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

In the Matter of:	)	Docket No. I&SE 04\05-008
	)	
Chrome Crankshaft Company	)	AMENDED
6845 East Florence Place	)	IMMINENT AND SUBSTANTIAL
Bell Gardens, California 90201	)	ENDANGERMENT
	)	DETERMINATION AND ORDER
Respondents:	)	AND REMEDIAL ACTION ORDER
	)	
Amsted Industries Incorporated	)	Health and Safety Code
205 North Michigan Ave., 44th Floor	)	Sections 25355.5(a)(1)(B),
Chicago, Illinois 60601,	)	25358.3(a), 58009 and 58010
	)	
Varlen Corporation	)	
55 Shuman Boulevard	)	
P.O. Box 3089	)	
Naperville, Illinois 60566-70889,	)	
	)	
Locomotive Air Services, Inc.	)	
P.O. Box 3030	)	
Bell Gardens, California 90202,	)	
	)	
Chrome Crankshaft Company	)	
6845 East Florence Place	)	
Bell Gardens, California 90201	)	
_____	)	

I. INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) issues this Amended Imminent and Substantial Endangerment Determination and Order and Remedial Action Order (Order) to Amsted Industries Incorporated, a Delaware Corporation doing business in California, Varlen Corporation, a Delaware Corporation doing business in California, Locomotive Air Services, Incorporated, a Delaware Corporation doing business in California, and Chrome Crankshaft Company (Respondents).

1.2 Property/Site. This Order applies to the property located at 6845 East Florence Place, Bell Gardens, Los Angeles County, California 90201. The property consists of approximately 2 acres and is identified by Assessor's Parcel numbers 6358-

019-27 and 6358-019-28. A map showing the Property is attached as Exhibit A. This Order applies to the property and the aerial extent of contamination that resulted from activities on the property (hereinafter, the "Site").

1.3 Jurisdiction. This Order is issued by DTSC to Respondent pursuant to its authority under Health and Safety Code sections 25358.3(a), 25355.5(a)(1)(B), 58009 and 58010.

Health and Safety Code section 25358.3(a) authorizes DTSC to take various actions, including issuance of an Imminent or Substantial Endangerment Determination and Order, when DTSC 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.

Health and Safety Code section 25355.5(a)(1)(B) authorizes DTSC to issue an order establishing a schedule for removal or remedy of a release of a hazardous substance at a site, or for correcting conditions that threaten the release of a hazardous substance. The order may include, but is not limited to, specification of the dates by which the nature and extent of a release shall be determined and the site adequately characterized, a remedial action plan prepared and submitted to DTSC for approval, and a removal or remedial action completed.

Health and Safety Code section 58009 authorizes DTSC to commence and maintain all proper and necessary actions and proceedings to enforce its rules and regulations; to enjoin and abate nuisances related to matters within its jurisdiction which are dangerous to health; to compel the performance of any act specifically enjoined upon any person, officer, or board, by any law of this state relating to matters within its jurisdiction; and/or on matters within its jurisdiction, to protect and preserve the public health.

Health and Safety Code section 58010 authorizes DTSC to abate public nuisances related to matters within its jurisdiction.

II. FINDINGS OF FACT

DTSC hereby finds:

2.1 Liability of Respondents. Respondents are responsible parties or liable persons as defined in Health and Safety Code section 25323.5. From at least 1963 forward, Chrome Crankshaft Company conducted chrome plating operations at the Site. Chrome Crankshaft Company released contaminants from the facility to the atmosphere, soil, and groundwater, as described in Section 2.4 of this Order. DTSC confirmed discontinuation of plating operations during a site visit on February 11, 1999. Chrome Crankshaft Company continued chrome plating operations at the Site until January 1999. Thereafter, Chrome Crankshaft Company changed its name to Locomotive Air Services Incorporated and refurbished air conditioning units for railroad

trains. On March 1, 2004 Locomotive Air Services Incorporated, also known as Chrome Crankshaft Company, filed for Chapter 7 Bankruptcy. From at least 1969 forward, Varlen Corporation was the parent company of Chrome Crankshaft Company, later named Locomotive Air Services Incorporated. On August 16, 1999 Amsted Industries Incorporated (Amsted), a Delaware Corporation, acquired Varlen through a stock tender offer. Amsted is the successor in interest to Varlen Corporation.

2.1.1. Varlen operated the Chrome Crankshaft Company's Bell Gardens chrome plating facility. Varlen managed, directed and conducted operations of Chrome Crankshaft Company specifically related to pollution and hazardous materials management, including operations related to the hazardous substances released at the Site, and Chrome Crankshaft Company's compliance with environmental regulations for the Chrome Crankshaft Company's Bell Gardens chrome plating facility.

2.1.1.1 As early as 1984, Varlen executives required executives at Chrome Crankshaft Corporation to comply with Varlen policies and requested information from Chrome Crankshaft Company executives regarding environmental compliance matters. Likewise, Chrome Crankshaft executives requested guidance from Varlan executives regarding environmental compliance matters

2.1.1.2 In 1986, Chrome Crankshaft Company executives requested guidance from Varlen executives as to how to deal with stringent California environmental regulations on managing hazardous wastes.

2.1.1.3 In May, 1990, Varlen documented its "Environmental Policy" with its subsidiary companies, including Chrome Crankshaft Company. The policy required that the Chrome Crankshaft Company president communicate with Varlen with regard to any environmental agency inquiry, any investigation or formal communications with the facility by regulatory personnel, the occurrence of any spill, discharge or release into the environment necessitating response or disclosure to an agency, governmental inspection reports, compliance notifications, notices of violation and required submissions to governmental agencies. The policy also required Chrome Crankshaft Company's president to "clear" the following matters, related to environmental compliance, with Varlen's Executive Vice President and Chief Operating Officer: selection of local legal counsel; formulation of responses, disclosures, or notifications to regulatory agencies; and proposed changes in process, equipment or procedures which relate to environmental compliance, construction and permit applications. The policy also required that Varlen's environmental consultant be involved with coordinating any such responses or actions, and that any such filings/responses be reviewed by Varlen's consultant prior to submission.

2.1.1.4 Chrome Crankshaft Company used Varlen's consultants, McLaren/Hart, and specifically, Dr. Kim Anderson, Ph.D., as consultants regarding the releases of contaminants at the Bell Gardens chrome plating facility.

2.1.2. The facts outlined in paragraph 2.1.1, above, among others, were considered by the court in the case Hidalgo v. Chrome Crankshaft Co., 2002 WL 1797271 (Case No. B146957, Cal. App. 2 Dist. 2002), when it decided Varlen had engaged in "a host of intentional acts, aimed at California, which may have caused harm here" and ruled that Varlen was subject to the personal jurisdiction of the California courts in a case involving injuries stemming from contamination at the Bell Gardens chrome plating facility.

2.1.3. As discussed above, Varlen Corporation, as the parent company, was in actuality the operator of Chrome Crankshaft's Bell Gardens chrome plating facility, with respect to environmental compliance and hazardous materials management. Since Amsted Industries acquired Varlen Corporation through a stock purchase agreement in 1999, it is successor in interest for the site.

2.2 Physical Description of Site. The Site occupies approximately 2 acres of flat land. The Site is bordered by an empty lot to the north; the J&S Chrome Plating site to the east; residences to the south (across Florence Place); and the Suva Elementary and Intermediate School, herein referred to as Suva Schools, to the west, which is separated from the Site by a chain link fence. In November 2003, Chrome Crankshaft Company's consultant began an interim removal action to remove the plating line and associated equipment, above ground portions of the building, an underground storage tank, aboveground storage tanks, and a clarifier and associated features. The building has been demolished and the process equipment, storage tanks, and debris have been removed from the Site. Currently, the Site is vacant. A plastic sheet covers the soil, asphalt driveway and parking areas, and the building footing. The Site is covered with at least two inches of asphalt over two inches of gravel base material. The asphalt is starting to deteriorate due to vegetation growing through it. The Site is completely fenced and is posted with warning signs.

2.3 Site History. Chrome Crankshaft Company conducted plating operations at the Site until January 1999. The chrome plating process at the Site used chromic acid to chrome plate the locomotive crankshafts. Chromic acid is made up of hexavalent chromium which is a known inhalation carcinogen, and in addition, other heavy metals have been found at the Site which includes cadmium, nickel, lead, and mercury. The Site is now vacant as an interim removal action has been completed to remove all of the tanks, process equipment, and building. The Site is now paved with at least two inches of asphalt. The interim removal action was completed on January 29, 2004. However, due to vegetative growth through the asphalt, the asphalt is deteriorating and coming apart.

2.4 Hazardous Substances Found at the Site. Elevated levels of arsenic, total chromium (Cr), hexavalent chromium (Cr VI), lead, cadmium, nickel, mercury, perchloroethylene (PCE), trichloroethylene (TCE), and thallium exist at the Site. All of the aforementioned substances are hazardous substances and, with the exception of the PCE and TCE, have been shown to exceed the US EPA's Preliminary Remediation

Goals (PRGs) for residential soil. The Cr, PCE, and TCE exceed the US EPA and California Maximum Contaminant Limits (MCLs) for drinking water.

2.4.1 In 1986 and 1987, the South Coast Air Quality Management District (SCAQMD) conducted the Multiple Air Toxics Exposure Study (MATES). MATES included Bell Gardens City Park, which is less than 3,000 feet west of Suva School. Cr VI was detected by the Bell Gardens City Park air monitoring stations. The Chrome Crankshaft Company and J&S Chrome Plating were suspected sources of the contaminants.

As a result of elevated concentrations of Cr VI in the Bell Gardens City Park air samples, and the fact that Suva School lies between the suspected sources and the sample locations, SCAQMD targeted Suva School for air sampling in 1988. The objectives of the Suva School air sampling were to characterize local micrometeorological conditions, and to quantify ambient levels of Cr VI and total chromium (Cr) on and off the Suva School schoolyards. The report generated as a result of this sampling is titled Preliminary Report of Micrometeorological and Ambient Air Quality Monitoring Conducted at the Suva School in Bell Gardens, dated April 15, 1988.

Ambient air monitoring for Cr VI and Cr was conducted at a total of eight sites on and near Suva School using a Greenburg-Smith Impinger Train and a High Volume Air Sampler. The results of the investigation indicated that ambient Cr VI was present at Suva School, and that the adjacent chrome plating facilities of Chrome Crankshaft Company and J&S Chrome Plating were possible sources. The highest concentration of 430 nanograms per cubic meter (ng/m3) was detected at a sampling station near Suva School's eastern sandbox bordering the Site. As a result of these findings, the SCAQMD requested Chrome Crankshaft Company to take action to reduce its Cr VI emissions.

2.4.2 In January 1990, the Los Angeles County Department of Public Works (LACDPW) implemented an underground storage tank (UST) certification process. As part of the process, Locomotive Air Services Incorporated (Chrome Crankshaft Company) collected surface and subsurface soil samples in the vicinity of a plating process tank. Cr VI was detected in the soil samples. The highest concentration of Cr VI encountered in the vicinity of the plating process tank was 9,765 mg/kg at 25 feet below ground surface (bgs). Based on additional investigative data, this Cr VI was attributed to a small transfer sump located near the plating process tank. The sump and surrounding soil were removed and the area was paved.

2.4.3 In June 1990, additional subsurface soil samples, collected near the former sump, were found to contain total chromium (Cr) and Cr VI. In addition to collecting soil samples, Conservtech, consultant for Chrome Crankshaft Company, installed a groundwater monitoring well into the Gaspur aquifer in an area just inside the southern property boundary of the Site. The depth to the first groundwater was determined to be approximately 75 feet bgs. Cr VI was detected in the groundwater sample at a

maximum concentration of 12 milligrams per liter (mg/l). Additionally, 18 micrograms per liter (µg/l) trichloroethylene (TCE) and 6.7 µg/l perchloroethylene (PCE) were also detected in the groundwater sample.

2.4.4 In July 1991, three additional groundwater monitoring wells were installed in the Gaspur aquifer at the Site. LACDPW collected groundwater samples from these wells and analyzed the samples for Cr VI, total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs). The results indicated the presence of Cr VI, TPH, and VOCs.

2.4.5 In March 1993, four additional exploratory subsurface soil borings were drilled and sampled at the Site. The samples were analyzed for Cr VI, Cr, cadmium, nickel, and VOCs. The results showed maximum concentrations of 3,600 mg/kg Cr VI, 5,400 mg/kg Cr, and 17 mg/kg nickel.

2.4.6 In August 1993, groundwater samples were collected from the four onsite groundwater monitoring wells and analyzed for VOCs, nickel, cadmium, total chromium (Cr), and Cr VI. The results showed maximum concentrations of 6 µg/l PCE, 11 µg/l TCE, 300 µg/l nickel, 12,000 µg/l total chromium, and 11,000 µg/l Cr VI in the groundwater.

2.4.7 In December 1996, a fifth groundwater monitoring well was installed in the area of the former sump at the Site. The soil borings were logged, sampled, and analyzed for Cr VI, Cr, nickel, and cadmium. These vadose zone soil samples showed maximum concentrations of 52 mg/kg Cr VI, 1,900 mg/kg Cr, and 21 mg/kg nickel. After installation and development of the groundwater monitoring well, samples were collected from all five wells onsite and analyzed for Cr VI, Cr, cadmium, nickel, and VOCs. The results showed maximum concentrations of 2,000 µg/l Cr VI, 32,000 µg/l Cr, 40 µg/l nickel, 7.3 µg/l PCE, 2.8 µg/l TCE, and 3.2 µg/l total xylenes.

2.4.8 In September 1998, DTSC conducted environmental surface and shallow subsurface soil and dust sampling at Suva School. The investigation focused on the possibility of contamination at Suva School from the adjacent chrome plating facilities (Chrome Crankshaft Company and J&S Chrome Plating).

As a result of the investigation, elevated levels of lead and Cr VI were detected on the Suva School property. The maximum concentrations detected were 460 mg/kg lead in school vacuum cleaner bags and 7.8 mg/kg Cr VI in soils in the area of the eastern sandbox bordering the Site. Impacted soils at Suva School were excavated to below health risk-based levels and soil was removed from the Site in December 1998.

2.4.9 In October 1998, Chrome Crankshaft Company reported to DTSC that a release of hazardous substances was encountered during a facility soils investigation. The letter report stated that hazardous substances including, but not limited to, Cr, lead, cadmium, and mercury, were detected on Site in surface soils at concentrations up to

5,300 mg/kg lead, 294 mg/kg cadmium, 1,510 mg/kg Cr VI, 128 mg/kg nickel, and 5.42 mg/kg mercury.

2.4.10 Also in October 1998, surface soil samples were collected at the Site by the California Regional Water Quality Control Board, Los Angeles Region (RWQCB-LA) during an investigation of the facility. Analytical results from these samples indicated concentrations of lead up to 3,100 mg/kg, cadmium as high as 165 mg/kg, Cr up to 3,450 mg/kg, and Cr VI as high as 478 mg/kg.

2.4.11 In June 1999, Chrome Crankshaft Company's consultant, McLaren-Hart, took solid waste samples from the floor of the building, roof of the building, plating tanks, and a rain water storage tank during plating line decommissioning activities, and analyzed them for Cr, lead, copper, nickel, cadmium, mercury, and Cr VI.. The analytical results for the floor residue was 19,600 mg/kg Cr, 35,400 mg/kg lead, 980 mg/kg copper, 60.3 mg/kg nickel, and 10,100 mg/kg Cr VI. The rooftop residue showed 69,000 mg/kg Cr, 2,700 mg/kg lead, 690 mg/kg copper, 116 mg/kg nickel, 4.11 mg/kg cadmium, and 27,000 mg/kg Cr VI. The rainwater storage tank residue results showed 2,300 mg/kg Cr, 1,640 mg/kg lead, 1,460 mg/kg copper, 35.3 mg/kg nickel, and 18.8 mg/kg cadmium. The rainwater storage tank residue was not analyzed for Cr VI.

2.4.12 In September 1999, McLaren-Hart collected surface and subsurface soil samples from eight soil borings in the area of the plating line after it was decommissioned, and DTSC received splits of those samples. The samples and splits were analyzed for heavy metals. The results from Chrome Crankshaft Company's samples for five of the borings showed maximum levels of 15.1 mg/kg lead, 1.77 mg/kg cadmium, 2,410 mg/kg Cr, 33.5 mg/kg copper, 19.8 mg/kg nickel, and 1,970 mg/kg Cr VI. There were no results submitted for soil borings no. CCB#6 through CCB#8 by McLaren-Hart. The split samples in DTSC's custody yielded maximum concentrations for all eight of the borings of 183 mg/kg arsenic, 1,980 mg/kg barium, 0.89 mg/kg beryllium, 18.9 mg/kg cadmium, 42.3 mg/kg cobalt, 119,000 mg/kg Cr, 606 mg/kg copper, 176 mg/kg molybdenum, 639 mg/kg nickel, 37,000 mg/kg lead, 90.8 mg/kg thallium, 138 mg/kg vanadium, 1,370 mg/kg zinc, and 73,000 mg/kg Cr VI. The highest concentrations of metals were found in boring CCB#8.

2.4.13 In 2004, Clayton Group Services, the new environmental consultant for Chrome Crankshaft Company, completed an interim removal action at the Chrome Crankshaft Company facility. The interim removal and restoration activities were completed in accordance with the Removal Action Workplan (RAW) approved by DTSC in December 2003. The objective of the RAW was to clean and demolish the building that had been used for chromium plating activities. Potential downward mobility of Cr VI from infiltration of rainwater through soil had been limited due to the presence of the building, asphalt parking area, and the 40-mil high density polyethylene (HDPE) liner. Following demolition, Chrome Crankshaft Company re-graded and paved the entire Site, limiting rainwater infiltration. However, since Chrome Crankshaft Company filed for Chapter 7 Bankruptcy, the asphalt is not maintained and is already deteriorating due to vegetative growth through it.

Security included a 6-foot chain link fence with a locked gate surrounding the eastern and northern sides of the Site. An 8-foot fence with view screen was installed along Florence Place and the property boundary with the Suva Schools. However, due to the bankruptcy filing by Chrome Crankshaft Company, the Site, and thus the fence, is not maintained.

The building interior was cleaned to reduce the potential for generating airborne dust during demolition. Interior building walls and surfaces were cleaned; wipe and/or concrete core samples were collected and analyzed for Cr VI following building cleaning. Dust was removed from interior surfaces using a vacuum equipped with a high-efficiency particulate air filter. During demolition, dust suppression consisted of spraying the work area with water to minimize or prevent emissions.

A hazardous materials survey was conducted prior to cleaning the building. The survey consisted of an asbestos survey, a lead-based paint (LBP) screening survey, and cataloging potentially hazardous materials present at the Site. Asbestos-containing materials (ACM) and LBP were found, quantified, and removed. Miscellaneous chemicals, lighting fixtures and ballasts were collected, segregated by waste category and shipped as hazardous wastes to facilities licensed to accept such materials.

Demolition consisted of removing the plating line and associated equipment; aboveground portions of the building; an underground storage tank; aboveground storage tanks; a clarifier and associated features. The building footings and concrete floor remained in place.

To ready the Site for paving, all depressed areas such as trenches/sumps within the building were filled with gravel to match the surrounding grade. The loading area directly west of the building was also backfilled with gravel material and compacted to the paving sub-grade elevation. The entire Site, including the existing pavement, the building floor slab, and the area directly north of the existing pavement on the Site was overlaid with 2-inch thick asphalt. However, as noted above, the pavement is already deteriorating and there is no one to maintain the fence or asphalt due to Chrome Crankshaft Company's bankruptcy.

2.5 Health Effects. DTSC has determined that a potential for complete exposure pathways exists at the Site. The observed hazardous substances represent a threat to human health through ingestion, inhalation, and dermal contact exposure pathways. The following hazardous substances are present at the Site: arsenic, total chromium (Cr), hexavalent chromium (Cr VI), lead, cadmium, nickel, mercury, perchloroethylene (PCE), trichloroethylene (TCE), and thallium.

2.5.1 Chromium/Hexavalent Chromium - The principal acute effects of hexavalent chromium exposure are renal toxicity, gastrointestinal hemorrhage, and intravascular hemolysis. In occupational settings the most common reported chronic effects of chromium exposure include contact dermatitis, skin ulcers, irritation and

ulceration of the nasal mucosa and perforation of the nasal septum. Less common are reports of hepatic and renal damage and pulmonary effects (bronchitis, asthma, and bronchospasm). Limited human studies suggest that occupational exposure may be associated with complications during pregnancy and childbirth.

There is epidemiological evidence that exposure to inhaled hexavalent chromium may result in lung cancer. The U.S. EPA classified hexavalent chromium as a Class A carcinogen (known human carcinogen) by the inhalation route. The International Agency for Research on Cancer has classified hexavalent chromium as a Group 1 Human carcinogen, and chromium as not classifiable. The State of California has determined under Proposition 65 that hexavalent chromium is a carcinogen by the inhalation route.

2.5.2 Lead - Adverse health effects on adults and children via inhalation and ingestion are well documented. These effects include loss of appetite, anemia, malaise, insomnia, headache, irritability, muscle and joint pains, tremors, flaccid paralysis without anesthesia, hallucinations and distorted perceptions, muscle weakness, gastritis, and liver changes. The major organ systems affected are the nervous system, blood system, and kidneys. Lead may also cause permanent brain damage, especially in young children, even at low doses. Lead is a suspected carcinogen of the lungs and kidneys from animal studies.

2.5.3 Cadmium - Subchronic and chronic exposures have been associated with renal, cardiovascular, endocrine, hepatic, bone, hematological, and immunological effects. Respiratory conditions include bronchiolitis and emphysema. Human developmental studies are limited, although there is some evidence to suggest that maternal cadmium exposure may result in decreased birth weights. The State of California has determined under Proposition 65 that cadmium is a male reproductive and developmental toxicant.

Epidemiological evidence strongly supports an association between cadmium exposure and neoplasia, including respiratory and renal cancers. The U.S. EPA classified cadmium in Group B1: probable human carcinogen, based on human and animal studies showing an increase of lung cancer. The State of California has determined under Proposition 65 that cadmium and cadmium compounds are carcinogens.

2.5.4 Nickel - Nickel is categorized by U.S. EPA as a Group A carcinogen (known human carcinogen) by the inhalation route. Nickel is a respiratory irritant. Ingestion of soluble salts causes nausea, vomiting, and diarrhea. Hypersensitivity to nickel is common and can cause allergic contact dermatitis, pulmonary asthma, conjunctivitis, and inflammatory reactions around nickel-containing medical implants and prostheses.

2.5.5 Mercury - Elemental mercury target organs include the brain and kidneys. Acute, high level exposure mercury vapor may cause toxic pneumonitis and pulmonary

edema. High acute or chronic overexposure can result in severe central nervous system toxicity, chronic renal disease, and peripheral neuropathies. Children exposed to elemental mercury may develop acrodynia. Mercury salts are primarily toxic to the kidneys by acute ingestion. The State of California has determined under Proposition 65 that mercury compounds are developmental toxicants.

The U.S. EPA has placed inorganic mercury and methyl mercury in Group C: Possible human carcinogen; and elemental mercury in Group D: Not classifiable as a carcinogen.

2.5.6 Arsenic - Most forms of arsenic are toxic. Acute symptoms fooling ingestion relate to irritation of the gastrointestinal tract: vomiting, diarrhea which can progress to shock and death. Chronic poisoning can result in exfoliation and pigmentation of skin, herpes, polyneuritis, altered hematopiesis, and degeneration of the liver and kidneys. Arsenic and certain arsenic compounds are listed as known carcinogens.

2.5.7 Thallium - Symptoms of acute toxicity include nausea, vomiting, diarrhea, tingling, pain in extremities, weakness, coma, convulsions, and death. Chronic exposure causes weakness and pain in extremities (polyneuritis), and loss of hair.

2.5.8 Perchloroethylene (PCE) - This volatile organic compound can affect the central nervous system and cause anesthesia, may irritate skin and eyes after prolonged contact, or cause liver damage. PCE is known to be carcinogenic in experimental animals.

2.5.9 Trichloroethylene (TCE) - This volatile organic compound is an irritant to the eyes and nose. TCE may cause nausea, attitude of irresponsibility, blurred vision, and disturbance of central nervous system that may result in cardiac failure. Skin contact causes dermatitis. TCE causes irritating sensation and lachrymation of the eyes. TCE is known to be carcinogenic in experimental animals.

2.6 Routes of Exposure. This Order focuses on, but is not limited to, the potential detrimental impact to public health via the air and soil environmental pathways.

2.6.1 Inhalation is a route of exposure for metals, such as lead, nickel, and Cr VI. Although the Respondents facility has been completely paved with asphalt, the asphalt cap is already deteriorating due to vegetative growth. If no corrective action is taken at the Site, the potential exists for dispersion of contaminated airborne particulates.

2.6.2 Contaminants in soil could reach people by direct contact or ingestion. Contaminants could be blown over to the Suva School yards leading to exposure to students and employees at the Suva Schools. Although the Site is currently fenced, there is no one to maintain it since Chrome Crankshaft Company is bankrupt. If the

fence were to deteriorate, school children and residents could be exposed to the contaminated soil through the deteriorating asphalt.

2.6.3 Contaminants in groundwater could reach people by direct contact, inhalation (by showering) or ingestion. Contaminants have been detected in groundwater above MCLs for drinking water and the Regional Water Quality Control Board, Los Angeles Region Basin Plan identifies public water supply as a beneficial use of the Gaspur aquifer.

2.7 Public Health and/or Environmental Risk. Respondents own a property that was previously used as a chrome plating facility that is located adjacent to the Suva schools. Hazardous substances have been detected in the surface soils of the facility at concentrations that may pose a health hazard. Hazardous substances have also been detected on the Suva school grounds and are believed to have originated from the Respondent's facility. The potential exists for school children and employees of the Suva Schools, and nearby residents to be exposed to hazardous substances from the Site if unmitigated.

III. CONCLUSIONS OF LAW

3.1 Respondents are responsible parties as defined by Health and Safety Code section 25323.5.

3.2 Each of the substances listed in Section 2.4 is a "hazardous substance" as defined in Health and Safety Code section 25316.

3.3 There has been a "release" and/or there is a "threatened release" of hazardous substances listed in Section 2.4 at the Site, as defined in Health and Safety Code section 25320.

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

3.5 Response action is necessary to abate a public nuisance and/or to protect and preserve the public health.

IV. DETERMINATION

4.1 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that a response action is necessary at the Site because there has been a release and/or there is a threatened release of a hazardous substance.

4.2 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that there may be an imminent and/or substantial endangerment to

the public health or welfare or to the environment because of the release and/or the threatened release of the hazardous substances at the Site.

V. ORDER

Based on the foregoing FINDINGS, CONCLUSIONS, AND DETERMINATION, IT IS HEREBY ORDERED THAT Respondents conduct the following response actions in the manner specified herein, and in accordance with a schedule specified by DTSC as follows:

5.1 All response actions taken pursuant to this Order shall be consistent with the requirements of Chapter 6.8 (commencing with section 25300), Division 20 of the Health and Safety Code and any other applicable state or federal statutes and regulations.

5.1.1 Site Remediation Strategy. The purpose of this Order is to require for the Site: implementation of any appropriate removal actions, completion of a Remedial Investigation/Feasibility Study (RI/FS), preparation of a Remedial Action Plan (RAP), preparation of California Environmental Quality Act (CEQA) documents, and design and implementation of the remedial actions approved in the RAP. An overall site investigation and remediation strategy shall be developed by Respondents in conjunction with DTSC. That strategy shall reflect program goals, objectives, and requirements. Current knowledge of the site contamination sources, exposure pathways, and receptors shall be used in developing this strategy.

An objective of the site investigation shall be to identify immediate or potential risks to public health and the environment and prioritize and implement response actions using removal actions and operable units, if appropriate, based on the relative risks at the Site. Respondents and DTSC shall develop and possibly modify site priorities throughout the course of the investigation. If necessary for the protection of public health and the environment, DTSC will require additional response actions not specified in this Order to be performed as removal actions or separate operable units. Removal actions shall be implemented in accordance with a workplan and implementation schedule submitted by Respondent and approved by DTSC.

For operable unit remedial actions, DTSC will specify the separate and focused remedial phase activities to be conducted as RI/FS, RAP, Design, and Implementation. The focused activities shall be conducted in accordance with the corresponding remedial phase requirements specified in this Order, but shall only address the area or problem of the operable unit.

5.1.2 Remedial Action Objectives. Based on available information, DTSC has preliminarily determined that the remedial action objectives for the Site shall include:

(a) Existing and potential beneficial uses of groundwater shall be protected. The Regional Water Quality Control Board, Los Angeles Region Basin Plan identifies public

water supply as a beneficial use of this aquifer. Additionally, there is a currently inoperative a drinking water production well within 100 feet of the Site. Therefore, drinking water standards or more conservative values determined by a Risk Assessment shall be remedial action objectives for this Site.

(b) Although the Site is zoned for commercial/industrial land uses, it is located adjacent to the Suva Schools and is directly across the street from single family residences. Therefore, remedial action objectives for contaminated media shall be developed which are protective of adults and children in a residential exposure scenario.

5.1.3 Removal Actions. Respondents shall undertake removal actions if, during the course of the RI or FS, DTSC determines that such actions are necessary to mitigate the release of hazardous substances at or emanating from the Site. DTSC may require Respondents to submit a removal action workplan (RAW) that includes a schedule for implementing the RAW for DTSC's approval. Either DTSC or Respondents may identify the need for removal actions. Respondents shall implement the following removal actions. Workplans for implementing the following removal actions shall be submitted by the specified dates:

(a) Fence and Post. The soils at the Site have been shown to contain hazardous substances in the form of heavy metals. In order to eliminate the possibility of people coming into contact with contaminated soil, Respondents shall perform the following activities:

1) Within 30 days of the effective date of this Order, Respondents shall install a fence. The fence shall secure, at a minimum, the areas specified on the Site map (Exhibit 1).

2) Within 30 days of the effective date of this Order, Respondents shall install signs which are visible from the area surrounding the Site and posted at each route of entry into the Site, including those routes likely to be used by unauthorized persons. Such routes of entry include access roads leading to the Site and waterways which may provide a route of access to the Site. The signs shall be in accordance with the specifications attached as Exhibit 2.

3) The fence and signs shall be constructed of materials able to withstand the elements and shall be continuously maintained for as long as DTSC determines it to be necessary in order to protect public health and safety and the environment.

(b) Drainage Control. Within 30 days of the effective date of this Order, the Site should be graded such that all surface water runoff will be diverted to the storm drains and not be allowed to pool and contribute to the migration of contaminants to the underlying groundwater

(c) Stabilization of Structures. The structures have been demolished and removed and thus stabilization of structures is not necessary.

(d) Interim Capping. The following areas shall be capped with impermeable materials to limit direct human contact with contaminated soil and limit infiltration of rainwater.

1) Within 30 days of the effective date of this Order, the entire Site (Exhibit 1) shall be capped with impermeable materials to limit rainwater infiltration and direct human contact with contaminated soil.

5.1.4 Groundwater Monitoring. Respondents shall immediately resume quarterly groundwater monitoring in accordance with the existing Sampling and Analysis Plan (SAP) attached as Exhibit 4. Groundwater level measurements shall be conducted during the monitoring events, commencing within 30 days of the effective date of this Order. Groundwater sampling shall be conducted on a quarterly basis commencing within 30 days of the effective date of this Order. Subsequent monitoring shall be conducted until DTSC determines it is appropriate to terminate monitoring.

5.1.5 Site Remediation Strategy Meeting. Respondents, including the Project Coordinator (Section 6.1) and Project Engineer/Geologist (Section 6.2), shall meet with DTSC within 20 days from the effective date (and concurrent with the development of the RI/FS workplan) of this Order to discuss the site remediation strategy. These discussions will include site risks and priorities, project planning, phasing and scheduling, remedial action objectives, remedial technologies, data quality objectives, and the RI/FS workplan. Results of the discussions will be included in the Scoping Document, Section 5.2.2(b) of this Order.

5.2 Remedial Investigation/Feasibility Study (RI/FS). An RI/FS shall be conducted for the Site. The RI/FS may be performed as a series of focused RI/FSs, if appropriate, based on site priorities. The RI/FS shall be prepared consistent with the U.S. Environmental Protection Agency's "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," October 1988. The purpose of the RI/FS is to assess site conditions and to evaluate alternatives to the extent necessary to select a remedy appropriate for the Site. RI and FS activities shall be conducted concurrently and iteratively so that the investigations can be completed expeditiously. Because of the nature of the Site and the iterative nature of the RI/FS, additional data requirements and analyses may be identified throughout the process. Respondents shall fulfill additional data and analysis needs identified by DTSC; these additional data and analysis requests will be consistent with the general scope and objectives of this Order.

The following elements of the RI/FS process and those defined by DTSC in Section 5.1.4 of this Order shall be preliminarily defined in the initial Site scoping and refined and modified as additional information is gathered throughout the RI/FS process.

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

(b) Federal, state and local remedial action objectives including applicable legal requirements or relevant and appropriate standards;

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

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

(e) The need for treatability studies.

5.2.1 RI/FS Objectives. The objectives of the RI/FS are to:

(a) Determine the nature and full extent of hazardous substance contamination of air, soil, surface water and groundwater at the Site.

(b) Identify all actual and potential exposure pathways and routes through environmental media at the Site;

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

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

(e) Collect and evaluate the information necessary to prepare a RAP.

5.2.2 RI/FS Workplan. Within 30 days from the effective date of this Order , Respondents shall prepare and submit to DTSC for review and approval a detailed RI/FS Workplan and implementation schedule which covers all the activities necessary to conduct a complete RI/FS of the Site .

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

These RI/FS Workplan deliverables are discussed in the remainder of this Section, with a schedule for implementation, and monthly reports. The RI/FS Workplan shall include all the sections and address each component listed below.

(a) Project Management Plan. The Project Management Plan shall define relationships and responsibilities for major tasks and project management items by Respondents and their contractors, subcontractors, and consultants. The plan shall include an organization chart with the names and titles of key personnel and a description of their individual responsibilities.

(b) Scoping Document. The Scoping Document shall incorporate program goals, program management principles, and expectations contained in the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Part 300), as amended. It shall include:

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

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

(B) A description of past disposal practices;

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

(D) A description of the characteristics of the hazardous substances at the Site; and

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

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

(3) Presentation of the conceptual site model;

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

(5) Preliminary identification of possible response actions and the data needed for the evaluation of alternatives. Removal actions shall be proposed, if needed, based on the initial evaluation of threats to public health and the environment. If remedial actions involving treatment can be identified, treatability studies shall be conducted during the characterization phase, unless Respondents and DTSC agree that such studies are unnecessary as set forth in Section 5.4; and

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

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

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

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

(3) Sample designation or numbering system;

(4) Detailed specification of sampling equipment and procedures;

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

(6) Management plan for wastes generated.

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

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

(2) Quality assurance objectives for measurement including accuracy, precision, and method detection limits. In selecting analytical methods, Respondents shall consider obtaining detection limits at or below potentially applicable legal requirements or relevant and appropriate standards, such as Maximum Contaminant Levels (MCLs) or Maximum Contaminant Level Goals (MCLGs);

(3) Sampling procedures;

(4) Sample custody procedures and documentation;

(5) Field and laboratory calibration procedures;

(6) Analytical procedures;

(7) the requirement that the laboratory to be used be certified pursuant to Health and Safety Code section 25198;

(8) Specific routine procedures used to assess data (precision, accuracy and completeness) and response actions;

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

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

(11) Internal quality control.

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

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

(2) Respondents' key personnel and responsibilities;

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

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

(5) Exposure monitoring plan;

(6) Personal protective equipment and engineering controls;

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

(8) Decontamination procedures;

(9) General safe work practices;

(10) Sanitation facilities;

(11) Standard operating procedures;

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

(13) Training requirements;

(14) Medical surveillance program; and

(15) Record keeping.

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

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

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

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

5.3 Interim Screening and Evaluation of Remedial Technologies. At the request of DTSC, Respondents shall submit an interim document which identifies and evaluates potentially suitable remedial technologies and recommendations for treatability studies.

5.4 Treatability Studies. If required by DTSC based on the RI/FS, treatability testing will be performed by Respondents to develop data for the detailed remedial alternatives. Treatability testing is required to demonstrate the implementability and effectiveness of technologies, unless Respondents can show DTSC that similar data or documentation or information exists. The required deliverables are: a workplan, a sampling and analysis plan, and a treatability evaluation report. To the extent practicable, treatability studies will be proposed and implemented during the latter part of site characterization.

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

(a) Site Physical Characteristics. Data on the physical characteristics of the Site and surrounding area shall be collected to the extent necessary to define potential transport pathways and receptor populations and to provide sufficient engineering data for development and screening of remedial action alternatives.

(b) Sources of Contamination. Contamination sources (including heavily contaminated media) shall be defined. The data shall include the source locations, type

of contaminant, waste characteristics, and Site features related to contaminant migration and human exposure.

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

5.6 Baseline Health and Ecological Risk Assessment. Respondents shall perform health and ecological risk assessments for the Site that meet the requirements of Health and Safety Code §25356.1.5(b). Respondents shall submit a baseline health and ecological risk assessment report as part of the RI Report. The report shall be prepared consistent with U.S. EPA and California Environmental Protection Agency guidance and regulations, including as a minimum: Risk Assessment Guidance for Superfund, Volume 1; Human Health Evaluation Manual, December 1989; Superfund Exposure Assessment Manual, April 1988; Risk Assessment Guidance for Superfund, Volume 2, Environmental Evaluation Manual, March 1989; and all other related or relevant policies, practices and guidelines of the California Environmental Protection Agency and policies, practices and guidelines developed by U.S. EPA pursuant to 40 CFR 300.400 et seq. The baseline health and ecological risk assessment report shall include the following components:

(a) Contaminant Identification. Characterization data shall identify contaminants of concern for the risk assessment process.

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

(1) Identification of sensitive environments and rare, threatened, or endangered species and their habitats; and

(2) As appropriate, ecological investigations to assess the actual or potential effects on the environment and/or develop remediation criteria.

(c) Exposure Assessment. The objectives of an exposure assessment are to identify actual or potential exposure pathways, to characterize the potentially exposed populations, and to determine the extent of the exposure. Exposed populations may include industrial workers, residents, and subgroups that comprise a meaningful portion of the general population, including, but not limited to, infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations, that are identifiable as being at greater risk of adverse health effects due to exposure to hazardous substances than the general population.

(d) Toxicity Assessment. Respondents shall evaluate the types of adverse health or environmental effects associated with individual and multiple chemical exposures; the relationship between magnitude of exposures and adverse effects; and

related uncertainties such as the weight of evidence for a chemical's potential carcinogenicity in humans.

(e) Risk Characterization. Risk characterization shall include the potential risks of adverse health or environmental effects for each of the exposure scenarios derived in the exposure assessment.

5.7 Feasibility Study (FS) Report. The FS Report shall be prepared and submitted by Respondents to DTSC for review and approval, no later than 30 days from submittal of the RI Report. The FS Report shall summarize the results of the FS including the following:

(a) Documentation of all treatability studies conducted.

(b) Development of medium specific or operable unit specific remedial action objectives, including legal requirements and other promulgated standards that are relevant.

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

(d) Evaluation of alternatives based on the criteria contained in the NCP including:

Threshold Criteria:

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

(2) Compliance with legal requirements and other promulgated standards that are relevant.

Primary Balancing Criteria:

(1) Long-term effectiveness and permanence.

(2) Reduction of toxicity, mobility, or volume through treatment.

(3) Short-term effectiveness.

(4) Implementability based on technical and administrative feasibility.

(5) Cost.

Modifying Criteria:

(1) State and local agency acceptance.

(2) Community acceptance.

(e) Proposed remedial actions.

5.8 Public Participation Plan (Community Relations). Respondents shall work cooperatively with DTSC in providing an opportunity for meaningful public participation in response actions. Any such public participation activities shall be conducted in accordance with H&SC §§ 25356.1 and 25358.7 and DTSC's most current Public Participation Policy and Guidance Manual, and shall be subject to DTSC's review and approval.

Respondents, in coordination with DTSC, shall conduct a baseline community survey and develop a Public Participation Plan (PPP) which describes how, under this Order, the public and adjoining community will be kept informed of activities conducted at the Site and how Respondents will respond to inquiries from concerned citizens. Major steps in developing a PPP are as follows:

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

Respondents shall conduct the baseline community survey and submit the PPP for DTSC's review within 40 days of the effective date of this Order.

Respondents shall implement any of the public participation support activities identified in the PPP, at the request of DTSC. DTSC retains the right to implement any of these activities independently. These activities include, but are not limited to, development and distribution of fact sheets; public meeting preparations; and development and placement of public notices.

5.9 California Environmental Quality Act (CEQA). DTSC will comply with CEQA for all activities required by this Order that are projects subject to CEQA. Upon DTSC request, Respondents shall provide DTSC with any information that DTSC deems necessary to facilitate compliance with CEQA. The costs incurred by DTSC in complying with CEQA are response costs and Respondents shall reimburse DTSC for such costs pursuant to Section 6.19.

5.10 Remedial Action Plan (RAP). No later than 30 days after DTSC approval of the FS Report, Respondents shall prepare and submit to DTSC a draft RAP. The draft RAP shall be consistent with the NCP and Health and Safety Code section 25356.1. The draft RAP public review process may be combined with that of any other documents required by CEQA. The draft RAP shall be based on and summarize the approved RI/FS Reports, and shall clearly set forth:

(a) Health and safety risks posed by the conditions at the Site.

(b) The effect of contamination or pollution levels upon present, future, and probable beneficial uses of contaminated, polluted, or threatened resources.

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

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

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

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

(g) A statement of reasons setting forth the basis for the removal and remedial actions selected. The statement shall include an evaluation of each proposed alternative submitted and evaluate the consistency of the removal and remedial actions proposed by the plan with the NCP.

(h) A schedule for implementation of all proposed removal and remedial actions.

In conjunction with DTSC, Respondents shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual. Within 10 days of closure of the public comment period, Respondents shall submit to DTSC a written responsiveness summary of all written and oral comments presented and received during the public comment period.

Following DTSC's review and finalization of the responsiveness summary, DTSC will specify any changes to be made in the RAP. Respondents shall modify the document in accordance with DTSC's specifications and submit a final RAP within 15 days of receipt of DTSC's comments.

5.11 Remedial Design (RD). Within 60 days after DTSC approval of the final RAP, Respondents shall submit to DTSC for review and approval a RD describing in detail the technical and operational plans for implementation of the final RAP which includes the following elements, as applicable:

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

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

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

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

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

(f) An updated health and safety plan addressing the implementation activities.

(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, the current owner of the Site shall sign and record deed restrictions approved by DTSC within 90 days of DTSC's approval of the final RAP.

5.13 Implementation of Final RAP. Upon DTSC approval of the RD, Respondents shall implement the final RAP in accordance with the approved schedule in the RD. Within 30 days of completion of field activities, Respondents 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 O&M requirements in accordance with the final RAP and approved RD. Within 30 days of the date of DTSC's request, Respondents shall prepare and submit to DTSC for approval an O&M plan that includes an implementation schedule. Respondents shall implement the plan in accordance with the approved schedule.

5.15 Five-Year Review. Respondents shall review and reevaluate the remedial action after a period of five years from the completion of construction and startup, and every five years thereafter. The review and reevaluation shall be conducted to determine if human health and the environment are being protected by the remedial action. Within thirty (30) calendar days before the end of the time period approved by DTSC to review and reevaluate the remedial action, Respondents shall submit a remedial action review workplan to DTSC for review and approval. Within sixty (60) days of DTSC's approval of the workplan, Respondents shall implement the workplan

and shall submit a comprehensive report of the results of the remedial action review. The report shall describe the results of all sample analyses, tests and other data generated or received by Respondents and evaluate the adequacy of the implemented remedy in protecting public health, safety and the environment. As a result of any review performed under this Section, Respondents may be required to perform additional Work or to modify Work previously performed.

5.16 Changes During Implementation of the Final RAP. During the implementation of the final RAP and RD, DTSC may specify such additions, modifications, and revisions to the RD as DTSC deems necessary to protect public health and safety or the environment or to implement the RAP.

5.17 Stop Work Order. In the event that DTSC determines that any activity (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or safety of people on the Site or in the surrounding area or to the environment, DTSC may order Respondents to stop further implementation of this Order for such period of time needed to abate the endangerment. In the event that DTSC determines that any site activities (whether or not pursued in compliance with this Order) are proceeding without DTSC authorization, DTSC may order Respondents to stop further implementation of this Order or activity for such period of time needed to obtain DTSC authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this Section, shall be extended for the term of the Stop Work Order.

5.18 Emergency Response Action/Notification. In the event of any action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances caused by the release or threatened release of a hazardous substance) during the course of this Order, Respondents shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify the Project Manager. Respondents shall take such action in consultation with the Project Manager and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, Respondents shall furnish a report to DTSC, signed by Respondents' project coordinator, setting forth the events which occurred and the measures taken in the response thereto. In the event that Respondents fail to take appropriate response and DTSC takes the action instead, Respondents shall be liable to DTSC for all costs of the response action. Nothing in this Section shall be deemed to limit any other notification requirement to which Respondents may be subject.

5.19 Discontinuation of Remedial Technology. Any remedial technology employed in implementation of the final RAP shall be left in place and operated by Respondents until and except to the extent that DTSC authorizes Respondents in writing to discontinue, move or modify some or all of the remedial technology because Respondents have met the criteria specified in the final RAP for its discontinuance, or because the modifications would better achieve the goals of the final RAP.

5.20 Financial Assurance. Respondents shall demonstrate to DTSC and maintain financial assurance for operation and maintenance and monitoring. Respondents shall demonstrate financial assurance prior to the time that operation and maintenance activities are initiated and shall maintain it throughout the period of time necessary to complete all required operation and maintenance activities. The financial assurance mechanisms shall meet the requirements of Health and Safety Code Section 25355.2. All financial assurance mechanisms are subject to the review and approval of DTSC.

VI. GENERAL PROVISIONS

6.1 Project Coordinator. Within 10 days from the date the Order is signed by DTSC, Respondents shall submit to DTSC in writing the name, address, and telephone number of a Project Coordinator whose responsibilities will be to receive all notices, comments, approvals, and other communications from DTSC. Respondents shall promptly notify DTSC of any change in the identity of the Project Coordinator. Respondents shall obtain approval from DTSC before the new Project Coordinator performs any work under this Order.

6.2 Project Engineer/Geologist. The work performed pursuant to this Order shall be under the direction and supervision of a qualified professional engineer or a registered geologist in the State of California, with expertise in hazardous substance site cleanups. Within 15 calendar days from the date this Order is signed by DTSC, Respondents must submit: a) The name and address of the project engineer or geologist chosen by Respondent; and b) in order to demonstrate expertise in hazardous substance cleanup, the resumé of the engineer or geologist, and the statement of qualifications of the consulting firm responsible for the work. Respondents shall promptly notify DTSC of any change in the identity of the Project Engineer/Geologist. Respondents shall obtain approval from DTSC before the new Project Engineer/Geologist performs any work under this Order.

6.3 Monthly Summary Reports. Within 30 days from the date this Order is signed by DTSC, and on a monthly basis thereafter, Respondents shall submit a Monthly Summary Report of its activities under the provisions of this Order. The report shall be received by DTSC by the [15th] day of each month and shall describe:

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

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

(c) All planned activities for the next month;

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

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

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

6.4 Quality Assurance/Quality Control (QA/QC). All sampling and analysis conducted by Respondents under this Order shall be performed in accordance with QA/QC procedures submitted by Respondents and approved by DTSC pursuant to this Order.

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

Thomas M. Cota, Chief
Southern California Cleanup Operations Branch
Attention: Daniel Zogaib (two copies)
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

6.6 Communications. All approvals and decisions of DTSC made regarding submittals and notifications will be communicated to Respondent in writing by the Site Mitigation Branch Chief, or his/her designee. No informal advice, guidance, suggestions or comments by DTSC regarding reports, plans, specifications, schedules or any other writings by Respondents shall be construed to relieve Respondents of the obligation to obtain such formal approvals as may be required.

6.7 DTSC Review and Approval. (a) All response actions taken pursuant to this Order shall be subject to the approval of DTSC. Respondents shall submit all deliverables required by this Order to DTSC. Once the deliverables are approved by DTSC, they shall be deemed incorporated into, and where applicable, enforceable under this Order.

(b) If DTSC determines that any report, plan, schedule or other document submitted for approval pursuant to this Order fails to comply with this Order or fails to protect public health or safety or the environment, DTSC may:

(1) Modify the document as deemed necessary and approve the document as modified; or

(2) Return comments to Respondents with recommended changes and a date by which Respondents must submit to DTSC a revised document incorporating the recommended changes.

(c) Any modifications, comments or other directives issued pursuant to (a) above, are incorporated into this Order. Any noncompliance with these modifications or directives shall be deemed a failure or refusal to comply with this Order.

6.8 Compliance with Applicable Laws. Nothing in this Order shall relieve Respondents from complying with all other applicable laws and regulations, including but not limited to compliance with all applicable waste discharge requirements issued by the State Water Resources Control Board or a California Regional Water Quality Control Board. Respondents shall conform all actions required by this Order with all applicable federal, state and local laws and regulations.

6.9 Respondents' Liabilities. Nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current or future operations of Respondents. Nothing in this Order is intended or shall be construed to limit the rights of any of the parties with respect to claims arising out of or relating to the deposit or disposal at any other location of substances removed from the Site. Nothing in this Order is intended or shall be construed to limit or preclude DTSC from taking any action authorized by law to protect public health or safety or the environment and recovering the cost thereof. Notwithstanding compliance with the terms of this Order, Respondents may be required to take further actions as are necessary to protect public health and the environment.

6.10 Site Access. Access to the Site and laboratories used for analyses of samples under this Order shall be provided at all reasonable times to employees, contractors, and consultants of DTSC. Nothing in this Section is intended or shall be construed to limit in any way the right of entry or inspection that DTSC or any other agency may otherwise have by operation of any law. DTSC and its authorized representatives shall have the authority to enter and move freely about all property at the Site at all reasonable times for purposes including, but not limited to: inspecting records, operating logs, sampling and analytic data, and contracts relating to this Site; reviewing the progress of Respondents in carrying out the terms of this Order; conducting such tests as DTSC may deem necessary; and verifying the data submitted to DTSC by Respondents.

To the extent the Site or any other property to which access is required for the implementation of this Order is owned or controlled by persons other than Respondents, Respondents shall use best efforts to secure from such persons access for Respondents, as well as for DTSC, its representatives, and contractors, as necessary to effectuate this Order. To the extent that any portion of the Site is controlled by tenants of any Respondent, that Respondent shall use best efforts to secure from such tenants, access for Respondents, as well as for DTSC, its representatives, and contractors, as necessary to effectuate this Order. For purposes of this Section, "best efforts" includes the payment of reasonable sums of money in consideration of access. If any access required to complete the Work is not obtained within forty-five (45) days of the effective date of this Order, or within forty-five (45) days of the date DTSC notifies Respondents in writing that additional access beyond that previously secured is necessary, Respondents shall promptly notify DTSC, and shall include in that notification a summary of the steps Respondents has taken to attempt to obtain access. DTSC may, as it deems appropriate, assist Respondents in obtaining

access. Respondents shall reimburse DTSC in obtaining access, including, but not limited to, attorneys fees and the amount of just compensation.

6.11 Site Access for Respondents. The Site owner Respondent shall grant access to any other Respondents who are in compliance with this Order for the purpose of conducting activities pursuant to this Order or for activities deemed necessary by DTSC to meet the objectives of this Order.

6.12 Sampling, Data and Document Availability. Respondents shall permit DTSC and its authorized representatives to inspect and copy all sampling, testing, monitoring or other data generated by Respondents or on Respondents' behalf in any way pertaining to work undertaken pursuant to this Order. Respondents shall submit all such data upon the request of DTSC. Copies shall be provided within seven (7) days of receipt of DTSC's written request. Respondents shall inform DTSC at least seven (7) days in advance of all field sampling under this Order, and shall allow DTSC and its authorized representatives to take duplicates of any samples collected by Respondent pursuant to this Order. Respondent shall maintain a central depository of the data, reports, and other documents prepared pursuant to this Order.

6.13 Record Retention. All such data, reports and other documents shall be preserved by Respondent for a minimum of ten years after the conclusion of all activities under this Order. If DTSC requests that some or all of these documents be preserved for a longer period of time, Respondent shall either comply with that request or deliver the documents to DTSC, or permit DTSC to copy the documents prior to destruction. Respondents shall notify DTSC in writing at least six months prior to destroying any documents prepared pursuant to this Order.

6.14 Government Liabilities. The State of California shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by any Respondent, or related parties specified in Section 6.26, Parties Bound, in carrying out activities pursuant to this Order, nor shall the State of California be held as party to any contract entered into by any Respondent or its agents in carrying out activities pursuant to this Order.

6.15 Additional Actions. By issuance of this Order, DTSC does not waive the right to take any further actions authorized by law.

6.16 Extension Requests. If Respondents are unable to perform any activity or submit any document within the time required under this Order, Respondents may, prior to expiration of the time, request an extension of the time in writing. The extension request shall include a justification for the delay. All such requests shall be in advance of the date on which the activity or document is due.

6.17 Extension Approvals. If DTSC determines that good cause exists for an extension, it will grant the request and specify a new schedule in writing. Respondents shall comply with the new schedule incorporated in this Order.

6.18 Liability for Costs . Respondents are liable for all of DTSC's costs that have been incurred in taking response actions at the Site (including costs of overseeing response actions performed by Respondents) and costs to be incurred in the future.

6.19 Payment of Costs. DTSC may bill Respondents for costs incurred in taking response actions at the Site prior to the effective date of this Order. DTSC will bill Respondents quarterly for its response costs incurred after the effective date of this Order. Respondents shall pay DTSC within sixty (60) days of receipt of any DTSC billing. Any billing not paid within sixty (60) days is subject to interest calculated from the date of the billing pursuant to Health and Safety Code section 25360.1. All payments made by Respondents pursuant to this Order shall be by cashier's or certified check made payable to “Department of Toxic Substances Control," and shall bear on the face the project code of the Site (Site 300736) and the Docket number of this Order. Payments shall be sent to:

Department of Toxic Substances Control
Accounting/Cashier
P.O. Box 806
Sacramento, California 95812-0806

A photocopy of all payment checks shall also be sent to the person designated by DTSC to receive submittals under this Order.

6.20 Severability. The requirements of this Order are severable, and Respondents shall comply with each and every provision hereof, notwithstanding the effectiveness of any other provision.

6.21 Incorporation of Plans, Schedules and Reports. All plans, schedules, reports, specifications and other documents that are submitted by Respondent pursuant to this Order are incorporated in this Order upon DTSC's approval or as modified pursuant to Section 6.7, DTSC Review and Approval, and shall be implemented by Respondent. Any noncompliance with the documents incorporated in this Order shall be deemed a failure or refusal to comply with this Order.

6.22 Modifications. DTSC reserves the right to unilaterally modify this Order. Any modification to this Order shall be effective upon the date the modification is signed by DTSC and shall be deemed incorporated in this Order.

6.23 Time Periods. Unless otherwise specified, time periods begin from the effective date of this Order and "days" means calendar days.

6.24 Termination and Satisfaction. Except for Respondents’ obligations under Sections 5.14 Operation and Maintenance (O&M), 5.15 Five-Year Review, 5.20 Financial Assurance, 6.13 Record Retention, 6.18 Liability for Costs, and 6.19 Payment of Costs, Respondents’ obligations under this Order shall terminate and be deemed

satisfied upon Respondents' receipt of written notice from DTSC that Respondents have complied with all the terms of this Order.

6.25 Calendar of Tasks and Schedules. This Section is merely for the convenience of listing in one location the submittals required by this Order. If there is a conflict between the date for a scheduled submittal within this Section and the date within the Section describing the specific requirement, the latter shall govern.

Calendar of Tasks and Schedules

TASK	SCHEDULE
1. Identify Project Coordinator; Order Section 6.1;	Within 10 days from the date this is signed by DTSC.
2. Identify Project Engineer/Geologist; Order Section 6.2;	Within 15 days from the date this is signed by DTSC.
3. Submit Monthly Summary Reports; Section 6.3; signed	Within 30 days from the date this Order is by DTSC.
4. Attend Site Remediation Strategy Meeting; Section 5.1.7;	Within 20 days from the date this Order is signed by DTSC.
5. Submit groundwater level measurements;	First Monday of specified month.
Groundwater sampling results; Section 5.1.5;	Quarterly basis.
6. Submit RI/FS Workplan; Section 5.2.2;	Within 30 days of the effective date of this Order.
7. Submit interim screening and evaluation document; Section 5.3;	As requested by DTSC.
8. Submit Treatability Studies; Section 5.4;	As required during Site characterization or as requested by DTSC.
9. Submit RI Report; Section 5.5;	Per approved RI/FS Workplan Schedule.
10. Submit Baseline Risk Assessment; from Section5.6;	Within 30 days [or as required] submittal of RI Report.

11. Submit FS Report; Section 5.7;	Within 30 days from submittal of RI Report.
12. Submit Public Participation Plan; Section 5.8;	Within 40 days from the date the Order is signed by DTSC.
Submit and distribute Fact Sheets;	For projected or completed key milestones, as specified in Public Participation Plan or when requested by DTSC.
13. Submit Initial Study and Checklist; Section 5.9;	Within 30 days after approval of FS Report.
14. Submit Draft RAP; Section 5.10;	Within 30 days after approval of FS Report.
Submit Responsiveness Summary;	Within 10 days of closure of public comment period.
Submit Final RAP;	Within 15 days of receipt of DTSC's comments.
15. Submit Remedial Design; Section 5.11;	Within 60 days after DTSC's approval of the Final RAP.
16. Deed Restrictions; Section 5.12;	Within 90 days of approval of Final RAP.
17. Submit Implementation Report; Section 5.13;	Within 30 days of completion of field activities.
18. Submit O&M Workplan Section 5.14;	Within 30 days of DTSC' request.
19. Submit Remedial Action Review Workplan; Section 5.15;	Within 30 days before end of five-year period.
20. Submit Emergency Response Action Report; Section 5.18;	Within 7 days of an emergency response action.
21. Provide copies of sampling, data, and documentation; Section 6.12;	Within 7 days of receipt of DTSC's request.

Provide prior notice before conducting field sampling;	Inform DTSC 7 days in advance of sampling.
22. Maintain central depository of data, reports, documentation; and	Maintain central depository for a minimum of ten years after conclusion of all activities conducted pursuant to this Order.
23. Provide prior written notice to DTSC before destroying any documentation prepared pursuant to this Order; Section 6.13.	At least six months prior to destroying any documents.

6.26 Parties Bound. This Order applies to and is binding upon Respondents, and their officers, directors, agents, employees, contractors, consultants, receivers, trustees, successors and assignees, including but not limited to, individuals, partners, and subsidiary and parent corporations. Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Order, within fifteen (15) days after the effective date of this Order or the date of retaining their services, whichever is later. Respondents shall condition any such contracts upon satisfactory compliance with this Order. Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that its subsidiaries, employees, contractors, consultants, subcontractors, agents and attorneys comply with this Order.

6.27 Change in Ownership. No change in ownership or corporate or partnership status relating to the Site shall in any way alter Respondents' responsibility under this Order. No conveyance of title, easement, or other interest in the Site, or a portion of the Site, shall affect Respondents' obligations under this Order. Unless DTSC agrees that such obligations may be transferred to a third party, Respondents shall be responsible for and liable for any failure to carry out all activities required of Respondents by the terms and conditions of this Order, regardless of Respondents' use of employees, agents, contractors, or consultants to perform any such tasks. Respondents shall provide a copy of this Order to any subsequent owners or successors before ownership rights or stock or assets in an corporate acquisition are transferred.

VII. NOTICE OF INTENT TO COMPLY

7. Not later than fifteen (15) days after the effective date of this Order, each Respondent shall provide written notice, in accordance with paragraph 6.5 Submittals of this Order, stating whether or not Respondent will comply with the terms of this Order. If a Respondent does not unequivocally commit to perform all of the requirements of this Order, it shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondent's written notice shall describe,

using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under Health and Safety Code sections 25358.3(a) and 25355.5(a)(1)(B) or CERCLA section 107(c)(3), 42 U.S.C. section 9607(c)(3).

VIII. EFFECTIVE DATE

8. This Order is final and effective five days from the date of mailing, which is the date of the cover letter transmitting the Order to Respondents.

IX. PENALTIES FOR NONCOMPLIANCE

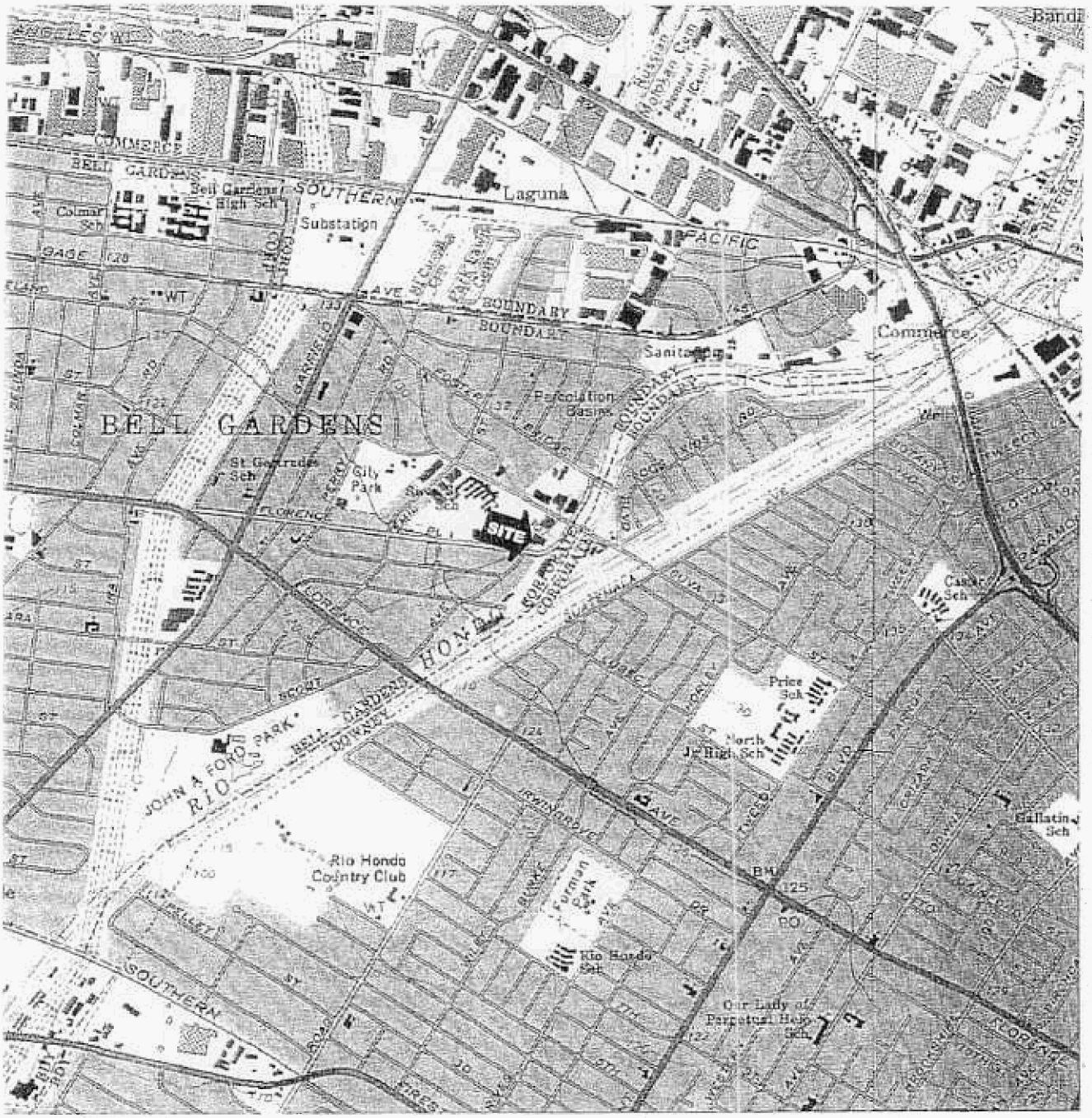
9. Respondents may be liable for penalties of up to $25,000 for each day out of compliance with any term or condition set forth in this Order and for punitive damages up to three times the amount of any costs incurred by DTSC as a result of Respondents' failure to comply, pursuant to Health and Safety Code sections 25359, 25359.2, 25359.4, and 25367(c). Health and Safety Code section 25359.4.5 provides that a responsible party who complies with this Order, or with another order or agreement concerning the same response actions required by this Order, may seek treble damages from any Respondent who fails or refuses to comply with this Order without sufficient cause.

DATE OF ISSUANCE: Original signed by Thomas M. Cota 02/04/2005

Thomas M. Cota, Chief
Southern California Cleanup Operations Branch
Cypress Office
Department of Toxic Substances Control

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

EXHIBIT A



SCALE 1:24,000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

NORTH

Portion of 7.5–minute Series (Topographic) Map
United States Department of the Interior
Geological Survey
South Gate, California Quadrangle 1964 (Photorevised 1981)

QUADRANGLE LOCATION

Clayton GROUP SERVICES
1565 MACARTHUR BOULEVARD, COSTA MESA, CALIFORNIA 92626

DATE:	02/06/03
DRAWN BY:	TP
CHECKED BY:	ES
PROJECT NO.:	80-01162.01.100

SITE LOCATION MAP

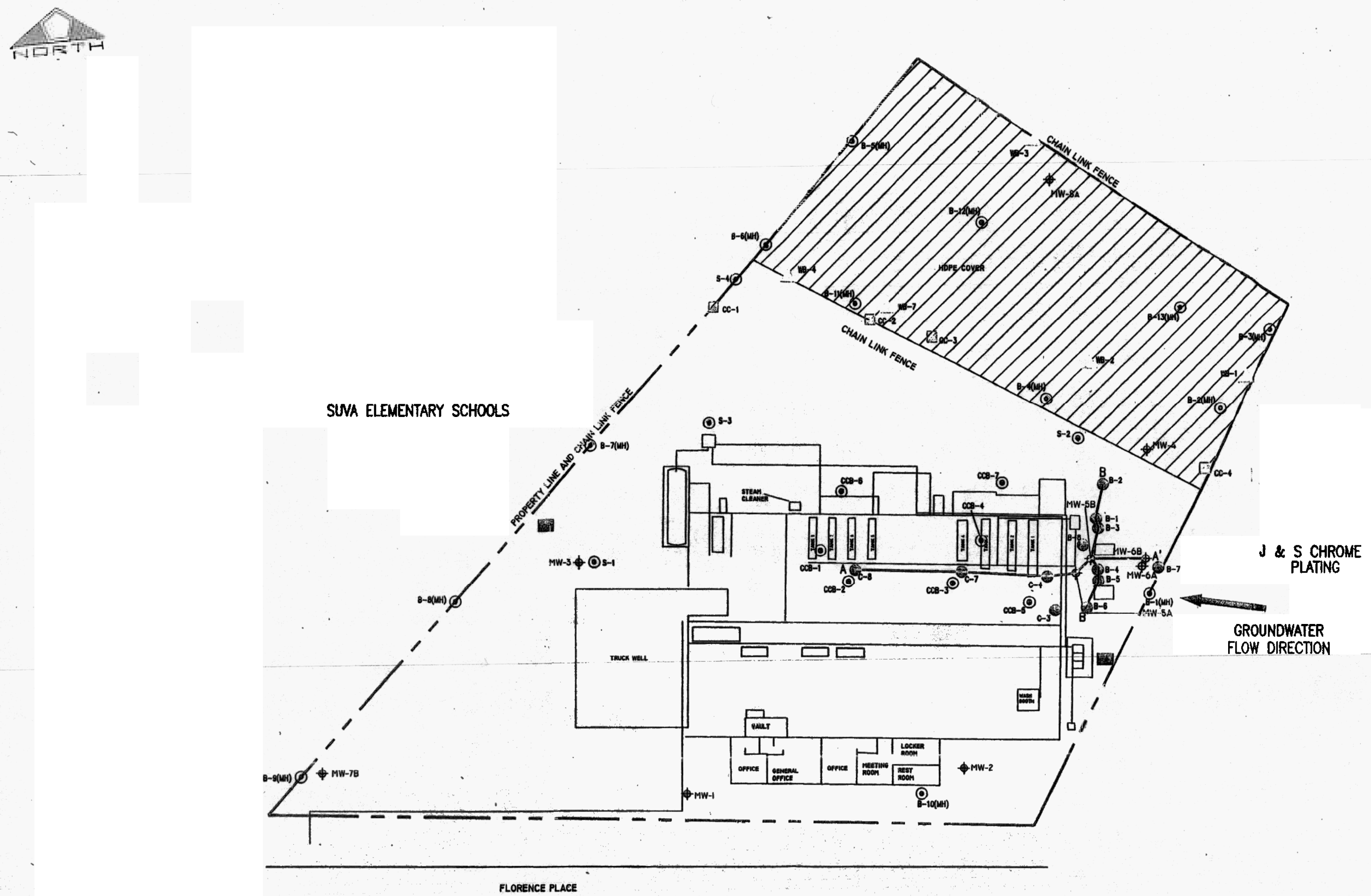
LOCOMOTIVE AIR SERVICES, INC.
6845 EAST FLORENCE PLACE
BELL GARDENS, CALIFORNIA

FIGURE 1

EXHIBIT 2


CAUTION
HAZARDOUS SUBSTANCE AREA
UNAUTHORIZED PERSONS KEEP OUT
DEPT. OF TOXIC SUBSTANCES CONTROL 714-484-5300
CUIDADO
AREA PELIGROSA
PERSONAS NO AUTORIZADAS NO ENTRAR
El DEPARTAMENTO del CONTROL
de SUBSTANCIAS TOXICAS
714-484-5300

EXHIBIT 1



LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- MONITORING WELL
- PROPOSED AIR MONITORING LOCATIONS
- MCLAREN HART
- CONSERVTECH
- KENDAL ADAMS
- RWQCB
- A–A' CROSS SECTION
- B–B' CROSS SECTION
- HDPE COVER

0 50
SCALE (FEET)

Clayton GROUP SERVICES
1565 MACARTHUR BOULEVARD, COSTA MESA, CALIFORNIA 92626
PHONE: (714) 431-4100 FAX: (714) 825-0685

DATE:	02/06/03
DRAWN BY:	DJR
CHECKED BY:	ES
PROJECT NO.:	80-01162.01.100
CAD NO:	800116506

FACILITY MAP WITH PROPOSED AIR MONITORING LOCATIONS

LOCOMOTIVE AIR SERVICES, INC.
6845 EAST FLORENCE PLACE
BELL GARDENS, CALIFORNIA

FIGURE 2