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

June 4, 2002

**ACTION MEMORANDUM**

**SUBJECT:** Request for an Emergency Removal Action at the Denova Environmental Site, Rialto, San Bernardino County, California

**FROM:** Steve Calanog, On-Scene Coordinator  
Emergency Response Section (SFD 9-2)

*SC* Richard Wm. Martyn, On-Scene Coordinator  
Emergency Response Section (SFD 9-2) *RM*

**THRU:** Pete Guria, Chief  
Emergency Response Section (SFD 9-2)

**TO:** Daniel Meer, Chief  
Preparedness, Removal and Assessment Branch (SFD 9)

**Site Status:** *Emergency Response*  
**Category of Removal:** *Emergency Response*  
**CERCLIS ID:** *CAN000905817*  
**SITE ID:** *HB*

**I. PURPOSE**

The purpose of this Action Memorandum is to obtain your approval to expend up to \$779,250 to mitigate threats to human health and the environment posed by the presence of uncontrolled hazardous and explosive substances (sulfuric and phosphoric acids, corrosives, chlorine gas, picric acid, lead styphnate, phosphorous, toluene diisocyanate) contained in drums, tanks, and storage containers described herein and located at the Denova Environmental, Incorporated (Denova) Site ("the Site"), Rialto, San Bernadino County, California.

The proposed action is being taken pursuant to Section 104 (a)(1) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), as amended, by removing drums and containers of the above referenced hazardous and explosive substances. Emergency response actions were initiated on May 24, 2002, under the On-Scene Coordinator's Warrant Authority to undertake site stabilization and security measures.

Conditions which existed at the Site necessitated the emergency response action documented in this Action Memorandum to respond to the release of hazardous substances which pose an imminent and substantial endangerment to the public health or welfare or the environment.

## II. SITE DESCRIPTION AND BACKGROUND

### A. Site Description

The Site is a chemical and explosives storage and disposal facility situated in a rural area of Rialto, California. It occupies 25 acres with a valley, and generally is divided into three sections. The northern most section contains a blast pit that was formerly permitted for the destruction of certain wastes. The middle section ("hazmat yard") contains six mobile concrete bomb shelters (igloos) and 19 conex shipping containers containing an array of hazardous wastes and explosive materials. The southern section ("explosive yard") contains 15 partially buried explosive storage magazines (bunkers), approximately 8 mobile explosive storage "boxes," and 8 conex boxes all of which contain and store explosive, propellants and ordinance products.

Within close proximity to the Site, there are several residential neighborhoods. In the event of an explosion, these residents could be exposed to hazardous substances which poses a significant human health threat through inhalation or dermal contact.

#### 1. Removal site evaluation

In June 2001, the California Department of Toxics and Substance Control (DTSC), in its capacity to oversee corrective actions at the site, requested EPA to assist with the removal and disposal of unstable explosives that they had identified. (See "Previous Actions" Section B. 1. below).

On May 22, 2002, the DTSC requested the EPA to address the release or threat of release of pollutants and contaminants at the Site. In a subsequent phone conference on May 23, 2002, the DTSC informed the EPA that they were terminating the Interim Status Document (ISD) for the Denova facility and that EPA should move forward with its actions to abate the threat posed by the Site. Although DTSC and the facility owners and operators entered into a Partial Stipulation and Order ("Agreement") on March 28, 2002,<sup>1</sup> to address threats located at the Site and Site management issues, the owner and operators were unable to fulfill their obligations under this Agreement. Specifically, the owners and operators were unable to produce an acceptable plan and remove hazardous wastes from the Site within the required time frame. Thus DTSC based its request upon the need to ensure a mechanism was implemented to abate imminent and substantial threats at the Site posed by these substances. The DTSC also based its request on ongoing, significant management problems at the Site, including the fact that staff responsible for handling waste and explosive management did not appear to be at the facility on a daily basis, and the inability of Denova to pay salaries. The DTSC concluded that overall site management concerns combined with the existing condition of the wastes and explosives on a site, that the stability of the overall condition of the Denova facility could be expected to deteriorate.

On May 23, 2002, a verbal Notice of CERCLA liability was given to Mr. Robert Cole, President of Denova Environmental, Inc. Mr. Cole was asked if he was able to undertake twenty-

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<sup>1</sup> In the Matter of: Denova Environmental, Inc., Gene S. Van Houten, and Robert V. Cole, "Partial Stipulation and Order," DTSC Docket HWCA 00/01/4015, March 28, 2002.

four hour security, hire a reputable environmental cleanup contractor and begin the process of removing the chemicals, explosive wastes and explosive product from the facility. He stated that he did not have the financial means to perform any of the items. The EPA informed Mr. Cole that the agency would begin the cleanup process immediately under its emergency response authority. Security was arranged that evening with the assistance of the San Bernardino County Sheriff's office.

On May 24, 2002, a General Notice of CERCLA liability was given to Mr. Cole. He again stated that he did not have the financial means to perform any of the Site removal activities asked of him. The EPA requested from Mr. Cole all keys to hazardous waste and explosives storage areas. Mr. Cole was informed that EPA would immediately take control of the Site under its emergency response authority. Security was arranged by EPA's Emergency Rapid Response Services (ERRS) contractor to secure the Site over the Memorial Day holiday weekend.

On May 28, 2002, concurrent with DTSC's termination of the facility's Resource Conservation and Recovery Act (RCRA), Treatment Storage and Disposal facility (TSD) Interim Status permit, On-Scene Coordinators Rich Martyn and Steve Calanog mobilized to the Site to coordinate site stabilization and removal actions. Because EPA had reason to believe that incompatible hazardous substances and wastes were improperly stored with explosives, OSC Calanog initiated removal actions pursuant to his OSC Warrant Authority to stabilize and assess the hazmat yard in preparation to segregate and remove the materials. OSC Martyn met with the County Sheriff's bomb squad and the Bureau of Alcohol, Tobacco, and Firearms (ATF) to discuss and plan the safe identification and removal of all explosives from the facility.

## **2. Physical location**

The Site is located at 2610 North Alder Ave, Rialto, San Bernardino County, California. The approximate latitude and longitude are North 34° 9' 17.5" and West 117° 24' 34.5", respectively.

## **3. Site characteristics**

### Hazmat Yard

- Approximately 750 containers stored in 19 conex boxes (bays). Among the hazardous substances identified in the bays are the following: mercury, phosphoric acid, picric acid, nitric acid, sulfuric, acetic acid, hydrochloric acid, hydrofluoric acid, ethylene bromide, formaldehyde, toluene diisocyanate, lead styphnate, red phosphorus, chlorine gas;
- Approximately fifty 55-gallon drums staged on a concrete area which appear to contain a variety of acidic, corrosive, and flammable wastes;
- Six mobile concrete bomb shelters (igloos) which contain highly explosive materials; and,
- A blast pit which was formerly permitted by DTSC's RCRA compliance Program used for the destruction of reactive and shock sensitive materials.

### Explosive Yard

- Fifteen partially buried explosive storage magazines (bunkers) which contain highly explosive materials;
- Eight conex boxes which contain highly explosive materials and propellants.

#### **4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant**

The Site currently does not have a valid TSD permit to accept or handle hazardous waste for storage or disposal. The operator has indicated that he is financially unable to manage the site and properly dispose of the hazardous materials. The Site is unmanned and is effectively abandoned. Site conditions indicate that an imminent and substantial threat of release is present at the Site.

#### **5. NPL status**

This Site is not currently being evaluated for the NPL.

#### **B. Other Actions to Date**

##### **1. Previous actions**

On January 18, 2001, representatives from the EPA Emergency Response Office and their Superfund Technical Assistance and Response Team (START) contractor provided a radiation assessment and assistance to the San Bernardino County Fire Department Hazardous Materials Unit ("County Hazmat") in the identification of chemicals present at the Site. County Hazmat requested EPA assistance in assessing these materials under suspicion that they had originated at the Chemical Commodities Site. During the site inspection, START and County Hazmat observed questionable explosive management practices. The START assisted County Hazmat and the San Bernardino County Bomb Squad ("Bomb Squad") with the investigation into the explosive management activities.

On February 6, 2001, the Federal Bureau of Investigations (FBI) and the DTSC executed a criminal search warrant at the Site. EPA was requested by DTSC to provide radiation and chemical identification assistance pursuant the search warrant investigation. During the radiation survey START identified thorium nitrate in one of the hazardous waste storage containers.

On February 7, 2001, EPA and START assisted DTSC with the inventory effort of the containerized wastes in the hazmat yard. During the investigation containers of highly explosive lead styphnate and lead azide waste were identified. The Bomb Squad was notified and responded on-scene. The Bomb Squad determined that the situation presented an imminent and substantial threat to public safety. The FBI, DTSC, Bomb Squad, and EPA determined that the lead styphnate and lead azide waste should be properly disposed of immediately.

On February 8, 2001, the Bomb Squad and FBI initiated a controlled burn of the lead styphnate and lead azide waste. At the conclusion of the burn, the Bomb Squad and FBI

determined that no further assistance by EPA was immediately needed.

On February 15, 2001, EPA and START were notified by County Hazmat that a fire in the hazmat yard at the Site had occurred. EPA and START then notified DTSC. DTSC requested EPA investigation and air monitoring support for the fire response. Rialto Fire Department (RFD) indicated that the fire had originated in the oxidizer waste storage yard. In response to an RFD request Denova was unable to accurately list the contents of the oxidizer container. County Hazmat and RFD determined that the fire could safely burn itself out.

On February 20, 2001, EPA directed START to assist DTSC, RFD, and FBI in evaluating the oxidizer fire scene. Large quantities of chemical solids and fire damaged containers were observed. A purple liquid originating from inside the oxidizer container was identified as potassium permanganate. DTSC retained the oversight and investigation lead into the cause of the fire and the disposal of the hazardous materials. DTSC indicated that no additional EPA assistance was immediately necessary.

On March 14, 2001, EPA directed START to assist the Bomb Squad and the Bureau of Alcohol, Tobacco, and Firearms (BATF) during the assessment of the explosive yard. At this time, DTSC suspected Denova of illegally storing hazardous waste in the explosive storage facilities. During the investigation six containers of highly explosive and shock sensitive tetrazene were identified by BATF and the Bomb Squad which would need immediate attention. The agencies determined that the tetrazene should be disposed of by an on-site detonation in an explosive detonation pit.

On June 14, 2001, the tetrazene was destroyed in the explosive detonation pit. START conducted air monitoring and sampling. After the detonation, START collected soil samples from the explosive detonation pit. No tetrazene was detected in the air and soil samples. It was then determined that EPA assistance was no longer immediately necessary.

## **2. Current actions**

On May 24, 2002, EPA ERRS contractor commenced 24 hour security at the site for the Memorial Day holiday weekend.

On May 28, 2002, OSCs Martyn and Calanog meet on-scene with representatives from the START and ERRS contractors to coordinate cleanup efforts. It was decided that OSC Martyn would assume the lead for the assessment, inventory, and disposal of the explosives and ordinance material ("explosives yard"). OSC Martyn initiates discussions with San Bernardino County Bomb Squad ("Bomb Squad") and the Bureau of Alcohol, Tobacco, and Firearms (BATF) to plan for removal of the ordinance and explosive materials.

OSC Calanog assumed the lead for the assessment, inventory, and disposal of the hazardous waste areas ("hazmat yard"). OSC Calanog, START, and ERRS conducted a site walk and inspection of the hazmat storage facilities to discuss and plan inventory strategies, and logistic needs. OSC Martyn, the San Bernardino County HazMat ("County Hazmat"), and START conduct investigation in several storage areas and identify possible ordinance/explosive materials. The Bomb Squad responded to OSC's request for assistance and removed suspected ordinance/explosive materials.

Between May 29-30, 2002, OSC Calanog met with START, ERRS, United States Coast Guard's Pacific Strike Team, and Rialto Fire Department. Inventory teams were formed and inventory activities began on hazmat storage facilities. Rialto Fire Department assisted with equipment (hydraulic cutter) and personnel in gaining access to locked facilities. County Hazmat provided a Cooling Station to assist with the management of heat stress. The Command Post was set-up on-scene.

Additional ordinance and explosive materials were identified in the hazmat yard storage facilities (i.e., detonation cord, artillery shells, arming devices/detonators). A storage trailer was inspected and found to contain approximately 20 small containers (e.g., 5-gallon buckets or less) of small arms ammunition. The Bomb Squad was notified and responded to remove the material except for the ammunition. At the request of OSC Martyn, a former explosives employee arrived to conduct an inventory of some of the explosive storage bunkers (Igloo 5). Approximately seven buckets containing hydrated picric acid were removed from Igloo 4 and placed into one of the on-site Bays with other containers of picric acid for transportation and disposal at a later date.

### **C. State and Local Authorities' Roles**

#### **1. State and local actions to date**

For the past year leading up to March 28, 2002, when the Agreement was reached, the DTSC and the current owners/operators had been negotiating enforcement actions to reduce and remove the volume of hazardous waste allowed under their ISD permit. During the effective period of the Agreement referenced in Section II A.1., Denova was unable to comply with the terms of performance. Additionally, Denova failed to provide adequate assurances that it had the financial viability to comply with the terms of the Agreement in the future.

On May 22, 2002, the DTSC informed EPA that it intended to revoke Denova's TSD permit on May 28, 2002. The DTSC requested EPA to take over the Site. The EPA provided verbal Notice pursuant to Section 104 of CERCLA to Mr. Cole and requested him to provide security and stabilize the Site. Mr. Cole indicated that he was financially unable to comply. The EPA informed Mr. Cole that it would take control of the Site.

#### **2. Potential for continued State/local response**

Because the DTSC does not have the resources to undertake removal activities at the Site, the EPA was requested to take control of the Site. It is anticipated that DTSC will have no more than an oversight role with on-going federal response activities.

The Bomb Squad continues to provide assistance to EPA in the identification and removal of ordinance and explosive materials.

The County Hazmat continues to provide assistance to EPA with support functions to the inventorying and hazard characterization activities.

The Rialto Fire Department continues to provide assistance to EPA with support functions to the Health and Safety Site Supervisor, emergency fire suppression, and logistic support (i.e., replenish air supply and decontamination water).



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

Pursuant to Section 300.415(b)(2) of the National Contingency Plan ("NCP") the following conditions at the site present a release, and a potential threat of release of a CERCLA hazardous substance, threatening to public health, or welfare, or the environment based upon the following factors:

#### **A. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain.**

The Site has approximately 750 containers of a wide range of highly hazardous chemicals and hazardous wastes. It is also estimated that the facility has approximately 40,000 pounds of explosives stored in the explosive yard. The Site is effectively abandoned as there is no viable entity with the associated permits that is able to safely manage the hazardous waste and explosive facilities. Prior to EPA involvement on May 23, 2001, there was no security at the Site. The DTSC has requested EPA assistance to stabilize the Site and remove the hazardous substances.

Some of the hazardous substances identified at the Site include but are not limited to:

- Picric Acid - Approximately 25 containers of picric acid have been identified. Picric acid when not properly managed is highly unstable and highly explosive and is capable of causing significant bodily harm or death once detonated.
- Mercury - There are numerous lab packs containing broken mercury thermometers, mercury filled syringes and other mercury filled equipment. Mercury injected into the body will cause severe damage to the can kidneys and can cause death.
- Phosphoric Acid, Nitric Acid, Acetic Acid, Sulfuric Acid, Hydrofluoric Acid, Hydrochloric Acid - These acids are inhalation risks that can cause pulmonary edema if inhaled. These acids can cause severe burns if in contact with skin.
- Formaldehyde - There are numerous lab packs which contain biologic samples in formaldehyde. Formaldehyde is a known carcinogen.
- Nitrocellulose - There is a 55-gallon drum of nitrocellulose. Nitrocellulose is highly unstable and highly explosive when not properly managed. An explosive of this container could cause severe bodily harm or death once detonated.
- Potassium Hydroxide - This substance is very corrosive, will cause severe burns to skin and can cause death if inhaled or ingested.
- Sodium Hydroxide - This substance is very corrosive, will cause severe burns to skin and can cause death if inhaled or ingested.
- Toluene Diisocyanate - If inhaled it will cause severe bronchial spasms. This is a known carcinogen.
- Cadmium Oxide - If the fumes are inhaled, it will cause severe pulmonary damage and could cause death.
- Cyanide - If the fumes are inhaled, it will cause death.
- Lead azide - This substance is highly unstable and highly explosive.
- Lead styphnate - This substance is highly unstable and highly explosive.
- Ordinances/Explosives - Approximately 40,000 pounds of explosives are abandoned on-site.

**B. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.**

Approximately 750 containers of hazardous substances and approximately 40,000 pounds of explosives are abandoned at the Site. Many of the containers are in deteriorating condition and their contents are not being properly maintained (e.g., there is no one hydrating the picric acid or nitrocellulose).

**C. High levels of hazardous substances or pollutants or contaminants in soils at or near the surface, that may migrate.**

Approximately 750 containers of hazardous substances and approximately 40,000 pounds of explosives are abandoned at the Site. No soil contamination has been determined at this time.

**D. Availability of other appropriate Federal or State response mechanisms to respond to the release.**

This factor supports the actions proposed by this Action Memorandum at the Site because neither the California DTSC nor the Rialto Fire Department have the necessary resources to respond to this emergency situation.

EPA has issued a written request to BATF to continue to provide technical and logistical support for the explosives. Explosives that are deemed waste will require either burning or detonation. Assistance from local DOD EOD teams has been requested.

**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, would present an imminent and substantial endangerment to public health, or welfare, or the environment.

**V. REMOVAL ACTIONS AND ESTIMATED COSTS**

**A. Removal Actions**

**1. Removal action description**

This removal action will consist of the following phases:

Hazmat Yard

- E. Conduct a site walk to identify all potential ordinance/explosive hazards
- F. Request Bomb Squad to remove ordinance/explosive hazards
- G. Conduct a preliminary radiation survey of all hazardous waste storage area, laboratories, and workshops.
- H. Inventory all containers on-site.

- I. Sample, profile, hazard categorize the contents of all containers.
- J. Remove all hazardous substance, debris, and other wastes from the Site.

Explosive Yard

- K. Inventory all explosive storage facilities
- L. Notify companies who are storing product explosives to move explosives to another storage facility
- M. Remove and destroy waste explosives
- N. Dismantle magazines

The removal of the hazardous substances from the Site is determined necessary by the EPA OSCs in order to mitigate the imminent threat of release into the local community and environment.

EPA's START and ERRS contractors utilized an emergency response Site Health and Safety Plan (HASP). This plan is clear and concise and states the precautions and procedure that are to be followed throughout the course of this removal action. The HASP is in conformance with OSHA 1910.210.

Upon mobilization the ERRS contractor established a Command Post, the support zone and an area to stage, inventory, and segregate waste streams. The ERRS contractor then will profile, re-lab-packed and/or drummed contaminated materials to prepare the material for transportation and disposal. The ERRS contractor will consolidate RCRA and non-RCRA debris for transport and disposal.

With the assistance of BATF and the SBCSD, the product/stored explosives will be removed from the site by their respective owners upon notification by EPA. The remaining explosives will either be considered abandoned or waste explosives and will be handled accordingly. It is anticipated that a large amount of explosives will need to be burned or detonated off-site. EPA has commenced contacts with local DOD facilities on this issue.

**2. Applicable or relevant and appropriate requirements (ARARs)**

This emergency response removal action meets, to the extent practicable, applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws.

ARARs include RCRA standards as implemented through California's federally authorized RCRA program and RCRA Land Disposal Restrictions as set forth at 22 CCR Chapter 12-18. All waste handling, storage, packaging, transportation and disposal will be conducted in accordance with RCRA. All offsite disposal will adhere to the CERCLA Off-Site Rule as set forth in Section 300.440 of the NCP.

**B. ESTIMATED COSTS**

**Extramural Costs**

Regional Removal Allowance Costs

Cleanup Contractor \$500,000

Extramural Costs Not Funded  
from the Regional Allowance

US Coast Guard Strike Team \$ 50,000

START Contractor 70,000

Extramural Subtotal \$620,000

Extramural Contingency (20%) \$124,000

TOTAL, Removal Action Project Ceiling \$744,000

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

If this action was not taken, contamination present on the Site would have posed an imminent threat to the local community and the environment. Detonation of explosives could release hazardous substances into the air which could produce serious health effects when inhaled or otherwise come into contact with local residents.

**VII. OUTSTANDING POLICY ISSUES**

No outstanding policy issues have been identified at this time.

**VIII. ENFORCEMENT**

See Enforcement Confidential Addendum

**A. Estimated Removal Action Costs<sup>2</sup>**

Intramural Costs


U.S. EPA Direct Costs	\$ 15,000
U.S. EPA Indirect Costs	<u>\$ 20,250</u>
Total Intramural	\$ 35,250

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$779,250.

**IX. RECOMMENDATION**

This decision document describes the ongoing emergency response removal action for the Denova Environmental Site in Rialto, California, that is being done in accordance with CERCLA as amended, and the NCP. This decision is based on the administrative record for the site.

Conditions at the site meet the NCP section 300.415(b)(2) criteria for an emergency response removal and I recommend you approve of this action. The total project ceiling of the approved action will be \$ 779,250.

Approval:  4 June 2002  
Daniel Meer, Chief Date  
Response, Planning, and Assessment Branch

Disapproval: \_\_\_\_\_  
Daniel Meer, Chief Date  
Response, Planning, and Assessment Branch

<sup>2</sup>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-judgement 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.