn met the goals for the burn.

The Army also successfully provided temporary voluntary relocation for all those who wished to be out of the area during the period of the prescribed burn.

Based on this evaluation, the Army believes the 2006 prescribed burn was highly successful.

To read the complete after-action reports on the prescribed burn, download the reports at http://www.fortord-cleanup.com/adminrec/ar%5Fpdfs/AR%2DOE%2D0613E/. For additional information, contact the Fort Ord Cleanup Program Community Relations Office at (831) 393-1284, or toll free, 1-800-852-9699, press 4.

| Goals | Performance |
|---|---|
| Complete prescribed burn operations with no injuries to fire personnel or the surrounding communities | No injuries |
| Hold the burn within the established primary containment lines located around the MRS-16 perimeter | The main fire did not escape the primary containment lines and contingency plans to protect against spot-overs resulted in immediate suppression of the one spot-over that occurred. |
| Minimize smoke impacts | Only one monitoring station showed particulate matter (PM 10) above the California health-protective screening level. That reading was likely caused by another agricultural prescribed burn that occurred the same day as the wind did not blow smoke from the prescribed burn in the direction of that station. |
| Clear vegetation to facilitate a safe MEC remedial action for MRS-16. 80-90% vegetation removal from the site | Goal— 80-90% vegetation removal by fire is estimated at approximately 87%. When combined with fuel breaks, vegetation removal exceeds 90%. |

# Fort Ord Cleanup Program Agency Contacts

## *U.S. Army Representative*

**Department of the Army Fort Ord BRAC Office**

BRAC Environmental Coordinator
***Gail Youngblood***
gail.youngblood@us.army.mil
(831) 393-1284

Community Involvement
***Melissa Broadston***
melissa.broadston@us.army.mil
(831) 393-1284

BRAC Office, P.O. Box 5008
Monterey, CA 93944-5008
(831) 242-7383
(800) 852-9699

## *Regulatory Representatives*

**U.S. Environmental Protection Agency (Region IX)**

***Judy Huang***, Remedial Project Manger
(for military munitions issues)
huang.judy@epa.gov
(415) 972-3681

***Martin Hausladen***, Remedial Project Manager (for all other cleanup issues)
hausladen.martin@epa.gov
(415) 972-3007

United States Environmental Protection Agency
75 Hawthorne Street, Mail Code SFD-8-3
San Francisco, CA 94105

**California EPA-DTSC**

***Roman Racca***, Remedial Project Manager
RRacca@dtsc.ca.gov
(916) 255-6407

***Joyce Whiten***
jwhiten@dtsc.ca.gov
(916) 255-6684

Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826-3200

(DTSC Public Participation hotline with Spanish Translation capability 1-866-495-5651)

**Regional Water Quality Control Board, Region 3**

***Grant Himebaugh***, Remedial Project Manager
ghimebaugh@waterboards.ca.gov
(805) 542-4636

California Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

## *Information Repositories*

**California State University Monterey Bay (CSUMB)**

Library Learning Center
100 Campus Center, Building 12
Seaside, CA 93955
(831) 582-3872
*Hours: Call or check website (http://library.csumb.edu) for hours*

**Seaside Branch Library**

550 Harcourt Avenue
Seaside, CA 93955
(831) 899-2055
*Hours: Monday-Thursday 10:00 a.m. to 8:00 p.m.; Friday and Saturday 10:00 a.m. to 6:00 p.m.; Sunday 1:00 p.m. to 5:00 p.m.*

**Administrative Record Department**

Fort Ord Administrative Record
Building 4463 Gigling Road, Room 101
Ord Military Community (former Fort Ord) CA 93944-5008
(831) 393-9186
*Hours: Monday-Friday 9:00 a.m. to 4:00 p.m. Closed 12:00 p.m. to 1:30 p.m. for lunch (closed on all federal holidays; hours*

Community Bulletin #7
September 2007

## Inside This Issue

Review of the Prescribed Burn.....1
Why Burn? .....2
Fort Ord's Burn History .....2
Goals of the 2006 Burn.....3
Burn Management .....3
Pre-Burn Preparations .....4
Fire Fighting Equipment .....4
Short Chronology .....5
Air Quality .....5
Notification and Relocation .....6
Site Security.....7
Burn Evaluation.....7

**Fort Ord Cleanup**
Community Relations Office
P.O. Box 5008
Monterey, CA, 93944-5008



**Postal Customer**