



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MEMORANDUM

DATE: **JUN 2 4 2009**

SUBJECT: Request for a Time-Critical Removal Action at Ingomar Ammunition Site, Reseda Ranch, Los Angeles County, CA

FROM: Robert Wise, On-Scene Coordinator
Emergency Response Section (SFD-9-2)

THROUGH: Harry Allen, Chief 
Emergency Response Section (SFD-9-2)

TO: Daniel Meer, Assistant Director
Superfund Division

I. PURPOSE

On June 1, 2009, the United States Environmental Protection Agency, Region IX (EPA) initiated an emergency response action to mitigate the threats posed by a fire that burned or otherwise compromised a large quantity of ammunition, gunpowder and miscellaneous chemicals. Authority to expend up to \$250,000 to initiate emergency characterization, stabilization and re-containment of hazardous substances was granted under the On-Scene Coordinator's (OSC) delegated authority to mitigate the threats posed at the Site. The actions proposed in this document provide the transition from emergency stabilization activities to fulfillment of identified time-critical removal needs. These time-critical actions include the segregation and destruction of fire damaged ammunition, gunpowder and small arms primers, the identification and off-site disposal of containerized hazardous substances and the excavation and disposal of lead-contaminated soil presenting a threat of release and direct contact exposure.

The purpose of this Action Memorandum is to obtain approval to spend an additional \$350,000, for a total of \$600,000 in direct extramural costs for EPA to mitigate threats to human health and the environment posed by uncontrolled hazardous substances (specifically halogenated and non-halogenated solvents, lead, arsenic, copper, zinc, gun powder and D003-reactive wastes) at the Ingomar Ammunition Site, located in Reseda Ranch, Los Angeles County, CA. The proposed time-critical removal of hazardous substances would be taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), as amended, 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 C.F.R. § 300.415.

II. SITE CONDITIONS AND BACKGROUND

Site Status: Non-NPL
Category of Removal: Time-Critical
CERCLIS ID: CAN000908769
SITE ID: 09SM

A. Site Description

1. Physical location

The site is located at 19227 Ingomar Street, Reseda Ranch (City of Los Angeles), Los Angeles Co., CA, 91335. The site coordinates are: Latitude: 34.2125, Longitude: -118.5522. The site is located in a residential neighborhood. The site is surrounded on all sides by residential parcels.

2. Site characteristics

The site is a 300' x 80' parcel and contains seven structures. In the front of the site fronting Ingomar Street is the main residence. This structure is not involved in the cleanup. The site is covered in debris, reloading supplies (brass, projectiles, primers, gunpowders and equipment), and live ammunition (much of it highly degraded).

Directly to the north of the residence is a garage. The garage is broken into four distinct areas: the garage itself, a covered storage area attached to the front of the garage, an attached, covered machine shop on the northern end of the garage, and an underground bunker on the south-eastern end of the machine shop.

The garage contains several work areas that are portioned off by storage units. The first section (eastern section) consists of shelves of ammunition reloading equipment, household chemicals, general debris and four refrigerators. The two most northern refrigerators contained a large quantity of smokeless gunpowder. The second section (middle) consist of shelving units holding ammunition reloading supplies such as primers, projectiles, brass and reloading tools, and ammunition. The third section (western) contains a reloading workshop with several reloading presses; shelving units holding ammunition reloading supplies such as primers, projectiles, brass and reloading tools, as well as numerous containers of gunpowder and ammunition.

The covered machine shop is portioned by various shelving units containing reloading supplies, ammunition, household chemicals and personal items. There are two compressed gas cylinders owned by the Potentially Responsible Party (PRP) from a welding setup. A small quantity of gunpowder was removed from the shelves.

The underground bunker is located at the entrance to the covered machine shop. It is located about 8' below ground surface. It has concrete stairs leading to it. It is not built to code and the walls are starting to cave in. It contains shelves along the walls with

there are several cases of highly degraded ammunition.

Directly north of the garage structure is the barn. The barn is a two story structure. One person lives on the second floor. The first floor contains two rooms. Both rooms are full of debris, reloading supplies, ammunition, reloading equipment and gunpowder. The southern section of the second story is compromised and tilting into the first floor.

Northeast of the barn is the area where the fire occurred. The fire footprint is approximately 50' x 100' and includes four fire-impacted shipping containers, containing an extremely large quantity of ammunition, gun powders, small arms primers and general reloading supplies. The shipping containers are of steel construction and have doors on one end. The containers are on the eastern perimeter of the site. The fire started in container #3 (2nd from the property line). There is a 50'x 60' burned debris field directly in front of the shipping containers, which contains a large quantity of materials impacted by the fire and fire suppression water, including ammunition, chemicals used in the reloading process, smokeless gunpowder, reloading supplies and general debris.

The remaining surface area of the site is covered in debris, trash, reloading supplies and equipment, live ammunition and unknown chemical containers.

3. Removal Site evaluation

At the request of the Los Angeles County Fire Department, on June 1, 2009, the EPA mobilized to 19227 Ingomar Street in Reseda, California to conduct an emergency response assessment at a residential property that sustained damage during a fire involving ammunition and compounds utilized in ammunition reloading. The Superfund Technical Assistance and Response Team (START) was tasked to conduct an unexploded ordnance (UXO) survey, inventory and characterize damaged containers of potential hazardous wastes or hazardous materials, and assess the soil for contamination. The assessment was restricted to the area where the fire occurred.

On June 3, 2009, the START also collected soil samples from the burn area, non fire-impacted areas of the property, and from an area affected by fire suppression water on an adjacent property to the west of the main residence. Laboratory samples collected from the burn area and the fire suppression water area on the adjacent property were analyzed for explosives, total metals, volatile organic chemicals, and nitrates/nitrites. Only elevated levels of lead above the California Hazardous Waste Total Threshold Limit Concentration (TTL) were found in the soil in the area where it was reported that the fire originated. Samples then were collected from non fire-impacted areas of the property and analyzed for total lead to determine if lead contamination existed in the soil throughout the property. Sampling results obtained were below U.S. EPA Regional Screening Levels for residential soil.

On June 10, 2009, a preliminary UXO survey was completed by the UXO specialists subcontracted by START, who determined that removal work could safely commence in the fire debris area and shipping containers. An ongoing UXO survey will continue onsite throughout the duration of the removal project as a health and safety precaution. A list of the military ordnance found to date in the course of such surveys is listed in Appendix A.

A search of the entire property was conducted to collect containers of black and smokeless powder. A total of 255 containers of black and smokeless powder were found ranging in size from 1 pint to 5 gallons. It is estimated that approximately 25 pounds of black powder and 300 pounds of smokeless powder were collected, and many of the containers were of questionable integrity. Numerous empty containers were also collected during the search for black and smokeless powder.

A physical inventory of containers potentially containing hazardous waste or hazardous materials was conducted in the area of the property damaged by the fire or by fire suppression water. A total of 57 containers, ranging in size from one quart to 55 gallons, were inventoried. The START performed hazard categorization testing on the unknown containers and samples were also collected for laboratory analysis. Twenty-nine containers were identified as containing hazardous waste or hazardous material, including 3 drums of halogenated solvents containing perchloroethylene and trichloroethylene, 3 drums of gun range waste containing lead, 3 drums of a RCRA-corrosivity characteristic caustic solution, and 3 drums of a RCRA-corrosivity characteristic acidic solution. A summary of the data is in Appendix B.

4. National Priorities List ("NPL") status

The Site is not currently on or proposed for inclusion on the NPL.

B. Other Actions to Date

On June 10, 2009, the FBI Bomb Squad notified EPA that they would be providing technical assistance to the OSC in disposing of the gun powder and the degraded ammunition.

On June 16, 2009, the United States Attorney's Office indicted the PRP for illegal storage of hazardous waste and knowing endangerment associated with that illegal storage. The investigation was a joint investigation by the Federal Bureau of Investigation (FBI) and EPA.

On June 19, 2009, the FBI and LAPD Bomb Squads conducted an on-site gunpowder destruction. The Bomb Squads sorted the gunpowders into gunpowder that was safely transportable and gunpowder that was not. The gunpowder that was not transportable was destroyed on-site via an open burn.

C. State and Local Authorities' Roles

1. State and local actions to date

On May 31, 2009, the City of Los Angeles Fire Department (LAFD) responded to a fire at 19227 Ingomar Street in Reseda, California. The PRP at the Site, conducted an ammunition reloading business. In an interview with EPA, the PRP stated that he heard 3 distinct thuds from the rear of the property, where four 40-foot shipping containers are located. He then noticed a ball of flames pass by the window of the barn at the rear of the property where he resides. The fire damaged the four containers on the property as well as

an area approximately 50 feet by 100 feet to the south of the containers. A structure on an adjacent property was also heavily damaged in the fire. An investigation by the LAFD Arson Squad was not able to determine the cause of the fire.

At approximately 1200 hours on June 1, 2009, the Los Angeles County Fire Department Health & Hazardous Materials Division (LA Co. HHMD) contacted the EPA for support in assessment and cleanup of the fire-impacted area. The Hazardous Materials Spill Report filed with the California Emergency Management Agency reported that 100 pounds of gunpowder, 50 gallons of sulfuric acid, and 200 pounds of lead dust were released during the fire. EPA OSC Robert Wise and START members arrived at the Ingomar residence. Information obtained from LA Co. HHMD and the City of Los Angeles Police Department (LAPD) suggested that approximately 200,000 rounds of ammunition were stored in the shipping containers where the fire originated. It was also communicated to the EPA and START that an unknown amount of black and smokeless powder is stored onsite; however, LA Co. HHMD stated that the PRP did have a permit at one time to store more than 1 pound of black powder and more than 10 pounds of smokeless powder onsite, but the permit had not been renewed. Due to the cost associated with the cleanup for the site, LA Co. HHMD referred the site to EPA by e-mail correspondence for a CERCLA removal action.

On June 1, 2009, FOOSC Wise contacted the California Department of Toxic Substance Control (DTSC) to determine if they were capable of conducting the cleanup. DTSC's Emergency Response representative agreed to place temporary security fencing around the fire-impacted area. On June 3, 2009, the DTSC fencing contractor fenced the fire-impacted area to prevent unauthorized access. Also on June 3, 2009, during the assessment of the burn area by a START UXO expert, a cluster bomb was discovered in the burn area. OSC Wise contacted LAPD and requested the bomb squad. The bomb squad assessed the munitions and decided to conduct a render safe procedure on it. After detonating it with a donor explosive, the bomb squad made an entry into the underground bunker and removed several military munitions (inert) and some ammunition. There was a large quantity of heavily degraded ammunition in the bunker and a large quantity of smokeless gunpowder.

On June 5, 2009, DTSC provided additional technical assistance to the OSC in the classification of the degraded ammunition as a D003 – Reactive Hazardous Waste. DTSC also provided two hazardous material specialists to assist in the assessment of the burn area.

After evaluating the amount of gunpowder on-site and determining it was in gross excess of the permitted level allowed by LAFD, LAPD ordered the PRP to remove all of the gunpowders from the site by 1800 hours on June 4, 2009, or forfeit it for destruction. The PRP failed to meet this deadline and notified EPA that he was unable to manage it in accordance with LAPD's direction and that EPA could dispose of it. A large quantity of the gunpowder had been impinged by the fire (approximately 100 lbs.). The remaining gunpowder was improperly stored throughout the site in violation of the LAFD Fire Code.

On June 11, 2009, while conducting the search for the gun powders, START and the Pacific Strike Team (PST) discovered a stash of rifles in the barn as well as some military munitions, including a grenade and landmines. OSC Wise notified the LAPD Gun Squad of

the find and they called the bomb squad. The bomb squad determined the land mine was a practice mine, but that it may have still had the signaling charge in it. It was rendered safe by the bomb squad.

2. Potential for Continued State/Local Response

State and local agencies have asserted that they lack the resources to undertake the required cleanup action at this time. The HHMD requested EPA's assistance with a removal of hazardous substances and provided a written request for EPA's assistance on June 2, 2009. A copy of the written request is included with this memorandum. OSC Wise contacted the DTSC Emergency Response Southern California Supervisor concerning funding and was informed that DTSC did not have the funding to do more than the installation of the fencing.

III. **THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

Conditions at the Site represent a release, and potential threat of release, of a CERCLA hazardous substance threatening to public health or welfare or the environment based on the factors set forth in the NCP. These factors include:

1. **Actual or potential exposure to nearby populations, animals or the food chain from hazardous substances or pollutants or contaminants**

The area impacted by the fire contains a large quantity of fire-impinged ammunition that meets the definition of a Reactive (D003) Hazardous Waste pursuant to the Resource Conservation and Recovery Act (RCRA). During the June 19, 2009 gun powder burn conducted by FBI on behalf of EPA, the soil also caught fire demonstrating the presence of flammable solids in the soil. The soil in the fire-impacted area contains lead above the TTLCC hazardous waste determination. The soil also contained antimony and lead above the Residential Preliminary Remediation Goal (PRG). According to a local neighbor, she and other neighborhood kids played back there when she was a child. The residence in the front of the property has seven children living in it. At least two of the teenage children worked in the yard. One of the teenage boys lived in a trailer in the yard. This could have allowed direct contact with the soil.

There are degraded three and five-gallon open containers, containing gun range waste. There are also two 55-gallon drums in poor condition and a trashcan with an unsecured lid containing gun range waste, located behind the shipping containers, adjacent to the neighbor's property line. The gun range waste contains TTLCC levels of lead, antimony, arsenic, copper and zinc. It also failed the EPA RCRA Toxicity Characteristic for lead with concentrations in all three drums of over 4,000 mg/l (the TCLP for lead is 5 mg/l). It was also hazard categorized as an oxidizer. The PRP stated that the material also contains gunpowder. When the material was tested for ignitability in the laboratory, it detonated.

There were also multiple fire-damaged containers of gun cleaning solvents that contained naphthalene, xylene, ethyl benzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene spread throughout the burn area. Directly adjacent to the burn area were

four drums of mixed chlorinated and non-chlorinated solvents, containing percent levels of 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA), 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethene (PCE), trichloroethylene (TCE), methylene chloride, xylene and ethyl benzene. The solvents came from a defunct plating shop where the PRP was formerly employed. The PRP was using the solvents to clean brass and paint buckets, but stated to the OSC that he had not used the material in several years.

Copper is an eco-toxic metal. It is regulated in California as a hazardous waste. Breathing high levels of copper can cause irritation of the nose and throat. Ingesting high levels of copper can cause nausea, vomiting, and diarrhea. Very high doses of copper can cause damage to the liver and kidneys, and even death. The Occupational Safety and Health Administration Permissible Exposure Limit (PEL) is 1.0 mg/m³ for copper dusts and the National Institute of Occupational Safety and Health Immediately Dangerous to Life or Health concentration (IDLH) is 100 mg/m³.

Lead is a toxic metal. It is regulated in RCRA and California as a hazardous waste. When lead is released to the air, it may travel long distances before settling to the ground. Exposure to lead can affect almost every organ and system in the body. Long-term exposure may cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production. The U.S. Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans. Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth. The PEL is 0.050 mg/m³ and the IDLH is 100 mg/m³. Lead is a D008 Characteristic RCRA Hazardous Waste.

Zinc is a toxic metal. It is regulated in California as a hazardous waste. Inhalation of metal zinc fume can result in the exhibiting of throat dryness, cough, aches, chills, fever, nausea and vomiting. Exposure can also cause injury to mucous membranes and skin.

Xylene is an aromatic flammable solvent. Exposure may result in disturbed vision, dizziness, tremors, salivation, central nervous system depression, cardiac stress, confusion and coma. The PEL is 100 ppm and the IDLH is 900 ppm. Xylene is a F003 Characteristic RCRA Hazardous Waste.

Ethyl benzene is an aromatic flammable solvent. Exposure may result in irritation of the eyes, skin, and mucous membranes; headache; dermatitis; narcosis and coma. The PEL is 100 ppm and the IDLH is 800 ppm. Ethyl benzene is a F001, F002 and U228 Listed RCRA Hazardous Waste.

Methylene chloride is a chlorinated solvent. Exposure may result in eye and skin irritation; lassitude, drowsiness, dizziness; numbness, tingling limbs and nausea. It is a potential occupational carcinogen. The PEL is 25 ppm and the IDLH is 2,300 ppm. Methylene Chloride is also a F001 and F002 RCRA Hazardous Waste.

Tetrachloroethene (PCE) is an ecotoxic halogenated solvent that can damage the eyes, skin, respiratory system, liver, kidney and central nervous system. Chronic exposure can also result in liver cancer. The PEL is 100 ppm, and the short term exposure limit (STEL) is 300 ppm (5-minute maximum peak in any 2 hours). PCE is also a D039 Characteristic RCRA Hazardous Waste and an F001, F002 and U210 Listed RCRA Hazardous Waste.

Trichloroethylene (TCE) is a chlorinated solvent. Exposure may result in irritation of the eyes and skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury and is a potential occupational carcinogen. It has a PEL of 100 ppm, and a STEL of 300 ppm (5-minute maximum peak in any 2 hours). TCE is also a D040 Characteristic RCRA Hazardous Waste and an F001, F002 and U228 Listed RCRA Hazardous Waste.

1,1-Dichloroethene is a chlorinated solvent. Exposure may result in irritation of the eyes, skin, and throat; dizziness, headache, nausea, dyspnea (breathing difficulty); liver, kidney disturbance; pneumonitis. It is a potential occupational carcinogen. 1,1-DCE is a D029 Characteristic RCRA Hazardous Waste and a U078 Listed RCRA Hazardous Waste.

1,1-Dichloroethane is a chlorinated solvent. Exposure may result in skin irritation; central nervous system depression; liver, kidney and lung damage. The PEL is 100 ppm (400 mg/m³). It is a U076 Listed RCRA Hazardous Waste.

1,2-Dichloroethane is a chlorinated solvent. Exposure may result in irritation of the eyes and corneal opacity; central nervous system depression; nausea, vomiting; dermatitis; liver, kidney, cardiovascular system damage. It is a potential occupational carcinogen. The PEL is 50 ppm, and the STEL is 200 ppm (5-minute maximum peak in any 3 hours). It is a D028 Characteristic RCRA Hazardous Waste and a U077 Listed RCRA Hazardous Waste.

1,1,1-Trichlorethane is a chlorinated solvent. Exposure may result in irritation of the eyes and skin; headache, lassitude (weakness, exhaustion), central nervous system depression, poor equilibrium; dermatitis; cardiac arrhythmias; and liver damage. The PEL is 350 ppm. It is a F001, F002 and U226 Listed RCRA Waste.

Arsenic is a toxic metal. Exposure may result in ulceration of nasal septum, dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, hyperpigmentation of skin, and is a potential occupational carcinogen. The PEL is 0.010 mg/m³. It is a D004 Characteristic RCRA Hazardous Waste.

Antimony is a toxic metal. Exposure may result in irritation to eyes, skin, nose, throat, mouth; cough; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; and inability to smell properly. The PEL is 0.5 mg/m³. It is a California Hazardous Waste.

Naphthalene is a hydrocarbon solvent. Exposure may result in irritation of the eyes; headache, confusion, excitement, malaise (vague feeling of discomfort); nausea, vomiting, abdominal pain; bladder irritation; profuse sweating; jaundice; hematuria (blood in the urine), renal shutdown; dermatitis, optical neuritis and corneal damage. The PEL is 10 ppm.

1,2,4-Trimethylbenzene and 1,3,5- Trimethylbenzene are hydrocarbon solvents. Exposure may result in irritation to eyes, skin, nose, throat, respiratory system; bronchitis; hypochromic anemia; headache, drowsiness, fatigue, dizziness, nausea, loss of coordination; vomiting, confusion; chemical pneumonitis (aspiration of liquid). The NIOSH REL is 25 ppm.

2 High levels of hazardous substances or pollutants in soil largely at or near the surface that may migrate.

Lead and antimony have been found above the California Hazardous Waste Levels in the burn area adjacent to the neighbor's property line. The contaminated soil can migrate via precipitation runoff, winds, erosion and direct contact with the soil.

3. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released

Rain could cause soil contaminated with heavy metals to migrate off-Site into the storm drain system or onto adjacent residential or business properties. Wind could result in airborne suspension and off-site migration of the contaminants listed in Section III.1. Due to the large amount of exposed ammunition, rain would result in further degradation of ammunition exposed to the elements.

4. Fire and Explosion

The issues at the site initially arose as the result of a fire of unknown origin in a shipping container storing a large quantity of ammunition and gunpowder. There are approximately 325 pounds of gunpowder (smokeless and black) on-site. There is also a large quantity of fire-impinged and degraded small arms ammunition on-site. The gunpowder and degraded bullets are a D003 – Characteristic RCRA Hazardous Waste pursuant to 40 CFR 261.23(6): It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement and 40 CFR 261.23(8): It is a forbidden explosive, Class A or Class B. The definition of a forbidden explosive is listed below:

Forbidden Explosives:

173.54(c): A leaking or damaged package containing an explosive
173.54(d): Propellants that are unstable, condemned or deteriorated.

The bullets that are fire impinged or otherwise damaged or deteriorated due to the fire meet the definition of DOT Forbidden. The smokeless powder is also a D001 Characteristic RCRA Hazardous Waste as a flammable solid.

5. Hazardous Substances or pollutants or contaminants in drums, barrels, tanks or other bulks storage that pose a threat of release.

There were 14 five-gallon open containers in a degraded condition, containing gun range waste. There are also two 55-gallon drums in poor condition and a trashcan with an unsecured lid containing gun range waste. The gun range waste contains TTLC levels of lead, antimony, arsenic, copper and zinc. The waste also is a D008 – Characteristic Toxic Waste for lead (TCLP>4,000 mg/l). It also hazard categorized as an oxidizer. The PRP stated that the material also contains gunpowder. When the material was tested for ignitability in the laboratory, it detonated. During the June 19, 2009 on-site gunpowder destruction, those containers caught fire after kickout from the burn pit caught the ground on fire and the fire migrated to those buckets.

There were also multiple fire-damaged containers of gun cleaning solvents that contained naphthalene, xylenes, ethyl benzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene spread throughout the burn area. Directly adjacent to the burn area were four drums of mixed chlorinated and non-chlorinated solvents containing percent levels of 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA), 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethene (PCE), trichloroethylene (TCE), methylene chloride, xylenes and ethyl benzene. These drums of solvent are in poor shape with one of the drums open to the environment. The drums are not marked in any way and are surrounded by degraded ammunition and combustible debris. These drums are stored approximately 20 feet from the western property line of the property.

While going through the debris pile, six 1 pint containers from plating shops were found. One was labeled as cyanide. Four five-gallon open containers of acid liquid (pH= 0-1) and three five-gallon containers of caustic liquid (pH = 14) were found in two open plating buckets between the barn and the garage. According to the PRP, all of this material was hazardous waste that the plating shop he formally worked for was going to dispose of, but he took home instead.

6. Availability of other appropriate federal or state response mechanisms to respond to the release

No other appropriate and timely federal, state, or local public funding source has been identified. HHMD asserts that the proposed action exceeds the financial capability of the California State Emergency Reserve Account. On June 2, 2009, the HHMD formally requested federal assistance in responding to the site.

DTSC provided security fencing prior to the beginning of EPA operations, but is incapable of funding further operations.

OSC Wise also contacted the Bureau of Alcohol, Tobacco and Firearms (ATF) for funding and was informed that ATF did not have any funds for this.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health or welfare or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The removal action will be limited to the fire-impacted areas, with the exception of the gunpowder, which will be collected from the entire site footprint. The following actions are proposed:

- Segregate the D003 waste (fire-damaged live ammunition, primed brass and small arms primers) from the inert ammunition brass casings;
- Containerize the D003 waste for off-site disposal to either a local bomb squad for destruction or a commercial CERCLA Off-Site Rule approved facility;
- Segregate the D001 and D003 waste (gun powders) from the debris;
- Dispose of the gunpowders through an on-site burn managed by FBI and LAPP Bomb Squads;
- Segregate, inventory, and hazard categorize containerized hazardous substances;
- Dispose of containerized hazardous substances at a commercial CERCLA Off-Site Rule approved facility;
- Upon removal of all debris from the burn area, assess the soil for heavy metal contamination and remove any such contamination for disposal at a commercial CERCLA Off-Site Rule approved facility; and
- Backfill excavated soil with clean fill.

2. Contribution to remedial performance

This site is covered in solid waste intermixed with live ammunition, containers of unknown chemical and miscellaneous reloading equipment. EPA is currently only conducting a removal on the burn area. At some future time, EPA may have to conduct a removal on the remainder of the property.

3. Description of alternative technologies

Alternative technologies are not considered for the proposed response action.

4. Applicable or relevant and appropriate requirements (ARRARs)

Section 300.415(j) of the NCP provides that removal actions must attain ARRARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under federal environmental or state environmental or facility

siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of permits, documentation, reporting, record keeping and enforcement are not ARARs for the CERCLA response actions confined to the Site.

The following ARARs have been identified for the proposed response action. All can be attained.

Federal ARARs: Potential Federal ARARs are the RCRA Land Disposal Restrictions, 40 C.F.R. § 268.40 Subpart D; the CERCLA Off-Site Disposal Rule, 40 CFR § 300.440; and the U.S. Department of Transportation of Hazardous Materials Regulations, 49 C.F.R. Parts 171, 172, and 173.

State ARARs: Potential State ARARs are Characteristics of Hazardous Waste as implemented through the California Code of Regulations, 22 CFR §§ 66261.20 - 66261.24, and the Definition of RCRA and Non-RCRA Hazardous Waste, 22 CFR §§ 66261.3, 66261.30, and 66261.100-101.

5. **Project schedule**

Removal activities are expected to take 6 weeks.

B. **Estimated Costs**

Regional Removal Allowance Costs

Cleanup Contractor	\$350,000
USCG PST	\$ 50,000

Extramural Costs Not Funded from the Regional Allowance

START Contractor	\$ 100,000
Extramural Subtotal	\$ 500,000
Extramural Contingency (20%)	<u>\$ 100,000</u>

TOTAL, Removal Action Project Ceiling \$ 600,000

EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the site conditions, the nature of the hazardous substances documented on-site and the potential exposure pathways to nearby populations described in Sections III and IV above, actual or threatened releases of hazardous substances from the site, if not addressed by implementing the response actions selected in this Action Memorandum, present an imminent and substantial endangerment to public health, or welfare, or the environment.

OUTSTANDING POLICY ISSUES

There are no outstanding policy issues with the site identified at this time.

ENFORCEMENT

Please see the attached Confidential Enforcement Addendum for a discussion regarding potentially liable parties and anticipated enforcement. In addition to the extramural costs estimated for the proposed action, a cost recovery enforcement action also may recover the following intramural costs:

<u>Intramural Costs</u> ¹	
U.S. EPA Direct Costs	
OSC	\$43,200
U.S. EPA Indirect Costs	
(35.28% of EPA Direct Costs + Removal Ceiling Costs)	<u>\$226,921</u>
TOTAL Intramural Costs	\$270,121

The total EPA extramural and intramural costs for this removal action, based on full-cost accounting practices that will be eligible for cost recovery, are estimated to be \$870,121. Of this, an estimated \$ 350,000 comes from the Regional removal allowance.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Ingomar Ammunition Site as developed in accordance with CERCLA and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

¹ Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

Because conditions at the Site meet the NCP criteria for a time-critical removal, I recommend that you concur on the determination of imminent and substantial endangerment and the removal action proposed in this Action Memorandum. The total removal action project ceiling, if approved, will be \$600,000. Of this, an estimated \$350,000 comes from the Regional removal allowance. You may indicate your decision by signing below.

Approve:



24 June 2009

Daniel Meer, Assistant Director Date

Response, Planning and Assessment Branch

Superfund Division

Disapprove:

Daniel Meer, Assistant Director Date

Response, Planning and Assessment Branch

Superfund Division

Appendices

Confidential Enforcement Addendum

Index to the Administrative Record

cc: Harry Allen, EPA

Sherry Fielding, USEPA, OEM, HQ

C. Trgovcich, California Department of Toxic Substances Control

J. Magnuson, ORC-3

R. Wise, SFD-9-2

J. Jaros, SFD-9-4

C. Temple, SFD-9-4

B. Lee, SFD-9-4

H. Salter, SFD-9-2

A. O'Donnelly, FBI

J. Johns, USAO

Site File

Appendix A: Military Ordnance Discovered During the Assessment

Items with Potential Energetics

MEC Item	Date Found	Quantity	Disposition
BLU 61	03 June, 2009	1	L.A. Bomb Squad Render Safe
50 Cal full rounds	On going	Multiple Ammo Cans	L.A.P.D./ Staging area
C3A1 French Flares	08 June, 2009	14	Staging area
M12 Land Mine (Practice)	10 June, 2009	1	L.A. Bomb Squad Render Safe
Civilian flares (marine flares)	10 June, 2009	54	Staging area
M18 Smoke grenades w/ M200 series fuses	10 June, 2009	2	L.A. Bomb Squad
AP 30-06 Small Arms	11 June, 2009	26	L.A. Bomb Squad
MK2 Hand Grenade (empty)	11 June, 2009	1	L.A. Bomb Squad
M246 HEI-T 20mm projectiles (emptied of energetic materials) with Live M503A3 fuses	17 June, 2009	8	L.A. Bomb Squad
M9 or M11 Rifle Grenades	18 June, 2009	9	L.A. Bomb Squad
T33 E7 90mm AP-T, Full round w/ inerting holes in cartridge	18 June, 2009	1	L.A. Bomb Squad

Munitions Debris (MD) Items:

MD Items	Date Found	Quantity	Disposition
81mm Mortar Illum Tail cups	03 June, 2009	3	Staging area
MK23 Practice Bombs	04,09, 10, 16 and 17 June, 2009	8	Staging area
50 cal Inert round Empty M9 Rifle grenade	04 June, 2009 04 June, 2009	1 1	Staging area Staging area
M306 57mm Projo	05 & 10 June, 2009	2	Staging area
M204A1 Expended grenade fuse	08 June, 2009	1	Staging area
M15 land Mine	10 June, 2009	1	Staging area
20mm TP Projos	10 June, 2009	198	Staging area
M43A1B1-81mm Mortar (empty)	10, 16 June, 2009	2	Staging area
M67 grenade with	16, June, 2009	1	Staging area

expended M228 fuse			
M3 20mm dummy rounds	17 June, 2009	4	Staging area
Mk55A2 20mm TP (full round, inert)	17 June, 2009	1	Staging area

Appendix B: Laboratory Data Summary

Soil Samples in the Burn Area						
Date Sampled	6/3/2009	6/3/2009	6/3/2009	TTLC	PRG*	
Sample ID	ING-005	ING-006	ING-007	mg/k	mg/kg	
Metals (mg/kg)						
Antimony (Sb)	22.9	99.9	2.09	500	500	31
Arsenic (As)	8.23	5.32	3.01	500	500	0.39
Lead (Pb)	870	3350	100	1000	1000	400
VOOCs by EPA 8260B, mg/kg						
Naphthalene	110	<0.006	0.0059			3.9
1,2,4-Trimethylbenzene	380	<0.006	<0.007			67
1,3,5-Trimethylbenzene	110	<0.006	<0.007			47
Ethyl benzene	71	<0.006	0.014			5.7
Xylenes	610	<0.019	0.0058			600

Solvent Drum Samples						
Date Sampled	6/5/2009	6/5/2009	6/11/2009			
Sample ID	ING-DR-012	ING-DR-013	ING-DR-011			PRG*, mg/kg
VOOCs by EPA 8260B, mg/kg						
1,1,1-Trichloroethane	300000	410000	560000		9000	
1,1-Dichloroethane	170	140	4800		3.4	
1,1-Dichloroethene	16000	19000	15000		250	
1,2-Dichloroethane	180	250	160		0.45	
Ethyl benzene	<250	220	130		5.7	
Xylenes	120	1000	570		600	
Methylene Chloride	140	<500	120		11	
Tetrachloroethylene	17000	16000	12000		0.57	
Trichloroethylene	290	530	210		2.8	
Flashpoint by 1010*	64.9 C	69.9 C	91.9 C			

Firing Range Waste Samples						
Date Sampled	6/11/2009	6/11/2009	6/11/2009			
Sample ID	ING-DR-22A**	ING-DR-23A**	ING-DR-24A**	TTLC	PRG*	
Metals (mg/kg)						
Antimony (Sb)	18600	15900	14900	500	500	31

Arsenic (As)	543	504	321	500	0.39
Copper	45500	2830	2850	2500	3100
Lead (Pb)	143000	171000	129000	1000	400
Zinc (Zn)	14400	496	578	5000	23000
TCLP Metals				TCLP,	
(mg/L)				mg/L	
Lead (Pb)	4180	4510	4980	5	

Index to the Administrative Record:

1. START Report Assessment Report
2. CERCLA General Notice dated June 1, 2009
3. CERCLA General Notice dated June 4, 2009
4. Request for assistance from HHMD
5. E-Mail from Edward Wyman declining to conduct powder removal
6. E-Mail from Cathleen Wyman confirming powder destruction