

STATE OF CALIFORNIA  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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In the Matter of: ) Docket No. I&/SE 95/96-005  
)  
DC Metals, Inc. ) Imminent or Substantial  
1414 Third Street ) Endangerment Determination  
Oakland, CA 94607 )  
) Health and Safety Code  
) Section 25358.3(a)  
)

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I. INTRODUCTION

1.1 Site. This imminent or substantial endangerment Determination applies to the site located at 1414 Third Street, Oakland, Alameda County. A map showing the site is attached as Exhibit 1.

1.2 Jurisdiction. Section 25358.3(a) of the Health and Safety Code authorizes the Department to take various actions when the Department determines that there may be an imminent or substantial endangerment to the public health or welfare or to the environment, because of a release or a threatened release of a hazardous substance.

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II. FINDINGS OF FACT

The Department hereby finds:

2.1 Site History.

2.1.1 Department records show that hazardous substances have been released at or from the Site. Investigations conducted by the California Department of Transportation and Southern Pacific Transportation Company, under the oversight of the Department, show that elevated concentrations of hazardous substances are present in soil and groundwater in areas which are located at the boundary line of the Site.

2.1.2 Groundwater elevation levels measured by Southern Pacific Transportation Company since 1994 have shown that contaminated groundwater is flowing from the Site in a west southwest direction.

2.2 Substances Found at the Site. The following substances have been found at the Site: Between September 1992 and December 1995, soil and groundwater investigations were conducted adjacent and to the south of the Site. Hazardous substances found in soils adjacent to the Site, along Third Street include: Benzene (up to 180 parts per billion [ppb]), 1,1-dichloroethane (up to 1,500 ppb), cis 1,2-dichloroethene (up to 18,000 ppb), ethyl benzene (up to 24,000 ppb), tetrachloroethene (up to 1900 ppb),

1 toluene (up to 630,000 ppb), trichloroethene (up to 1200 ppb),  
2 vinyl chloride (up to 540 ppb), and total xylenes (up to 179,000  
3 ppb). Hazardous substances found in groundwater from borings  
4 located downgradient and along Third Street include: acetone (up  
5 to 3100 ppb), benzene (up to 850 ppb), 2-butanone [MEK] (up to  
6 3,500 ppb), chloroethane (up to 460 ppb), 1,1-dichloroethane (up  
7 to 14,000 ppb), cis-1,2-dichloroethene (up to 81,000 ppb), trans-  
8 1,2-dichloroethene (up to 290 ppb), 1,1-dichloroethene (up to 71  
9 ppb), ethyl benzene (up to 1,250 ppb), methylene chloride (up to  
10 280 ppb), tetrachloroethene (up to 3 ppb), toluene (up to 110,000  
11 ppb), 1,1,1-trichloroethane (up to 1,500 ppb), 1,1,2-  
12 trichloroethane (up to 120 ppb), trichloroethene (up to 12 ppb),  
13 vinyl chloride (up to 44,000 ppb), and total xylenes (up to 8,300  
14 ppb).

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18 2.3 Health Effects.

19 2.3.1 Acetone. Acetone may produce a dry, scaly, and  
20 fissured dermatitis after repeated exposure. Inhalation of  
21 acetone vapors in high concentrations produces dryness of the  
22 mouth and throat, dizziness, nausea, uncoordinated movements,  
23 loss of coordinated speech, drowsiness, and in extreme cases,  
24 coma.  
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1           2.3.2       Chloroethane (Ethyl Chloride). The liquid form of  
2 chloroethane is mildly irritating to the skin and eyes.  
3 Frostbite can occur due to rapid liquid evaporation. Exposure to  
4 chloroethane may produce headache, dizziness, incoordination,  
5 stomach cramps, and eventual loss of consciousness. At high  
6 concentrations it is a respiratory tract irritant, and may cause  
7 cardiac arrhythmias.  
8

9           2.3.3       Benzene. Benzene is a highly volatile chemical  
10 and is readily absorbed following oral, dermal or inhalation  
11 exposures. Acute exposures to very high levels of benzene may  
12 result in death following depression of the central nervous  
13 system or fatal disturbances of cardiac rhythm. Acute exposures  
14 to lower levels can cause drowsiness, dizziness, rapid heart  
15 rate, headaches, tremors, confusion, and unconsciousness.  
16 Chronic, low level exposures to benzene can result in blood  
17 disorders such as aplastic anemia and leukemia. The IARC lists  
18 benzene in Category 1 (sufficient evidence of human  
19 carcinogenicity). Benzene is listed as a chemical known to the  
20 State to cause cancer (listed pursuant to the Safe Drinking Water  
21 and Toxic Enforcement Act of 1986).  
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25           2.3.4       2-Butanone (Methyl Ethyl Ketone [MEK]). MEK may  
26 cause slight nose and throat irritation, and mild eye irritation.  
27

1 Central nervous system effects and peripheral neuropathy have  
2 been reported in industrial settings following exposure to  
3 mixtures of organic substances including MEK.

4           2.3.5       1,1-Dichloroethane (1,1-DCA). 1,1-DCA is a  
5 central nervous system depressant in humans when inhaled at high  
6 concentrations. It may also be hepatotoxic (toxic to the liver)  
7 in humans. Human health effects associated with chronic  
8 inhalation of this compound include potential kidney and liver  
9 injury and lung irritation. 1,1-DCA is also a skin and eye  
10 irritant. 1,1-DCA is listed as a chemical known to the State to  
11 cause cancer (listed pursuant to the Safe Drinking Water and  
12 Toxic Enforcement Act of 1986).

13           2.3.6       Cis- and Trans-1,2-Dichloroethylene (1,2-DCE).  
14 1,2-DCE is moderately toxic by ingestion, inhalation and skin  
15 contact. 1,2-DCE is an irritant and narcotic in high  
16 concentrations to the central nervous system. Humans inhaling  
17 high concentrations of the compound display the following  
18 symptoms: nausea, vomiting, weakness, tremor and cramps,  
19 followed by unconsciousness.

20           2.3.7       Ethyl Benzene. Ethyl benzene is irritating to the  
21 eyes, skin, and mucous membranes. In high concentrations it is a  
22 narcotic. Ethyl benzene appears to also have acute and chronic  
23

1 effects on the central nervous system. Other chronic effects,  
2 based on animal experimentation include damage to the liver,  
3 kidneys and testes.

4 2.3.8 Tetrachloroethylene (PCE, Perchloroethylene).

5 Short-term exposure to PCE through ingestion and inhalation may  
6 cause nausea, vomiting, headache, dizziness, drowsiness, and  
7 tremors. Skin contact with liquid causes irritation and  
8 blistering. Both liquid and vapor are irritating to the eyes.  
9 Liver and kidney toxicity are the long-term effects. PCE is  
10 listed as a chemical known to the State to cause cancer (listed  
11 pursuant to the Safe Drinking Water and Enforcement Act of 1986).  
12

14 2.3.9 Toluene. Toluene is a depressant of the central  
15 nervous system. It can cause central nervous system  
16 encephalopathy, headache, depression, lassitude, impaired  
17 coordination, transient memory loss, and impaired reaction time.  
18

19 Human congenital malformations and functional or behavioral  
20 deficits have been associated with toluene abuse or in heavy  
21 industrial exposures; however, the existence of a casual  
22 relationship have not been proven.

24 2.3.10 1,1,1-Trichloroethane (1,1,1-TCA). Long-term  
25 exposure to 1,1,1-TCA produces a narcotic effect and depresses  
26 the central nervous system. Acute exposure symptoms include  
27

1 dizziness, incoordination, drowsiness, unconsciousness, and  
2 death.

3           2.3.11     1,1,2-Trichloroethane (1,1,2-TCE). In animals,  
4 1,1,2-TCA is a central nervous depressant causing narcosis.  
5 Narcotic concentrations of 1,1,2-TCE also produce ocular and  
6 upper respiratory tract irritation.  
7

8           2.3.12     Trichloroethylene (TCE). Acute exposure to TCE  
9 depresses the central nervous system, causing such symptoms as  
10 headache, dizziness, vertigo, tremors, irregular heartbeat,  
11 fatigue, nausea, vomiting, and blurred vision. TCE in a gaseous  
12 state may cause irritation of the eyes, nose and throat. TCE in  
13 a liquid state may cause burning irritation and damage to the  
14 eyes. Repeated or prolonged skin contact with the liquid may  
15 cause dermatitis. Long-term effects may include liver and kidney  
16 injury. TCE is listed as a chemical known to the State to cause  
17 cancer (listed pursuant to the Safe Drinking Water and  
18 Enforcement Act of 1986).  
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21           2.3.13     Vinyl Chloride. Inhalation of vinyl chloride  
22 causes headaches, dizziness, abdominal pain, numbness and  
23 tingling of the extremities. The vapors cause eye irritation.  
24 Skin contact with the liquid causes irritation and frostbite due  
25 to evaporation; skin contact with the vapor may also cause  
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1 irritation. The long-term effects due to exposure to vinyl  
2 chloride include liver damage and liver cancer. There is  
3 evidence of mutagenicity. The IARC has classified vinyl chloride  
4 in Category 1 for carcinogens (known human carcinogen). Vinyl  
5 chloride is listed as a chemical known to the State to cause  
6 cancer (listed pursuant to the Safe Drinking Water and Toxic  
7 Enforcement Act of 1986).

9       2.3.14    Xylenes. Xylene vapor is an irritant of the eyes,  
10 mucous membranes, and skin. It has caused narcosis at high  
11 concentrations. Liquid xylene is a skin irritant and causes  
12 erythema, dryness, and defatting. Following exposure to doses  
13 sufficient to induce overt poisoning and unconsciousness,  
14 transient hepatic and renal toxicity have been reported.

16       2.4    Routes of Exposure. If construction activities  
17 occurred in the vicinity of the Site, workers may come in contact  
18 with the contaminants through inhalation, dermal contact or  
19 ingestion. In addition, residents living in close proximity to  
20 the Site, or nearby workers in businesses could be exposed to the  
21 contaminants during construction activities.

23       2.5.   Population at Risk. The Site is located in the western  
24 part of Oakland in Alameda County. The approximate population  
25 living within a one-mile radius of the Site, based on 1990 census  
26



1 information, is 6,457. The land surrounding the Site includes  
2 residential and industrial development. The closest residential  
3 development is adjacent and to the west of the Site. The  
4 population at risk due to a release of volatile organics or from  
5 inhalation, ingestion or dermal contact with soil includes  
6 residents living downwind near the Site, construction workers,  
7 and persons working at DC Metals and other nearby businesses.  
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11 III. CONCLUSIONS OF LAW

12 3.1 Each of the substances listed in Section 2.3 is a  
13 "hazardous substance," as defined by Health and Safety Code  
14 Section 25316, and has been found migrating from the Site.

15 3.2 A "release" or threatened release of the hazardous  
16 substances listed in Section 2.3 has occurred at or from the  
17 Site, as defined by Health and Safety Code Section 25320.

18 3.3 The actual and/or threatened release of hazardous  
19 substances at the Site may present an imminent or substantial  
20 endangerment to the public health or welfare or to the  
21 environment.  
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25 IV. DETERMINATION

26 4.1 Based on the foregoing findings of fact and  
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1 conclusions of law, the Department hereby determines that removal  
2 or remedial action is necessary at the Site because there may be  
3 an imminent or substantial endangerment to the public health or  
4 welfare or to the environment.  
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7

8 DATED: April 26, 1996      Barbara J Cook

9 Barbara J. Cook, P.E.  
10 Regional Branch Chief  
11 Department of Toxic  
12 Substances Control

13 cc: Site Mitigation Program  
14 Headquarters, Planning & Policy  
15 Office of Legal Counsel  
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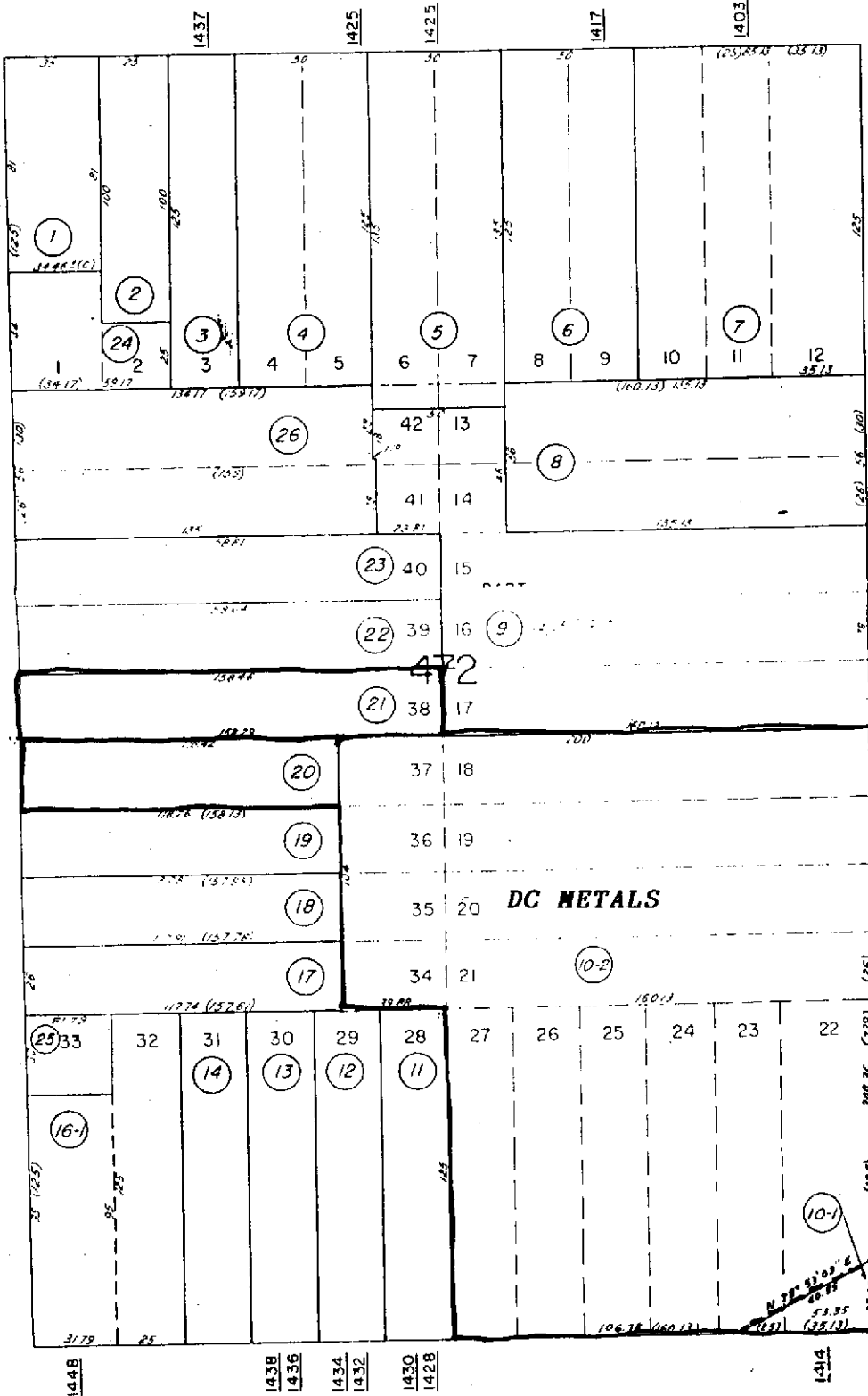
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EXHIBIT 1

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STATE OF CALIFORNIA  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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In the Matter of: ) Docket No. I&/SE 95/96-005  
)  
DC Metals, Inc. ) Imminent or Substantial  
1414 Third Street ) Endangerment Determination and  
Oakland, CA 94607 ) Remedial Action Order  
)  
) Health and Safety Code  
Responsible Parties: ) Sections 25355.5(a)(1)(B) and  
DC Metals, Inc. ) 25358.3, 25359.2, 58009, and  
1414 Third Street ) 58010  
Oakland, CA 94607 )  
)  
Cypress Street )  
Investments )  
1414 Third Street )  
Oakland, CA 94607 )  
)  
AMCO Chemical Corp. )  
2133 Pine Knoll Drive #7 )  
Walnut Creek, CA 94595 )  
\_\_\_\_\_ )

I. INTRODUCTION

1.1 Parties. The State Department of Toxic Substances Control (Department) issues this Imminent or Substantial Endangerment and Remedial Action Order (RAO) to DC Metals, a California Corporation, Cypress Street Investments, a limited

ENVIRONMENTAL  
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1 partnership and AMCO Chemical Corporation. Responsible Parties  
2 are herein referred to as Respondents.

3 1.2 Site. This Order applies to the site located at 1414  
4 Third Street, Oakland, Alameda County. A map showing the Site is  
5 attached as Exhibit 1.  
6

7 1.3 Jurisdiction. Section 25358.3(a) of the Health and  
8 Safety Code authorizes the Department to issue an Order when the  
9 Department determines that there may be an imminent or  
10 substantial endangerment to the public health or welfare or to  
11 the environment, because of a release or a threatened release of  
12 a hazardous substance.  
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14  
15 Section 25355.5(a)(1)(B) of the Health and Safety Code authorizes  
16 the Department to issue an order establishing a schedule for  
17 removing or remedying a release of a hazardous substance at a  
18 site, or for correcting the conditions that threaten the release  
19 of a hazardous substance. The order may include, but is not  
20 limited to, requiring specific dates by which the nature and  
21 extent of a release shall be determined and the site adequately  
22 characterized, a remedial action plan prepared and submitted to  
23 the Department for approval, and a removal or remedial action  
24 completed. The Department may spend funds after issuing a  
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1 remedial action order and making a determination of noncompliance  
2 pursuant to Section 25355.5(a)(1)(2).

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4 Health and Safety Code Section 25359.2 allows the imposition of  
5 administrative penalties for failure to comply with an order  
6 issued pursuant to section 25358.3 or 25355.5.

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9 Section 58009 and 58010 of the Health and Safety Code authorize  
10 the Department to commence and maintain all proper and necessary  
11 actions and proceedings to abate public nuisances related to  
12 matters within its jurisdiction which are dangerous to health.

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15 II. FINDINGS OF FACT

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17 The Department hereby finds:

18 2.1 Liability of Respondents. The liability of the  
19 Respondents is based on the following findings of fact:

20 2.1.1 DC Metals, Inc. is the current operator of the Site  
21 at or from which hazardous substances have been released to the  
22 environment.  
23

1           2.1.2 Cypress Street Investments is the current owner of  
2 the Site at or from which hazardous substances have been released  
3 to the environment.

4           2.1.3 AMCO Chemical Corporation was an owner and an  
5 operator of the Site at the time of the release of hazardous  
6 substances at or from the Site.

7           2.2 Physical Description of Site. The Site consists of  
8 three separate parcels. One parcel (4-73-10) is located at the  
9 corner of Third Street and Mandela Parkway (formerly Cypress  
10 Street), while the other two (4-73-20 and 4-73-21) are located  
11 along Center Street. The Site is adjacent to single family  
12 residences along both Center and Third Streets.

13           2.3 Site History.

14           2.3.1 Department records show that hazardous substances  
15 have been released at or from the Site. Investigations conducted  
16 by the California Department of Transportation and Southern  
17 Pacific Transportation Company, under the oversight of the  
18 Department, show that elevated concentrations of hazardous  
19 substances are present in soil and groundwater in areas which are  
20 located at the boundary line of the Site.

21           2.3.2 Groundwater elevation levels measured by Southern  
22 Pacific Transportation Company since 1994 have shown that  
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1 contaminated groundwater is flowing from the Site in a west  
2 southwest direction.

3       2.4 Substances Found at the Site. Between September 1992  
4 and December 1995, soil and groundwater investigations were  
5 conducted adjacent and to the south of the Site. Hazardous  
6 substances found in soils adjacent to the Site, along Third  
7 Street include: Benzene (up to 180 parts per billion [ppb]),  
8 1,1-dichloroethane (up to 1,500 ppb), cis 1,2-dichloroethene (up  
9 to 18,000 ppb), ethyl benzene (up to 24,000 ppb),  
10 tetrachloroethene (up to 1900 ppb), toluene (up to 630,000 ppb),  
11 trichloroethene (up to 1200 ppb), vinyl chloride (up to 540 ppb),  
12 and total xylenes (up to 179,000 ppb). Hazardous substances  
13 found in groundwater from borings located downgradient and along  
14 Third Street include: acetone (up to 3100 ppb), benzene (up to  
15 850 ppb), 2-butanone [MEK] (up to 3,500 ppb), chloroethane (up to  
16 460 ppb), 1,1-dichloroethane (up to 14,000 ppb), cis-1,2-  
17 dichloroethene (up to 81,000 ppb), trans-1,2-dichloroethene (up  
18 to 290 ppb), 1,1-dichloroethene (up to 71 ppb), ethyl benzene (up  
19 to 1,250 ppb), methylene chloride (up to 280 ppb),  
20 tetrachloroethene (up to 3 ppb), toluene (up to 110,000 ppb),  
21 1,1,1-trichloroethane (up to 1,500 ppb), 1,1,2-trichloroethane  
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1 (up to 120 ppb), trichloroethene (up to 12 ppb), vinyl chloride  
2 (up to 44,000 ppb), and total xylenes (up to 8,300 ppb).

3 2.5 Health Effects. The health effects of compounds  
4 detected in groundwater and/or soil include the following:  
5

6 2.5.1 Acetone. Acetone may produce a dry, scaly, and  
7 fissured dermatitis after repeated exposure. Inhalation of  
8 acetone vapors in high concentrations produces dryness of the  
9 mouth and throat, dizziness, nausea, uncoordinated movements,  
10 loss of coordinated speech, drowsiness, and in extreme cases,  
11 coma.  
12

13 2.5.2 Chloroethane (Ethyl Chloride). The liquid form of  
14 chloroethane is mildly irritating to the skin and eyes.  
15 Frostbite can occur due to rapid liquid evaporation. Exposure to  
16 chloroethane may produce headache, dizziness, incoordination,  
17 stomach cramps, and eventual loss of consciousness. At high  
18 concentrations it is a respiratory tract irritant, and may cause  
19 cardiac arrhythmias.  
20

21 2.5.3 Benzene. Benzene is a highly volatile chemical  
22 and is readily absorbed following oral, dermal or inhalation  
23 exposures. Acute exposures to very high levels of benzene may  
24 result in death following depression of the central nervous  
25 system or fatal disturbances of cardiac rhythm. Acute exposures  
26  
27

1 to lower levels can cause drowsiness, dizziness, rapid heart  
2 rate, headaches, tremors, confusion, and unconsciousness.  
3 Chronic, low level exposures to benzene can result in blood  
4 disorders such as aplastic anemia and leukemia. The IARC lists  
5 benzene in Category 1 (sufficient evidence of human  
6 carcinogenicity). Benzene is listed as a chemical known to the  
7 State to cause cancer (listed pursuant to the Safe Drinking Water  
8 and Toxic Enforcement Act of 1986).  
9

10           2.5.4       2-Butanone (Methyl Ethyl Ketone [MEK]). MEK may  
11 cause slight nose and throat irritation, and mild eye irritation.  
12 Central nervous system effects and peripheral neuropathy have  
13 been reported in industrial settings following exposure to  
14 mixtures of organic substances including MEK.  
15

16           2.5.5       1,1-Dichloroethane (1,1-DCA). 1,1-DCA is a  
17 central nervous system depressant in humans when inhaled at high  
18 concentrations. It may also be hepatotoxic (toxic to the liver)  
19 in humans. Human health effects associated with chronic  
20 inhalation of this compound include potential kidney and liver  
21 injury and lung irritation. 1,1-DCA is also a skin and eye  
22 irritant. 1,1-DCA is listed as a chemical known to the State to  
23 cause cancer (listed pursuant to the Safe Drinking Water and  
24 Toxic Enforcement Act of 1986).  
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1           2.5.6       Cis- and Trans-1,2-Dichloroethylene (1,2-DCE).

2 1,2-DCE is moderately toxic by ingestion, inhalation and skin  
3 contact. 1,2-DCE is an irritant and narcotic in high  
4 concentrations to the central nervous system. Humans inhaling  
5 high concentrations of the compound display the following  
6 symptoms: nausea, vomiting, weakness, tremor and cramps,  
7 followed by unconsciousness.  
8

9           2.5.7       Ethyl Benzene. Ethyl benzene is irritating to the  
10 eyes, skin, and mucous membranes. In high concentrations it is a  
11 narcotic. Ethyl benzene appears to also have acute and chronic  
12 effects on the central nervous system. Other chronic effects,  
13 based on animal experimentation include damage to the liver,  
14 kidneys and testes.  
15

16           2.5.8       Tetrachloroethylene (PCE, Perchloroethylene).  
17 Short-term exposure to PCE through ingestion and inhalation may  
18 cause nausea, vomiting, headache, dizziness, drowsiness, and  
19 tremors. Skin contact with liquid causes irritation and  
20 blistering. Both liquid and vapor are irritating to the eyes.  
21 Liver and kidney toxicity are the long-term effects. PCE is  
22 listed as a chemical known to the State to cause cancer (listed  
23 pursuant to the Safe Drinking Water and Enforcement Act of 1986).  
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1           2.5.9     Toluene. Toluene is a depressant of the central  
2 nervous system. It can cause central nervous system  
3 encephalopathy, headache, depression, lassitude, impaired  
4 coordination, transient memory loss, and impaired reaction time.  
5 Human congenital malformations and functional or behavioral  
6 deficits have been associated with toluene abuse or in heavy  
7 industrial exposures; however, the existence of a casual  
8 relationship have not been proven.

10           2.5.10    1,1,1-Trichloroethane (1,1,1-TCA). Long-term  
11 exposure to 1,1,1-TCA produces a narcotic effect and depresses  
12 the central nervous system. Acute exposure symptoms include  
13 dizziness, incoordination, drowsiness, unconsciousness, and  
14 death.

16           2.5.11    1,1,2-Trichloroethane (1,1,2-TCE)<sup>1</sup>. In animals,  
17 1,1,2-TCA is a central nervous depressant causing narcosis.  
18 Narcotic concentrations of 1,1,2-TCE also produce ocular and  
19 upper respiratory tract irritation.

21           2.5.12    Trichloroethylene (TCE). Acute exposure to TCE  
22 depresses the central nervous system, causing such symptoms as  
23 headache, dizziness, vertigo, tremors, irregular heartbeat,  
24 fatigue, nausea, vomiting, and blurred vision. TCE in a gaseous  
25 state may cause irritation of the eyes, nose and throat. TCE in  
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1 a liquid state may cause burning irritation and damage to the  
2 eyes. Repeated or prolonged skin contact with the liquid may  
3 cause dermatitis. Long-term effects may include liver and kidney  
4 injury. TCE is listed as a chemical known to the State to cause  
5 cancer (listed pursuant to the Safe Drinking Water and  
6 Enforcement Act of 1986).

8       2.5.13     Vinyl Chloride. Inhalation of vinyl chloride  
9 causes headaches, dizziness, abdominal pain, numbness and  
10 tingling of the extremities. The vapors cause eye irritation.  
11 Skin contact with the liquid causes irritation and frostbite due  
12 to evaporation; skin contact with the vapor may also cause  
13 irritation. The long-term effects due to exposure to vinyl  
14 chloride include liver damage and liver cancer. There is  
15 evidence of mutagenicity. The IARC has classified vinyl chloride  
16 in Category 1 for carcinogens (known human carcinogen). Vinyl  
17 chloride is listed as a chemical known to the State to cause  
18 cancer (listed pursuant to the Safe Drinking Water and Toxic  
19 Enforcement Act of 1986).

22       2.5.14     Xylenes. Xylene vapor is an irritant of the eyes,  
23 mucous membranes, and skin. It has caused narcosis at high  
24 concentrations. Liquid xylene is a skin irritant and causes  
25 erythema, dryness, and defatting. Following exposure to doses  
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1 sufficient to induce overt poisoning and unconsciousness,  
2 transient hepatic and renal toxicity have been reported.

3       2.6 Routes of Exposure. If construction activities  
4 occurred in the vicinity of the Site, workers may come in contact  
5 with the contaminants through inhalation, dermal contact or  
6 ingestion. In addition, residents living in close proximity to  
7 the Site, or nearby workers in businesses could be exposed to the  
8 contaminants during construction activities.  
9

10       2.7 Public Health and/or Environmental Risk. The Site is  
11 located in the western part of Oakland in Alameda County. The  
12 approximate population living within a one-mile radius of the  
13 Site, based on 1990 census information, is 6,457. The land  
14 surrounding the Site includes residential and industrial  
15 development. The closest residential development is adjacent and  
16 to the west of the Site. The population at risk due to a release  
17 of volatile organics or from inhalation, ingestion or dermal  
18 contact with soil includes residents living downwind near the  
19 Site, construction workers, and persons working at DC Metals and  
20 other nearby businesses.  
21  
22  
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1 III. CONCLUSIONS OF LAW

2  
3 3.1 Each of the persons listed in Section 1.1 is a  
4 "responsible party" or "liable person," as defined by Health and  
5 Safety Code sections 25319, 25323.5 and 25385.1(g), herein  
6 referred to as Respondent(s).  
7

8 3.2 Each of the substances listed in Section 2.4 is a  
9 "hazardous substance," as defined by Health and Safety Code  
10 section 25316, and has been found migrating from the Site.  
11

12 3.3 A "release" or threatened release of the hazardous  
13 substances listed in Section 2.4 has occurred at or from the  
14 Site, as defined by Health and Safety Code section 25320.  
15

16 3.4 The actual and/or threatened release of hazardous  
17 substances at the Site may present an imminent or substantial  
18 endangerment to the public health or welfare or to the  
19 environment.  
20

21 3.5 The actual and/or threatened release of hazardous  
22 substances at the Site is also injurious to public health or is  
23 an obstruction to the free use of property, and which, at the  
24 same time, affects the entire community where the Site is  
25 located.  
26  
27

1 IV. DETERMINATION

2  
3 4.1 Based on the foregoing findings of fact and conclusions  
4 of law, the Department hereby determines that removal and  
5 remedial action is necessary at the Site because there may be an  
6 imminent or substantial endangerment to the public health or  
7 welfare or to the environment.  
8

9 4.2 The actual and/or threatened release of hazardous  
10 substances at the Site constitute a public nuisance as defined in  
11 Civil Code Sections 3479 and 3480.  
12

13  
14 V. ORDER

15  
16  
17 Based on the foregoing FINDINGS AND DETERMINATION, IT IS  
18 HEREBY ORDERED THAT Respondents conduct the following response  
19 activities in the manner specified herein, and in accordance with  
20 a schedule specified by the Department as follows:

21 5.1. All work performed under this Order shall be  
22 consistent with and based on the Comprehensive Environmental  
23 Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601  
24 et seq.), as amended, the National Contingency Plan (40 Code of  
25 Federal Regulations (CFR) Part 300), as amended, the Health and  
26  
27



1 Safety Code (H&SC) Section 25300 et seq., as amended, state laws  
2 and regulations, as amended, and other current and applicable  
3 U.S. EPA and Department guidance and standards.  
4

5       5.1.1 Site Remediation Strategy. The purpose of this Order  
6 is to require for the Site: implementation of any appropriate  
7 removal actions, completion of a Remedial  
8 Investigation/Feasibility Study (RI/FS), preparation of a  
9 Remedial Action Plan (RAP), preparation of California  
10 Environmental Quality Act (CEQA) documents, and Design and  
11 Implementation of the remedial actions approved in the RAP. An  
12 overall Site investigation and remediation strategy shall be  
13 developed by the Respondents in conjunction with the Department  
14 which reflects program goals, objectives, and requirements.  
15 Current knowledge of the Site contamination sources, exposure  
16 pathways, and receptors shall be used in developing this  
17 strategy.  
18  
19  
20

21 An objective of the Site investigations shall be to identify  
22 immediate or potential risks to public health and the environment  
23 and prioritize and implement response actions using removal  
24 actions and operable units, if appropriate, based on the relative  
25 risks at the Site. The Respondents and Department shall develop  
26  
27

1 and possibly modify Site priorities throughout the course of the  
2 investigations. If necessary for the protection of public health  
3 and the environment, the Department will require additional  
4 response actions not specified in the Order to be performed as  
5 removal actions or separate operable units. Removal actions  
6 shall be implemented in accordance with a workplan and  
7 implementation schedule submitted by the Respondents and approved  
8 by the Department.  
9

10  
11  
12 For operable unit remedial actions, the Department will specify  
13 the separate and focused remedial phase activities to be  
14 conducted as RI/FS, RAP, Design, and Implementation. The focused  
15 activities shall be conducted in accordance with the  
16 corresponding remedial phase requirements specified in the Order,  
17 but shall only address the area or problem of the operable unit.  
18

19 5.1.2 Removal Actions. Respondents shall undertake removal  
20 actions if, during the course of the RI or FS, the Department  
21 determines that they are necessary to mitigate the release of  
22 hazardous substances at or emanating from the Site. The  
23 Department may require Respondents to submit a removal action  
24 workplan, including an implementation schedule, and may establish  
25 a schedule for submittal of or implementation of the workplan.  
26  
27

1 Either the Department or Respondents may identify the need for  
2 removal actions.

3           5.1.3       Site Remediation Strategy Meeting. The  
4 Respondents, including the Project Coordinator (Section 6.1) and  
5 Project Engineer/Geologist (Section 6.2), shall meet with the  
6 Department within 20 days from the date the Order is signed by  
7 the Department (and concurrent with the development of the RI/FS  
8 workplan) to discuss the Site remediation, strategy. The  
9 discussion will include Site risks and priorities; project  
10 planning, phasing and scheduling, remedial action objectives,  
11 remedial technologies, data quality objectives, and the RI/FS  
12 workplan. Results of the discussion will be included in the  
13 Scoping Document, Section 5.22(b) of this Order.

14           5.2       Remedial Investigation/Feasibility Study (RI/FS).  
15 A RI/FS shall be conducted for the Site. The RI/FS shall be  
16 prepared consistent with the U.S. Environmental Protection  
17 Agency's "Guidance for Conducting Remedial Investigations and  
18 Feasibility Studies under CERCLA," October 1988. The purpose of  
19 the RI/FS is to assess Site conditions and to evaluate  
20 alternatives to the extent necessary to select a remedy  
21 appropriate for the Site. RI and FS activities shall be  
22 conducted concurrently and iteratively so that the investigations  
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1 can be completed expeditiously. Because of the unknown nature of  
2 the Site and iterative nature of the RI/FS, additional data  
3 requirements and analyses may be identified throughout the  
4 process. The Respondents shall fulfill additional data and  
5 analysis needs identified by the Department; these additional  
6 data and analysis requests will be consistent with the general  
7 scope and objectives of the Order.  
8

9  
10 The following elements of the RI/FS process shall be  
11 preliminarily defined in the initial Site scoping and refined and  
12 modified as additional information is gathered throughout the  
13 RI/FS process (and those described in Section 5.2.3 of this  
14 Order).  
15

16 (a) Conceptual Site Model identifying contamination  
17 sources, exposure pathways, and receptors;  
18

19 (b) Federal, State and local remedial action  
20 objectives including applicable or relevant and  
21 appropriate requirements (ARARs);  
22

23 (c) Project phasing including the identification of  
24 removal actions and operable units;

25 (d) General response actions and associated remedial  
26 technology types; and  
27

1 (e) The need for treatability studies.

2 5.2.1 RI/FS Objectives. The objectives of the RI/FS are

3 to:

4 (a) Determine the nature and full extent of hazardous  
5 substance contamination of air, soil, surface water and  
6 groundwater at the Site and contamination from the  
7 Site, including offsite areas affected by the Site;

8 (b) Identify all actual and potential exposure  
9 pathways and routes through environmental media;

10 (c) Determine the magnitude and probability of actual  
11 or potential harm to public health, safety or welfare  
12 or to the environment posed by the threatened or actual  
13 release of hazardous substances at or from the Site;

14 (d) Identify and evaluate appropriate response  
15 measures to prevent or minimize future releases and  
16 mitigate any releases which have already occurred; and

17 (e) Collect and evaluate the information necessary to  
18 prepare a remedial action plan (RAP) in accordance with  
19 the requirements of Health and Safety Code

20 Section 25356.1.  
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1           5.2.2     RI/FS Workplan. Within 60 days from the date the  
2 Order is signed, Respondents shall prepare and submit to the  
3 Department for review and approval a detailed RI/FS Workplan and  
4 implementation schedule which covers all the activities necessary  
5 to conduct a complete RI/FS of the Site and any offsite areas  
6 where there is a release or threatened release of hazardous  
7 substances from the Site.  
8

9  
10 The RI/FS Workplan shall include a detailed description of the  
11 tasks to be performed, information or data needed for each task,  
12 and the deliverables which will be submitted to the Department.  
13 Either the Respondents or the Department may identify the need  
14 for additional work.  
15

16  
17  
18 These RI/FS Workplan deliverables are discussed in the remainder  
19 of this Section, with a schedule for implementation, and monthly  
20 reports. The RI/FS Workplan shall include all the sections  
21 listed below.

22           (a) Project Management Plan. The Project Management Plan  
23 shall define relationships and responsibilities for major  
24 tasks and project management items by Respondents, its  
25 contractors, subcontractors, and consultants. The plan  
26  
27

1 shall include an organization chart with the names and  
2 titles of key personnel and a description of their  
3 individual responsibilities.

4 (b) Scoping Document. The Scoping Document shall  
5 incorporate program goals, program management principles,  
6 and expectations contained in the NCP. It shall include:

7 (1) An analysis and summary of the Site background and the  
8 physical setting.' At a minimum, the following information  
9 is required:  
10

11 (A) A map of the Site, and if they exist, aerial photographs  
12 and blueprints showing buildings and structures;  
13

14 (B) A description of past disposal practices;

15 (C) A list of all hazardous substances, materials or wastes  
16 which were disposed, discharged, spilled, treated, stored,  
17 transferred, transported, handled or used at the Site, and a  
18 description of their estimated volumes, concentrations, and  
19 characteristics; and  
20

21 (D) A description of hazardous substance characteristics;  
22 and  
23

24 (E) If applicable, a description of all current and past  
25 manufacturing processes which are or were related to each  
26 hazardous substance, material or waste.  
27

1 (2) An analysis and summary of previous response actions  
2 including a summary of all existing data including air,  
3 soil, surface water, and groundwater data and the Quality  
4 Assurance/Quality Control (QA/QC) procedures which were  
5 followed;

6  
7 (3) Presentation of the Conceptual Site Model;

8 (4) The scope and objectives of RI/FS activities; and

9 (5) Preliminary identification of possible response actions  
10 and the data needed for the evaluation of alternatives.

11 Removal actions shall be proposed if needed based on the  
12 initial evaluation of threats to public health and the  
13 environment. If remedial actions involving treatment can be  
14 identified, treatability studies shall be conducted during  
15 the characterization phase, unless the Respondents and the  
16 Department agree that such studies are unnecessary;  
17  
18

19 (6) If applicable, initial presentation of the Site  
20 Remediation Strategy.

21 (c) Field Sampling Plan. The Field Sampling Plan shall  
22 include:

23  
24 (1) Sampling objectives, including a brief description of  
25 data gaps and how the field sampling plan will address these  
26 gaps;



1 (2) Sample locations, including a map showing these  
2 locations, and proposed frequency;

3 (3) Sample designation or numbering system;

4 (4) Detailed specification of sampling equipment and  
5 procedures;

6 (5) Sample handling and analysis including preservation  
7 methods, shipping requirements and holding times; and  
8

9 (6) Management plan for wastes generated.

10 (d) Quality Assurance Project Plan. The plan shall  
11 include:  
12

13 (1) Project organization and responsibilities with respect  
14 to sampling and analysis;

15 (2) Quality assurance objectives for measurement including  
16 accuracy, precision, and method detection limits. In  
17 selecting analytical methods, the Respondents shall consider  
18 obtaining detection limits at or below potential ARARs, such  
19 as Maximum Contaminant Levels (MCLs) or Maximum Contaminant  
20 Level Goals (MCLGs);  
21

22 (3) Sampling procedures;

23 (4) Sample custody procedures and documentation;

24 (5) Field and laboratory calibration procedures;

25 (6) Analytical procedures;  
26  
27

1 (7) Laboratory to be used certified pursuant to Health and  
2 Safety Code Section 25198;

3 (8) Specific routine procedures used to assess data  
4 (precision, accuracy and completeness) and corrective  
5 actions;

6 (9) Reporting procedure for measurement of system  
7 performance and data quality;

8 (10) Data management, data reduction, validation and  
9 reporting. Information shall be accessible to downloading  
10 into the Department's system; and

11 (11) Internal quality control.

12 (e) Health and Safety Plan. A site-specific Health and  
13 Safety Plan shall be prepared in accordance with federal  
14 (29 CFR 1910.120) and state (Title 8 CCR Section 5192)  
15 regulations and shall describe the following:

16 (1) Field activities including work tasks, objectives, and  
17 personnel requirements and a description of hazardous  
18 substances on the Site;

19 (2) Respondents' key personnel and responsibilities;

20 (3) Potential hazards to workers including chemical  
21 hazards, physical hazards, confined spaces and climatic  
22 conditions;

1 (4) Potential risks arising from the work being performed  
2 including the impact to workers, the community and the  
3 environment;

4 (5) Exposure monitoring plan;

5 (6) Personal protective equipment and engineering  
6 controls;

7 (7) Site controls including work zones and security  
8 measures;

9 (8) Decontamination procedures;

10 (9) General safe work practices;

11 (10) Sanitation facilities;

12 (11) Standard operating procedures;

13 (12) Emergency response plan covering workers addressing  
14 potential hazardous material releases;

15 (13) Training requirements;

16 (14) Medical surveillance program; and

17 (15) Record keeping.

18 (f) Other Activities. A description of any other  
19 significant activities which are appropriate to complete the  
20 RI/FS shall be included.

21 (g) Schedule. A schedule which provides specific time  
22 frames and dates for completion of each activity and report  
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1 conducted or submitted under the RI/FS Workplan including  
2 the schedules for removal actions and operable unit  
3 activities.

4  
5 5.2.3 RI/FS Workplan Implementation. Respondents shall  
6 implement the approved RI/FS Workplan.

7 5.2.4 RI/FS Workplan Revisions. If Respondents modify any  
8 methods or initiates new activities for which no Field Sampling  
9 Plan, Health and Safety Plan, Quality Assurance Project Plan or  
10 other necessary procedures/plans have been established, the  
11 Respondents shall prepare an addendum to the approved plan(s) for  
12 Department review and approval prior to modifying the method or  
13 initiating new activities.  
14

15 5.3 Interim Screening and Evaluation of Remedial  
16 Technologies. At the request of the Department, the Respondents  
17 shall submit an interim document which identifies and evaluates  
18 potentially suitable remedial technologies and recommendations  
19 for treatability studies.  
20

21 5.4 Treatability Studies. Treatability testing will be  
22 performed by the Respondents to develop data for the detailed  
23 remedial alternatives. Treatability testing is required to  
24 demonstrate the implementability and effectiveness of  
25 technologies, unless the Respondents can show the Department that  
26  
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1 similar data or documentation or information exists. The  
2 required deliverables are: a workplan, a sampling and analysis  
3 plan, and a treatability evaluation report. To the extent  
4 practicable, treatability studies will be proposed and  
5 implemented during the latter part of Site characterization.  
6

7       5.5 Remedial Investigation (RI) Report. The RI Report  
8 shall be prepared and submitted by the Respondents to the  
9 Department for review and approval in accordance with the  
10 approved RI/FS workplan schedule. The purpose of the RI is to  
11 collect data necessary to adequately characterize the Site for  
12 the purposes of defining risks to public health and the  
13 environment and developing and evaluating effective remedial  
14 alternatives. Site characterization may be conducted in one or  
15 more phases to focus sampling efforts and increase the efficiency  
16 of the investigation. The Respondents shall identify the sources  
17 of contamination and define the nature, extent, and volume of the  
18 contamination. Using this information, the contaminant fate and  
19 transport shall be evaluated. The RI Report shall contain:  
20  
21

22       (a) Site Physical Characteristics. Data on the physical  
23 characteristics of the Site and surrounding area shall be  
24 collected to the extent necessary to define potential  
25 transport pathways and receptor populations and to provide  
26  
27

1 sufficient engineering data for development and screening of  
2 remedial action alternatives.

3 (b) Sources of Contamination. Contamination sources  
4 (including heavily contaminated media) shall be defined.

5 The data shall include the source locations, type of  
6 containment, waste characteristics, and Site features  
7 related to contaminant migration and human exposure.  
8

9 (c) Nature and Extent of Contamination. Contaminants shall  
10 be identified and the horizontal and vertical extent of  
11 contamination shall be defined in soil, groundwater, surface  
12 water, sediment, air, and biota. Spatial and temporal  
13 trends and the fate and transport of contamination shall be  
14 evaluated.  
15

16 5.6 Baseline Risk Assessment. The Respondents shall  
17 submit a Baseline Risk Assessment Report within 30 days from the  
18 submittal of the RI Report. The report shall be prepared  
19 consistent with U.S. EPA and Department guidance and regulations,  
20 including as a minimum: Risk Assessment Guidance for Superfund,  
21 Volume 1; Human Health Evaluation Manual, December 1989;  
22 Superfund Exposure Assessment Manual, April 1988; and  
23 Risk Assessment Guidance for Superfund, Volume 2, Environmental  
24  
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1 Evaluation Manual, March 1989. The Baseline Risk Assessment  
2 Report shall include the following components:

3 (a) Contaminant Identification. Characterization data  
4 shall be screened to identify contaminants of concern in  
5 order to focus subsequent efforts of the risk assessment  
6 process.  
7

8 (b) Environmental Evaluation. An ecological assessment  
9 consisting of:

- 10 (1) Identification of sensitive environments and rare,  
11 threatened, or endangered species and their habitats; and  
12 (2) As appropriate, ecological investigations to assess the  
13 actual or potential effects on the environment and/or  
14 develop remediation criteria.  
15

16 (c) Exposure Assessment. The objectives of an exposure  
17 assessment are to identify actual or potential exposure  
18 pathways, to characterize the potentially exposed  
19 populations, and to determine the extent of the exposure.  
20

21 (d) Toxicity Assessment. Respondents shall evaluate the  
22 types of adverse health or environmental effects associated  
23 with individual and multiple chemical exposures; the  
24 relationship between magnitude of exposures and adverse  
25 effects; and related uncertainties such as the weight of  
26  
27

1 evidence for a chemical's potential carcinogenicity in  
2 humans.

3 (e) Risk Characterization. Risk characterization now  
4 includes the potential risks of adverse health or  
5 environmental effects for each of the exposure scenarios  
6 derived in the exposure assessment.  
7

8 5.7 Feasibility Study (FS) Report. The FS Report shall be  
9 prepared and submitted by the Respondents to the Department for  
10 review and approval, no later than 45 days from submittal of the  
11 RI Report. The FS Report shall summarize the results of the FS  
12 including the following:  
13

14 (a) Documentation of all treatability studies conducted.

15 (b) Development of medium specific or operable unit  
16 specific remedial action objectives, including ARARs.  
17

18 (c) Identification and screening of general response  
19 actions, remedial technologies, and process options on a  
20 medium and/or operable unit specific basis.

21 (d) Evaluation of alternatives based on the criteria  
22 contained in the NCP and H&SC Section 25356.1 including:  
23

24 Threshold Criteria:

25 (1) Overall protection of human health and the environment.

26 (2) Compliance with ARARs.  
27



1        Primary Balancing Criteria:

- 2            (1) Long-term effectiveness and permanence.
- 3            (2) Reduction of toxicity, mobility, or volume through
- 4            treatment.
- 5            (3) Short-term effectiveness.
- 6            (4) Implementability based on technical and administrative
- 7            feasibility.
- 8            (5) Cost.

9        Modifying Criteria:

- 10           (1) State and local agency acceptance.
- 11           (2) Community acceptance.
- 12           (e) Proposed remedial actions.

13           5.8    Public Participation Plan (Community Relations).    The

14           Respondent(s) shall work cooperatively with the Department in

15           ensuring that the affected public and community are involved in

16           the Department's decision-making process. Any such public

17           participation activities shall be conducted in accordance with

18           Health and Safety Code Section 25356.1(d), the Department's

19           Public Participation Policy and Guidance Manual, and with the

20           Department's review and approval.

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1 The Respondents, in coordination with the Department, shall  
2 assess the community and develop a Public Participation Plan  
3 (PPP) which describes how, under the Order, the public and  
4 adjoining community will be kept informed of activities conducted  
5 at the Site and how the Respondents will be responding to  
6 inquiries from concerned citizens. Major steps in developing a  
7 PPP are as follows:

- 9 (a) Develop proposed list of interviewees;  
10 (b) Schedule and conduct community interviews; and  
11 (c) Analyze interview notes, and develop objectives.  
12

13 The Respondents shall submit the PPP for the Department's review  
14 within 30 days of the effective date of the Order.  
15

16 The Respondents shall develop and submit fact sheets to the  
17 Department for review and approval when key milestones are  
18 projected and/or completed or when specifically requested by the  
19 Department. Respondents shall be responsible for distribution of  
20 fact sheets using the approved community mailing list.  
21

22 5.9 California Environmental Quality Act (CEQA). The  
23 Department must comply with CEQA insofar as activities required  
24 by this order are projects requiring CEQA compliance. The  
25 Respondents shall submit an Initial Study, associated checklist,  
26  
27

1 and discussion of mitigation methods (if any) as required by  
2 CEQA, concurrent with submittal of the draft RAP specified in  
3 Section 5.10, or when notified by the Department that an activity  
4 required by this order requires CEQA compliance. Based on the  
5 results of the Initial Study, the Department will determine if a  
6 Negative Declaration or Environmental Impact Report (EIR) should  
7 be prepared. If the Department believes that an EIR is  
8 necessary, it may contact the Respondents prior to the submittal  
9 of the draft RAP to identify the necessary tasks and schedule the  
10 preparation and finalization of the EIR.  
11

12  
13 5.10 Remedial Action Plan. No later than 30 days after  
14 Department approval of the FS Report, the Respondents shall  
15 prepare and submit to the Department a draft RAP. The draft RAP  
16 shall be consistent with the NCP and Health and Safety Code  
17 Section 25356.1, et seq. The draft RAP public review process may  
18 be combined with that of any other documents required by CEQA.  
19 The draft RAP shall be based on and summarize the approved RI/FS  
20 Reports, and shall clearly set forth:  
21

- 22 (a) Health and safety risks posed by the conditions at the  
23 Site.  
24  
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1 (b) The effect of contamination or pollution levels upon  
2 present, future, and probable beneficial uses of  
3 contaminated, polluted, or threatened resources.

4 (c) The effect of alternative remedial action measures on  
5 the reasonable availability of groundwater resources for  
6 present, future, and probable beneficial uses.

7 (d) Site specific characteristics, including the potential  
8 for offsite migration of hazardous substances, the surface  
9 or subsurface soil, and the hydrogeologic conditions, as  
10 well as preexisting background contamination levels.

11 (e) Cost-effectiveness of alternative remedial action  
12 measures. Land disposal shall not be deemed the most  
13 cost-effective measure merely on the basis of lower  
14 short-term cost.

15 (f) The potential environmental impacts of alternative  
16 remedial action measures, including, but not limited to,  
17 land disposal of the untreated hazardous substances as  
18 opposed to treatment of the hazardous substances to remove  
19 or reduce its volume, toxicity, or mobility prior to  
20 disposal.

21 (g) A statement of reasons setting forth the basis for the  
22 removal and remedial actions selected. The statement shall  
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1 include an evaluation of each proposed alternative submitted  
2 and evaluate the consistency of the removal and remedial  
3 actions proposed by the plan with the federal regulations  
4 and factors specified in subdivision (c) of Health and  
5 Safety Code (H&SC) Section 25356.1. The statement shall  
6 also include a proposed Nonbinding Preliminary Allocation of  
7 Responsibility (NBAR) for all identified RPs.  
8

9 (h) A schedule for implementation of all proposed remedial  
10 actions.  
11

12 In conjunction with the Department, the Respondents shall  
13 implement the public review process specified in Health and  
14 Safety Code Section 25356.1 (d) (1), et seq. Within 10 days of  
15 closure of the public comment period, the Respondents shall  
16 submit a written Responsiveness Summary of all written and oral  
17 comments presented and received during the public comment period.  
18

19  
20 Following the Department's review and finalization of the  
21 Responsiveness Summary, the Department will specify any changes  
22 to be made in the RAP. The Respondents shall modify the document  
23 in accordance with the Department's specifications and submit a  
24 final RAP within 15 days of receipt of the Department's comments.  
25  
26  
27

1           5.11 Remedial Design.    Within 45 days after Department  
2 approval of the final RAP, Respondents shall submit to the  
3 Department for review and approval a Remedial Design describing  
4 in detail the technical and operational plans for implementation  
5 of the final RAP which includes the following elements, as  
6 applicable:  
7

8           (a) Design criteria, process unit and pipe sizing  
9 calculations, process diagrams, and final plans and  
10 specifications for facilities to be constructed.

11           (b) Description of equipment used to excavate, handle, and  
12 transport contaminated material.  
13

14           (c) A field sampling and laboratory analysis plan  
15 addressing sampling during implementation and to confirm  
16 achievement of the performance objectives of the RAP.  
17

18           (d) A transportation plan identifying routes of travel and  
19 final destination of wastes generated and disposed.  
20

21           (e) For groundwater extraction systems: aquifer test  
22 results, capture zone calculations, specifications for  
23 extraction and performance monitoring wells, and a plan to  
24 demonstrate that capture is achieved.

25           (f) An updated health and safety plan addressing the  
26 implementation activities.  
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- (g) Identification of any necessary permits and agreements.
- (h) An operation and maintenance plan including any required monitoring.
- (i) A detailed schedule for implementation of the remedial action consistent with the schedule contained in the approved RAP including procurement, mobilization, construction phasing, sampling, facility startup, and testing.

5.12 Deed Restrictions. If the approved remedy in the Final RAP includes deed restrictions, Respondents shall sign and record deed restrictions approved by the Department within 90 days of the Department's approval of the final RAP.

5.13 Implementation of Final Remedial Action Plan. Upon Department approval of the Remedial Design (RD), Respondents shall implement the final RAP as approved. Within 30 days of completion of field activities, Respondent(s) shall submit an Implementation Report documenting the implementation of the Final RAP and RD.

5.14 Operation and Maintenance (O&M). Respondents shall comply with all operation and maintenance requirements in accordance with the final RAP and approved RD. O&M Agreements;

1 which include financial assurance, must be entered into with the  
2 Department prior to certification of the Site.

3  
4 5.15 Five-Year Review. Pursuant to Section 121(c) of  
5 CERCLA (42 U.S.C. 9601, et seq.), as amended by the Superfund  
6 Amendments and Reauthorization Act (SARA) of 1986, Respondents  
7 shall submit a remedial action review workplan within 30 days  
8 before the end of the five-year period following approval of the  
9 final RAP. Within 60 days of the Department's approval of the  
10 workplan, Respondents shall implement the workplan and shall  
11 submit a comprehensive report of the results of the remedial  
12 action review. The report shall describe the results of all  
13 sample analyses, tests and other data generated or received by  
14 the Respondents.  
15

16  
17 5.16 Changes During Implementation of the Final RAP.  
18 During the implementation of the final RAP and RD, the Department  
19 may specify such additions, modifications, and revisions to the  
20 RD as deemed necessary to protect public health and safety or the  
21 environment or to implement the RAP.  
22

23 5.17 Stop Work Order. In the event that the Department  
24 determines that any activity (whether or not pursued in  
25 compliance with this Order) may pose an imminent or substantial  
26 endangerment to the health or safety of people on the Site or in  
27



1 the surrounding area or to the environment, the Department may  
2 order Respondents to stop further implementation of this Order  
3 for such period of time needed to abate the endangerment. In the  
4 event that the Department determines that any site activities  
5 (whether or not pursued in compliance with this Order) are  
6 proceeding without Department authorization, the Department may  
7 order Respondents to stop further implementation of this Order or  
8 activity for such period of time needed to obtain Department  
9 authorization, if such authorization is appropriate. Any  
10 deadline in this Order directly affected by a Stop Work Order,  
11 under this section, shall be extended for the term of the Stop  
12 Work Order.  
13  
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15

16 5.18 Emergency Response Action/Notification. In the event  
17 of any action or occurrence (such as a fire, earthquake,  
18 explosion, or human exposure to hazardous substances caused by  
19 the release or threatened release of a hazardous substance)  
20 during the course of this Order, Respondents shall immediately  
21 take all appropriate action to prevent, abate, or minimize such  
22 emergency, release, or immediate threat of release and shall  
23 immediately notify the Project Manager. Respondents shall take  
24 such action in consultation with the Project Manager and in  
25 accordance with all applicable provisions of this Order. Within  
26  
27

1 seven days of the onset of such an event, Respondents shall  
2 furnish a report to the Department, signed by the Respondents'  
3 Project Coordinator, setting forth the events which occurred and  
4 the measures taken in the response thereto. In the event that  
5 Respondents fail to take appropriate response and the Department  
6 takes the action instead, Respondents shall be liable to the  
7 Department for all costs of the response action. Nothing in this  
8 section shall be deemed to limit any other notification  
9 requirement to which the Respondents may be subject.  
10  
11

12 5.19 Discontinuation of Remedial Technology. Any remedial  
13 technology employed in implementation of the final RAP shall be  
14 left in place and operated by Respondents until and except to the  
15 extent that the Department authorizes Respondents in writing to  
16 discontinue, move or modify some or all of the remedial  
17 technology because Respondents has met the criteria specified in  
18 the final RAP for its discontinuance, or because the  
19 modifications would better achieve the goals of the final RAP.  
20  
21  
22

## 23 VI. GENERAL PROVISIONS

24  
25 6.1 Project Coordinator. Within 10 days from the date the  
26 Order is signed by the Department, Respondents shall submit to  
27

1 the Department in writing the name, address, and telephone number  
2 of a Project Coordinator whose responsibilities will be to  
3 receive all notices, comments, approvals, and other  
4 communications from the Department. Respondents shall promptly  
5 notify the Department of any change in the identity of the  
6 Project Coordinator.  
7

8         6.2 Project Engineer/Geologist. The work performed  
9 pursuant to this Order shall be under the direction and  
10 supervision of a qualified professional engineer or a geologist  
11 registered in the State of California, with expertise in  
12 hazardous substance site cleanup. Within 15 calendar days from  
13 the date the Order is signed by the Department, Respondents must  
14 submit: a) The name and address of the project engineer or  
15 geologist chosen by the Respondent(s); and b) in order to  
16 demonstrate expertise in hazardous substance cleanup, the résumé  
17 of the engineer or geologist, and the statement of qualifications  
18 of the consulting firm responsible for the work. Respondents  
19 shall promptly notify the Department of any change in the  
20 identity of the Project Engineer/Geologist.  
21  
22  
23

24         6.3 Monthly Summary Reports. Within 30 days from the date  
25 the Order is signed by the Department, and on a monthly basis  
26 thereafter, Respondents shall submit a Monthly Summary Report of  
27

1 its activities under the provisions of this Order. The report  
2 shall be received by the Department by the 15th day of each month  
3 and shall describe:  
4

5 (a) Specific actions taken by or on behalf of Respondents  
6 during the previous calendar month;

7 (b) Actions expected to be undertaken during the current  
8 calendar month;

9 (c) All planned activities for the next month;

10 (d) Any requirements under this Order that were not  
11 completed;

12 (e) Any problems or anticipated problems in complying with  
13 this Order; and  
14

15 (f) All results of sample analyses, tests, and other data  
16 generated under the Order during the previous calendar  
17 month, and any significant findings from these data.  
18

19 6.4 Quality Control/Quality Assurance (QC/QA). All  
20 sampling and analysis conducted by Respondent(s) under this Order  
21 shall be performed in accordance with QC/QA procedures submitted  
22 by Respondents and approved by the Department pursuant to this  
23 Order.  
24

25 6.5 Submittals. All submittals and notifications from  
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Respondents required by this Order shall be sent simultaneously  
to:

Barbara J. Cook, P.E.  
Regional Branch Chief  
Attention: Lynn Nakashima  
Site Mitigation Branch  
Department of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710  
[Two Copies]

Loretta Barsamian  
Executive Officer  
Regional Water Quality Control Board  
Attention: Mr. Sum Arigala  
2101 Webster Street, Suite 500  
Oakland, California 94612

1 Public Health Director  
2 Alameda County Health Agency  
3 Department of Environmental Health  
4 1131 Harbor Bay Parkway  
5 Alameda, California 94502  
6  
7  
8

9 6.6 Communications. All approvals and decisions of the  
10 Department made regarding submittals and notifications will be  
11 communicated to Respondents in writing by the Site Mitigation  
12 Branch Chief, Department of Toxic Substances Control, or his/her  
13 designee. No informal advice, guidance, suggestions or comments  
14 by the Department regarding reports, plans, specifications,  
15 schedules or any other writings by Respondents shall be construed  
16 to relieve Respondents of the obligation to obtain such formal  
17 approvals as may be required.  
18

19 6.7 Department Review and Approval. (a) If the Department  
20 determines that any report, plan, schedule or other document  
21 submitted for approval pursuant to this Order fails to comply  
22 with this Order or fails to protect public health or safety or  
23 the environment, the Department may:  
24

- 25 (1) Modify the document as deemed necessary and approve  
26 the document as modified; or  
27

1 (2) Return comments to Respondents with recommended  
2 changes and a date by which Respondents must submit to the  
3 Department a revised document incorporating the recommended  
4 changes.  
5

6 (b) Any modifications, comments or other directive issued  
7 pursuant to (a) above, are incorporated into this Order.  
8 Any noncompliance with these modifications or directives  
9 shall be deemed a failure or refusal to comply with this  
10 Order.  
11

12 6.8 Compliance with Applicable Laws. Respondents shall  
13 carry out this Order in compliance with all applicable state,  
14 local, and federal requirements including, but not limited to,  
15 requirements to obtain permits and to assure worker safety.  
16

17 6.9 Respondent Liabilities. Nothing in this Order shall  
18 constitute or be construed as a satisfaction or release from  
19 liability for any conditions or claims arising as a result of  
20 past, current or future operations of Respondents. Nothing in  
21 this Order is intended or shall be construed to limit the rights  
22 of any of the parties with respect to claims arising out of or  
23 relating to the deposit or disposal at any other location of  
24 substances removed from the Site. Nothing in this Order is  
25 intended or shall be construed to limit or preclude the  
26  
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1 Department from taking any action authorized by law to protect  
2 public health or safety or the environment and recovering the  
3 cost thereof. Notwithstanding compliance with the terms of this  
4 Order, Respondents may be required to take further actions as are  
5 necessary to protect public health and the environment.  
6

7       6.10 Site Access. Access to the Site and laboratories used  
8 for analyses of samples under this Order shall be provided at all  
9 reasonable times to employees, contractors, and consultants of  
10 the Department. Nothing in this section is intended or shall be  
11 construed to limit in any way the right of entry or inspection  
12 that the Department or any other agency may otherwise have by  
13 operation of any law. The Department and its authorized  
14 representatives shall have the authority to enter and move freely  
15 about all property at the Site at all reasonable times for  
16 purposes including, but not limited to: inspecting records,  
17 operating logs, sampling and analytic data, and contracts  
18 relating to this Site; reviewing the progress of Respondents in  
19 carrying out the terms of this Order; conducting such tests as  
20 the Department may deem necessary; and verifying the data  
21 submitted to the Department by Respondents.  
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25       6.11 Sampling, Data and Document Availability. Respondents  
26 shall permit the Department and its authorized representatives to  
27



1 inspect and copy all sampling, testing, monitoring or other data  
2 generated by Respondents or on Respondents behalf in any way  
3 pertaining to work undertaken pursuant to this Order. Respondents  
4 shall submit all such data upon the request of the Department.  
5 Copies shall be provided within 7 days of receipt of the  
6 Department's written request. Respondents shall inform the  
7 Department at least 7 days in advance of all field sampling under  
8 this Order, and shall allow the Department and its authorized  
9 representatives to take duplicates of any samples collected by  
10 Respondents pursuant to this Order. Respondents shall maintain a  
11 central depository of the data, reports, and other documents  
12 prepared pursuant to this Order.  
13  
14

15  
16 6.12 Record Retention. All such data, reports and other  
17 documents shall be preserved by Respondents for a minimum of ten  
18 years after the conclusion of all activities under this Order.  
19 If the Department requests that some or all of these documents be  
20 preserved for a longer period of time, Respondents shall either  
21 comply with that request or deliver the documents to the  
22 Department, or permit the Department to copy the documents prior  
23 to destruction. Respondents shall notify the Department in  
24 writing, at least six months prior to destroying any documents  
25 prepared pursuant to this Order.  
26  
27

1           6.13 Government Liabilities. The State of California shall  
2 not be liable for any injuries or damages to persons or property  
3 resulting from acts or omissions by Respondents, or related  
4 parties specified in Section 6.26, Parties Bound, in carrying out  
5 activities pursuant to this Order, nor shall the State of  
6 California be held as party to any contract entered into by  
7 Respondents or its agents in carrying out activities pursuant to  
8 this Order.  
9

11           6.14 Additional Actions. By issuance of this Order, the  
12 Department does not waive the right to take any further actions  
13 authorized by law.  
14

15           6.15 Extension Requests. If Respondent(s) is unable to  
16 perform any activity or submit any document within the time  
17 required under this Order, Respondents may, prior to expiration  
18 of the time, request an extension of the time in writing. The  
19 extension request shall include a justification for the delay.  
20 All such requests shall be in advance of the date on which the  
21 activity or document is due.  
22

23           6.16 Extension Approvals. If the Department determines  
24 that good cause exists for an extension, it will grant the  
25 request and specify a new schedule in writing. Respondents shall  
26 comply with the new schedule incorporated in this Order.  
27

1           6.17 Cost Recovery. The Respondents are liable for all of  
2 the Department's costs incurred in responding to the  
3 contamination at the Site (including costs of overseeing  
4 response work performed by the Respondents) and costs to be  
5 incurred in the future. Cost recovery may be pursued by the  
6 Department under CERCLA, Health and Safety Code Section 25360,  
7 or any other applicable state or federal statute or common law.

8  
9           6.18 Future Costs. With respect to the Department's  
10 review of response activities performed by the Respondents, the  
11 Respondents shall pay all fees pursuant to the Health and Safety  
12 Code Section 25343 when such fees are due. The Department  
13 reserves any and all rights, pursuant to Health and Safety Code  
14 Section 25360, CERCLA and all other applicable state and federal  
15 laws, to recover all costs incurred for the response activities  
16 at the Site (including costs of overseeing response work  
17 performed by Respondent) which are in excess of the fees paid.  
18 under Health and Safety Code Section 25343.

19  
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21           6.19 Severability. The requirements of this Order are  
22 severable, and Respondents shall comply with each and every  
23 provision hereof, notwithstanding the effectiveness of any other  
24 provision.  
25  
26  
27

1           6.20 Incorporation of Plans, Schedules and Reports. All  
2 plans, schedules, reports, specifications and other documents  
3 that are submitted by Respondents pursuant to this Order are  
4 incorporated in this Order upon the Department's approval or as  
5 modified pursuant to Section 6.7, Department Review and  
6 Approval, and shall be implemented by Respondents. Any  
7 noncompliance with the documents incorporated in this Order,  
8 shall be deemed a failure or refusal to comply with this Order.  
9

10           6.21 Modifications. The Department reserves the right to  
11 unilaterally modify this Order. Any modification to this Order  
12 shall be effective upon the date the modification is signed by  
13 the Department and shall be deemed incorporated in this Order.  
14

15           6.22 Time Periods. Unless otherwise specified, time  
16 periods begin from the effective date of this Order and "days"  
17 means calendar days. The effective date of this Order is the  
18 date the Order is signed by the Department.  
19

20           6.23 Termination and Satisfaction. The Respondents  
21 obligations under this Order, except for the Respondents  
22 obligation to pay all past and future costs incurred by the  
23 Department in responding to the contamination at the Site  
24 pursuant to Sections 5.15, Five-Year Review; 6.18, Cost  
25 Recovery; and 6.19, Future Costs, shall terminate and be deemed  
26

27

1 satisfied upon Respondents' receipt of written notice from the  
 2 Department that the Respondents have complied with all the terms  
 3 of this Order.

4 6.24 Calendar of Tasks and Schedules. This Section is  
 5 merely for the convenience of listing in one location the  
 6 submittals required by this Order. If there is a conflict  
 7 between the date for a scheduled submittal within this section  
 8 and the date within the section describing the specific  
 9 requirement, the latter shall govern.  
 10  
 11

12  
 13 Calendar of Tasks and Schedules

<u>TASK</u>	<u>SCHEDULE</u>
14	
15 1. Identify Project	Within 10 days from the date
16 Coordinator;	the Order is signed by the
17 Section 6.1;	Department.
18 2. Identify Project	Within 15 days from the date
19 Engineer/Geologist;	the Order is signed by the
Section 6.2;	Department.
20 3. Submit Monthly Summary	Within 30 days from the date
21 Reprints;	the Order is signed by the
22 Section 6.3;	Department.
23 4. Attend Site Remediation	Within 20 days from the date
24 Strategy Meeting;	the Order is signed by the
Section 5.1.3;	Department.
25 5. Submit RI/FS Workplan;	Within 60 days from the date
26 Section 5.2.2;	the Order is signed by the
27	Department.

1	<u>TASK</u>	<u>SCHEDULE</u>
2	6. Submit interim screening and evaluation document; Section 5.3;	As requested by the Department.
3		
4	7. Submit Treatability Studies; Section 5.4;	As required during Site characterization.
5		
6	8. Submit RI Report; Section 5.5;	Per approved RI/FS Workplan schedule.
7		
8	9. Submit Baseline Risk Assessment; Section 5.6;	Within 30 days from submittal of RI Report.
9		
10	10. Submit FS Report; Section 5.7;	Within 45 days from submittal of RI Report.
11		
12	11. Submit Public Participation Plan; Section 5.8;	Within 30 days from the date the Order is signed by the Department.
13		
14	Submit and distribute Fact Sheets;	For projected or complete key milestones or when requested by the Department.
15		
16	12. Submit Initial Study and Checklist; Section 5.9;	Within 30 days after approval of FS Report.
17		
18	13. Submit Draft RAP; Section 5.10;	Within 30 days after approval of FS Report.
19		
20	Submit Responsiveness Summary;	Within 10 days of closure of public comment period.
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22	Submit Final RAP;	Within 15 days of receipt of Department's comments.
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TASK

SCHEDULE

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|-----|---|---|
| 14. | Submit Remedial Design;<br>Section 5.11;  | Within 45 days after<br>Department's approval of the<br>Final RAP.  |
| 15. | Deed Restrictions;<br>Section 5.12;   | Within 90 days of approval of<br>Final RAP.   |
| 16. | Submit Implementation<br>Report;<br>Section 5.13;   | Within 30 days of completion<br>of field activities.  |
| 17. | Submit Remedial action<br>Review Workplan;<br>Section 5.15;   | Within 30 days before end of<br>five-year period.   |
| 18. | Submit Emergency Response<br>Action Report;<br>Section 5.18;  | Within 7 days of an emergency<br>response action.   |
| 19. | Provide copies of<br>sampling, data, and<br>documentation;<br>Section 6.11;   | Within 7 days of receipt of<br>Department's request.  |
|     | Provide prior notice<br>before conducting field<br>sampling;  | Inform Department 7 days <u>in<br/>advance</u> of sampling.   |
| 20. | Maintain central<br>depository of data,<br>reports, documentation;<br>and   | Maintain central depository<br>for a <u>minimum</u> of ten years<br>after conclusion of all<br>activities conducted pursuant<br>to the Order. |
|     | Provide prior written<br>notice to the Department<br>before destroying any<br>documentation prepared<br>pursuant to the Order;<br>Section 6.13; | At least six months prior to<br>destroying any documents.   |

1           6.25 Parties Bound. This Order applies to and is binding  
2 upon Respondents, and its officers, directors, agents,  
3 employees, contractors, consultants, receivers, trustees,  
4 successors and assignees, including but not limited to,  
5 individuals, partners, and subsidiary and parent corporations,  
6 and upon any successor agency of the State of California that  
7 may have responsibility for and jurisdiction over the subject  
8 matter of this Order.  
9

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12                               VII. PENALTIES AND PUNITIVE DAMAGES  
13   FOR NONCOMPLIANCE  
14

15           7.1 You may be liable for penalties of up to \$25,000 for  
16 each day you refuse to comply with this Order and for punitive  
17 damages up to three times the amount of any costs incurred by  
18 the Department as a result of your failure to comply, pursuant  
19 to Health and Safety Code sections 25359, 25359.2, 25359.4, and  
20 25367(c). Health and Safety Code Section 25359.3 provides that  
21 a responsible party who complies with this order, or with  
22 another order or agreement concerning the same response actions  
23 required by this order, may seek treble damages from  
24 Respondent(s) who fail or refuse to comply with this order  
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without sufficient cause.

DATED: April 26, 1996 Barbara J Cook

Barbara J. Cook, P.E.  
Regional Branch Chief  
Department of Toxic  
Substances Control

cc: Site Mitigation Program  
Headquarters, Planning & Policy  
Office of Legal Counsel

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EXHIBIT 1