BRUSH STREET GROUP, LLC
1155 Third Street #230
Oakland CA 94607

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11:05 am, Jun 19, 2012

Alameda County
Environmental Health

June 15, 2012

Mr. Jerry Wickham, PG
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Francis Plating Property, 751-785 7th Street, Oakland
Conceptual Site Model and Work Plan for Sub-slab Vapor Investigation

Dear Mr. Wickham,

Enclosed please find the Work Plan for additional sub-slab vapor sampling at the 7th Street site. As we discussed, it includes elements of a site conceptual model. As I reviewed the report, I found the reiteration/synthesis of historic information helpful in terms of understanding what is known and unknown. I hope the presentation is useful for you as well

The data presented supports our preliminary sense that the majority of plating process compounds in soil and groundwater are located near and down gradient from the Frog Pond. The prospect of dividing the property to facilitate reuse and remediation seems supported by these data. There is still work to be done, but what we know thus far is encouraging. I've moved no further on the division concept, but am heartened by the recent presentation by our consultant.

Perjury Statement:

I declare under penalty of perjury that the information and/or recommendations in the attached report is true and correct to the best of my knowledge.

Thank you for your continued assistance.

Most sincerely,

Tom McCoy
Brush Street Group, LLC

Tel: 510/286-8200
Fax: 510/286-8210

CONCEPTUAL SITE MODEL AND WORK PLAN FOR SUB-SLAB VAPOR INVESTIGATION

JUNE 2012

751 - 785 Seventh Street
Oakland, California

Alameda County Case No. RO0002586

For:

Brush Street Group, LLC
Oakland, California

Y0323-05.01875

5900 Hollis Street, Suite D • Emeryville, CA 94608 • (510) 420-8686

BASELINE

ENVIRONMENTAL CONSULTING

15 June 2012
Y0323-05

Mr. Jerry Wickham, CHG
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Conceptual Site Model and Sub-slab Vapor Investigation Work Plan for 751-785 7th Street, Oakland, California, Case No. RO0002586

Dear Mr. Wickham:

On behalf of the Brush Street Group, BASELINE Environmental Consulting is submitting the attached Sub-slab Vapor Investigation Work Plan for 751-785 7th Street, Oakland. As we discussed, the report includes a presentation of a comprehensive Conceptual Site Model to provide context for the recommended additional testing.
We look forward to working with the Alameda County Health Care Services Agency on this project. Should you have any questions or need additional information, please do not hesitate to contact us at your convenience.

Sincerely,

James McCarty, P.E.
Project Engineer

JGM:km

Enclosure

cc: Tom McCoy, Brush Street Group LLC
Markus Niebanck, AMICUS

5900 Hollis Street, Suite D • Emeryville, CA 94608-2008 • (510) 420-8686 • FAX (510) 420-1707
Emeryville Petaluma San Francisco

CONCEPTUAL SITE MODEL AND WORK PLAN FOR SUB-SLAB VAPOR INVESTIGATION

June 2012

751 - 785 Seventh Street
Oakland, California

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BASELINE Environmental Consulting
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PROFESSIONAL CERTIFICATION

This report was prepared by me or by other professionals directly under my supervision.

James McCarty
P. E. No. C 62618

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751 - 785 Seventh Street
Oakland, California

1.0 INTRODUCTION

On the behalf of the Brush Street Group, LLC, BASELINE Environmental Consulting (BASELINE) has prepared this Conceptual Site Model and Work Plan for the former Francis Plating facility at 751 - 785 Seventh Street, Oakland, California (site) (Figure 1). The site is bounded by Seventh Street to the north, Brush Street to the east, a commercial building and lot to the south, and a Shell Service Station to the west (Figure 2).

The site is currently under the regulatory oversight of the Alameda County Environmental Health Services (ACEH) (Alameda County SLIC Case No. RO0002586). In a letter to the Brush Street Group, LLC, dated 2 April 2012, ACEH provided technical comments on BASELINE's report "*Soil Gas Survey, 751-785 Seventh Street, Oakland, California*," dated March 2012, and requested the submittal of a Work Plan to address the following technical comments:

- Conduct additional evaluation for vapor intrusion into the existing building on-site by collecting sub-slab vapor samples at multiple locations;

- Collect additional soil vapor samples to characterize the distribution of volatile organic compounds in the soil; and

- Repair any leaks or other opening in the existing sub-slab sample point where vapors from the subsurface could be transmitted into the existing building.

The existing sub-slab sample point is equipped with stainless steel cap that both seals the probe and covers the annular space. The cap seats flush with the surrounding concrete and is tightened provide a seal against vapors from migrating into the building.

In conversation with ACEH following receipt of the request it was determined that a comprehensive evaluation of potential source areas should be completed to provide a foundation for proposed additional testing. Numerous phases of site investigation have been completed; the Conceptual Site Model presented in this report synthesizes these phases of assessment, and allows for the identification of those areas of the site where additional testing is recommended.

This report focuses on volatile organic compound (VOC) contamination in soil, groundwater and soil vapor. Other contaminants have been detected in subsurface media. These other contaminants occur primarily in the vicinity and downgradient of the former "Frog Pond." While mentioned in this report, the magnitude and extent of these contaminants as well as the strategy for their mitigation/management will be presented in a later technical submittal.

2.0 CONCEPTUAL SITE MODEL

2.1 Historical Land Use

Based on Sanborn Fire Insurance maps, use of the site dates back to at least 1889 (BASELINE, 2005). Between 1889 and 1912, buildings and business located at the site included residential dwellings, a Santa Fe Express Co. office, lodgings, a Chinese laundry, a Japanese laundry, a marble works, and a stable. In the late 1940s or early 1950s, a large building for an auto truck sales and service facility was constructed on the western portion of the site (BASELINE, 2005). No documents are available related to the types of hazardous materials that may have been associated with these businesses, although it is likely that the auto truck sales and service facility used and stored petroleum products and solvents used in vehicle repair.

In 1957, the land use changed from the auto and truck sales and service to a plating facility. The plating operation was conducted using the building on the western portion of the site. The location and orientation of this building can be seen on an aerial photograph from 1965, as shown on Figure 3. In 1970, an additional building for the plating operation was constructed on the northeastern portion of the site (BASELINE, 2005). The general configuration of the site at this time is presented on Figure 4. On 18 November 1992, a fire significantly damaged the western building, which was subsequently razed, and the plating processes from that point forward were conducted primarily in the northeastern building.

In 1998, the owner of Francis Plating declared bankruptcy and the plating operation ceased. The property, along with the chemicals and equipment, was abandoned. Between 1998 and 2000, the U.S. Environmental Protection Agency (U.S. EPA) conducted a cleanup of the site. The abandoned chemicals and equipment were removed and shallow soil in areas without concrete or asphalt covering was excavated and removed. In 2003, Brush Street Group, LLC, the current owner, acquired the property.

In 2008, the northeastern building was renovated to its current condition shown on Figure 2. The roof and portions of the exterior structure of the original building were removed and replaced. A large containment vault located within the building was filled with crushed recycled concrete and sealed with a cement concrete cap. The building is currently occupied by the Kinetic Arts Center, a circus and fitness school. The site is almost entirely covered by concrete, asphalt, or the existing building in the northeastern corner. A strip of exposed soil exists along the western border of the site and small landscaped areas exist along the Brush Street boundary of the site (Figure 5).

2.2 Environmental Setting

2.2.1 Geology

Past investigations indicate that the lithology is consistent across the site. The soil from the surface to 3 or 5 feet below ground surface (bgs) consists of silty sand/sand fill with some brick and concrete debris. Very fine- to fine-grained sands (Merritt Sands) of the San Antonio Formation underlie the fill and extend to approximately 60 feet bgs (BASELINE, 2010). The Merritt Sands is underlain by plastic clay (Old Bay Mud).

In 2010, BASELINE collected a soil sample on-site from 26 feet bgs and tested the sample for hydraulic conductivity and porosity. The average hydraulic conductivity of the soil sample was 3×10^{-7} centimeters per second (BASELINE, 2010). The total porosity of the soil was determined to be 38.4 percent; however, the effective porosity of the soil sample tested was only 0.7 percent, indicative of low-permeability, dense silty- or clayey-sands (BASELINE, 2010).

2.2.2 Hydrogeology

Regional groundwater flow direction in the San Antonio Formation is southwesterly toward the Oakland Inner Harbor. Based on groundwater monitoring conducted by BASELINE in 2003, 2005, and 2010, the depth to the shallow unconfined groundwater at the site ranges from approximately 12 to 16 feet bgs (Table 1). Groundwater monitoring performed by BASELINE in 2010 and groundwater monitoring reports from the adjacent Shell Service Station indicate that the local shallow unconfined groundwater flows in a south southwesterly direction (BASELINE, 2010, CRA, 2009). The Old Bay Mud is the confining layer for the deeper water-bearing formation.

2.3 Summary of Investigative Activity

2.3.1 Versar, Inc.

In 1993, a Phase II Environmental Site Assessment was performed for the site by Versar, Inc. (Versar). A copy of the draft report was included in a Phase I ESA prepared by Hillmann Environmental Company in 1997 (Hillmann, 1997). Since the final report did not appear to have been issued, the draft report did not contain complete summary tables of all the analytical data, and no copies of the laboratory reports were available, the quality of the data is uncertain.

2.3.2 Ecology And Environment

After the Francis Plating facility was abandoned, Ecology and Environment was contracted by U.S. EPA to perform sampling as part of the emergency response action (BASELINE, 2005). The sampling effort mainly involved characterization of stored liquids, sludge, and sediments contained in tanks, pits, and ponds, all located above the concrete pavement. All of these materials were subsequently removed from the site. Soil samples were collected and analyzed for selected metals and total cyanide.

Surface soils were removed as part of the emergency response action to ensure that remaining surface soils did not contain cadmium, chromium, nickel, and lead concentrations above U.S. EPA Industrial Preliminary Remedial Goal. During the removal action, shallow soil was excavated and removed from areas that were not capped with concrete or asphalt concrete. These are the same areas (along the western boundary of the site and the landscaped areas) not capped by asphalt or concrete today.

2.3.3 BASELINE Environmental Consulting Investigations

BASELINE has conducted a number of environmental investigations at the site, beginning in 2003. These investigations included soil and groundwater sampling, a soil gas survey, and a sub-slab vapor evaluation, as described below. Tables 1 through 11 contain the groundwater level data and analytical results for soil, groundwater, soil gas, and vapor samples collected to date. Sampling locations are shown on Figure 5. The results have been screened against the San

Francisco Bay Regional Water Quality Control Board (Regional Water Board) Environmental Screen Levels (ESLs) for residential and commercial land uses where groundwater is not a drinking water resource (Regional Water Board, 2008). The screening for metals in soil also considered background values from the Lawrence Berkeley National Laboratory, "*Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory* (LBNL, 2009).

2.3.3.1 Soil and Groundwater Investigation

BASELINE performed a preliminary soil and groundwater investigation in 2003 (BASELINE, 2003). Seven soil borings, B-FP01 through B-FP07, were advanced to depths ranging from 16 to 25 feet bgs (Figure 5). Two shallow monitoring wells, MW-FP1 and MW-FP2, were also installed.

Soil samples were collected in the fill and just beneath the fill/native material interface at approximately 2 feet and 5 feet bgs. Soil samples were analyzed for Title 22 metals, total petroleum hydrocarbons (TPH) as gasoline and diesel, VOCs, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), pH, hexavalent chromium (Cr-VI), and cyanide. Select soil samples were also analyzed for soluble lead and/or nickel using the waste extraction test (WET) or toxicity characteristic leaching procedure (TCLP).

Groundwater samples were collected from the two groundwater monitoring wells and two borings (B-FP04 and B-FP05) to assess groundwater quality directly beneath the property. These groundwater samples were analyzed for TPH, VOCs, PAHs, PCBs, and cyanide. A grab groundwater sample was also collected from boring B-FP03 and analyzed for TPH to assess the potential presence of petroleum hydrocarbons, which might have migrated from the adjacent Shell Service Station site. Polychlorinated biphenyls were not reported above the laboratory reporting limit in any of the soil samples analyzed (BASELINE, 2003).

Lead, nickel, and zinc were reported in two shallow soils samples at concentrations exceeding the residential and commercial ESLs (Table 2). Nickel was reported in soil samples at levels exceeding residential and commercial ESLs at B-FP03 in the southwest corner of the site and at B-FP06, located just south of the existing building. B-FP06 also contained lead and zinc at levels exceeding residential and commercial ESLs. The soil samples from B-FP03 and B-FP06 contained soluble nickel at levels that exceeded California hazardous waste criteria (Table 3).

Volatile organic compounds were not reported in any of the soil samples at concentrations exceeding the residential and commercial ESLs (Table 4). The sample collected from B-FP07 at 2.5 feet bgs was reported to contain PAHs and cyanide above the residential and commercial ESLs (Tables 5 and 6). The soil sample collected from 5.0 feet bgs at this location did not contain these contaminants above the residential and commercial ESLs. The pH of the soils tested ranged from 5.2 to 9.2.

Dissolved nickel was reported in two of the grab groundwater samples (B-FP04 and B-FP05) and one of the groundwater monitoring well samples (MW-FP1) at concentrations exceeding the residential and commercial ESLs (Table 7). TPH as diesel was reported in the groundwater sample from MW-FP1 at a concentration exceeding the residential and commercial ESL (Table 8). Since MW-FP1 is an upgradient well, the TPH as diesel would appear to be migrating

on-site from an off-site source. The grab groundwater samples from B-FP03 was reported to contain TPH as gasoline at 150 µg/L.

2.3.3.2 Phase II Investigation

BASELINE performed a Phase II investigation in November 2005 (BASELINE, 2006). The investigation included installation of soil borings in: 1) potential source areas (borings B-FP08 through B-FP17), 2) areas to define the extent of the PAH-impacted area (borings B-FP07A through B-FP07C), and 3) areas with exposed soil (samples SS-FP01 through SS-FP10) (Figure 5). In addition, grab groundwater samples were collected from select soil borings and the two on-site groundwater monitoring wells, MW-FP1 and MW-FP2.

Soil samples were analyzed for one or all of the following: Title 22 metals, VOCs, PAHs, and Cr-VI. Select soil samples were also analyzed for soluble cadmium, copper, lead, and/or nickel using deionized water (DI WET) or TCLP. Groundwater samples from the two groundwater monitoring wells were analyzed for TPH as gasoline, TPH as diesel, VOCs, and PAHs. Grab groundwater samples from the soil borings were analyzed for at least one of the following: Title 22 metals, Cr-VI, TPH as gasoline, TPH as diesel, VOCs, and PAHs.

Cadmium, total chromium, Cr-VI, copper, lead, and nickel were reported in shallow soil samples at concentrations exceeding the residential and commercial ESLs (Table 2). Cadmium, total chromium, copper, and nickel in soil samples collected from B-FP11 and nickel in soil samples collected from B-FP12, both located on the eastern portion of the site near the former track drain, were reported at concentrations exceeding the residential and commercial ESLs. Total chromium, Cr-VI and nickel were reported in soil samples collected from B-FP14, located near a subsurface containment vault on the southwestern portion of the site referred to as the "Frog Pond," at concentrations exceeding the residential and commercial ESLs. Antimony and lead were reported in soil samples collected from B-FP14 at concentrations above the residential ESLs but below commercial ESLs.

The composite sample (COMP 6) from the landscaped areas along Brush Street was reported to contain lead at concentrations exceeding the residential ESL.

The soil samples tested using the DI WET analysis were reported to contained only low levels of soluble metals (Table 3).

Cis-1,2-dichloroethene (cis-1,2-DCE) and trichloroethene (TCE) were reported in one grab groundwater sample (B-FP14) at concentrations exceeding the residential and commercial ESLs (Table 9).

2.3.3.3 Phase III Investigation

A focused Phase III investigation was conducted after sample results from B-FP14 identified chlorinated VOCs adjacent to the Frog Pond, located in the southwestern portion of the site (BASELINE, 2006). The investigation consisted of collecting soil and grab groundwater samples from six soil borings (B-FP18 through B-FP23) (Figure 5).

Two soil samples were collected from each boring, from 5 or 6 feet bgs and from 12 feet bgs. Soil samples were analyzed for VOCs. In addition, the soil sample from B-FP25 collected at 6.0

feet bgs was also analyzed for Cr-VI. Standing water, about 6 inches deep, was observed above the presumed bottom of the Frog Pond in boring B-FP23. This water had a greenish-yellow tint. The grab groundwater sample collected from B-FP23 also had a greenish-yellow tint. The grab groundwater sample from B-FP23 was analyzed for Title 22 metals, Cr-VI, and VOCs.

Hexavalent chromium was reported in the soil sample collected from B-FP23, adjacent to and south of the Frog Pond, at concentrations exceeding the residential and commercial ESLs (Table 2). Concentrations of cis-1,2-DCE and TCE exceeding the residential and commercial ESLs were reported in grab groundwater samples from borings B-FP18, B-FP20, and B-FP22 (Table 9). Dissolved total chromium, Cr-VI, cobalt, lead, mercury, nickel, silver, thallium, and vanadium were also reported in the grab groundwater sample from B-FP23 at concentrations exceeding the residential and commercial ESLs (Table 7).

2.3.3.4 Frog Pond Removal

Data from the Phase III investigation suggested that the Frog Pond was a significant source of the subsurface contamination at the site. Therefore, the Frog Pond was removed in an attempt to identify the source (BASELINE, 2008). BASELINE collected soil samples from eight locations underneath the Frog Pond between 31 May and 5 June 2007 (sample locations B-FP24 through B-FP31 on Figure 5) and submitted the samples for Title 22 metals and Cr-VI analyses. Soil sample locations B-FP24 through B-FP28 were chosen to characterize the soil underneath the Frog Pond. Samples were collected from sampling locations B-FP24 through B-FP28 from 4.5 feet below the surrounding grade, which was immediately below the concrete bottom of the Frog Pond. A second soil sample was collected at 9.5 feet below grade, or 5.0 feet below the bottom of the Frog Pond, from B-FP24 through B-FP27.

Additional soil samples were collected below suspect features found in the Frog Pond, as follows:

- One soil sample (B-FP29) was collected from 7.0 feet bgs, which is below the bottom of a sump on the eastern side of the Frog Pond;
- One soil sample (B-FP30) was collected below the bottom of a sump that was attached to the separate concrete pad found about 1.0 foot below the bottom of the Frog Pond from 7.0 feet below grade; and
- Two soil samples were collected from 11.5 and 18.5 feet below grade adjacent to a large sump that was discovered on the western side of the Frog Pond (B-FP31).

BASELINE also collected a sample of the fine-grained sand immediately below the cobbles imbedded at the large sump for metals analysis, after the cobbles and sand were excavated. Total chromium, Cr-VI, copper, and/or nickel were reported at concentrations exceeding the residential and commercial ESLs in the soil samples collected from B-FP24, B-FP25, B-FP29, B-FP30, and B-FP31 (Table 2).

2.3.3.5 Phase IV Soil and Groundwater Investigation

On 2 and 3 March 2010, BASELINE installed three shallow groundwater monitoring wells (MW-FP3, MW-FP4A, and MW-FP5) and one deep groundwater monitoring well (MW-FP4B)

at the site (BASELINE, 2010) (Figure 5). The shallow borings were completed to a final depth of 25 feet bgs and the deep boring was completed to a final depth of 65 feet bgs.

Soil samples were collected from 5 feet bgs at MW-FP3 and from 5, 10, 15, and 20 feet bgs at MW-FP4A and MW-FP5 for chemical analysis. The soil samples were analyzed for Title 22 metals and Cr-VI. A soil sample from MW-FP4B was collected from 26 feet bgs and analyzed for hydraulic conductivity, effective porosity, and bulk density.

The soil samples from MW-FP4A and MW-FP5 contained Cr-VI at concentrations exceeding the residential and commercial ESLs. The soil sample from MW-FP4A collected at 5.0 feet bgs also contained total chromium at a concentration exceeding the residential and commercial ESL. The soil sample collected from MW-FP3 did not contain any metal above the residential and commercial ESLs.

The three on-site shallow groundwater monitoring wells, MW-FP4A, MW-FP3, and MW-FP5, were screened from 12 to 25 feet bgs within the Merritt Sands. The deep well (MW-FP4B) was screened within the Merritt Sands from 45 to the top of the Old Bay Mud at 57 feet bgs.

On 12 April 2010, BASELINE installed one shallow off-site well (MW-FP6) and one deep off-site well (MW-FP7B) on Sixth Street. These wells were installed similarly to the wells previously installed on-site, as described above. The deep well (MW-FP7B) was screened within the Merritt Sands from 39 to the top of the Old Bay Mud at 49 feet bgs.

After developing the wells on 9 March 2010, the two existing groundwater monitoring wells (MW-FP1, and MW-FP2), the six new groundwater monitoring wells (MW-FP3, MW-FP4A, MW-FP4B MW-FP5, MW-FP6, and MW-FP7B), and two Shell Service Station groundwater monitoring wells (MW-3 and MW-9) (Figure 2) were sampled using a low flow method. The soil and groundwater samples were analyzed for dissolved Title 22 Metals, Cr-VI, and VOCs.

Dissolved Cr-VI was reported in all the on-site wells sampled at levels exceeding the residential and commercial ESLs for sites were groundwater is not a drinking water source. The highest concentration was reported in the groundwater sample collected from MW-FP4A. Dissolved total chromium, cobalt, copper, nickel, thallium, and vanadium were also reported at levels above the residential and commercial ESLs.

Trichloroethene was reported in the groundwater samples from MW-FP3, MW-FP4A, MW-FP5, MW-FP6, MW-FP7B, and MW-9 (Figure 2). Trichloroethene was not reported in on-site shallow groundwater monitoring wells MW-FP1 and MW-FP2 or on-site deep groundwater monitoring well MW-FP4B. The highest reported concentration of TCE was 51 micrograms per liter (µg/L), from groundwater monitoring well MW-FP4A located downgradient of the Frog Pond. TCE was reported in MW-FP3 at 0.9 µg/L and MW-FP5 at 1.2 µg/L. The concentrations of VOCs in the groundwater monitoring wells were below the residential and commercial ESLs. Other VOCs reported in one or more of the groundwater samples (acetone, methyl tertiary-butyl ether (MTBE), carbon disulfide, chloroform, 1,1-dichloroethene (1,1-DCE), cis-1,2-dichlorethen, and trans-1,2-dichloroethene (trans-1,2-DCE) were also below the residential and commercial ESLs.

Dissolved metals total chromium, Cr-VI, copper and nickel were also reported in groundwater monitoring well located along 6th Street at levels exceeding residential and commercial ESLs (Table 7). The concentration of VOCs in the off-site wells was below the ESL (Table 9).

2.3.3.6 Soil Gas Survey

In November 2011, BASELINE performed a soil gas survey on the site. Soil gas samples were collected from six locations as shown on Figure 5 (SG-01 through SG-06). Deep and shallow soil gas samples were collected at each location. The soil gas sample probe was initially advance to 5 feet bgs for the shallow samples and 10 feet bgs for the deeper samples. Because of the low permeability of the soil, the probes had to be retracted as much as 2 feet to obtain enough soil gas for analysis. Trichloroethene was reported in shallow soil gas samples at concentrations exceeding residential land use screening levels at locations SG-01, SG-03, SG-04, and SG-05 (Table 10). Trichloroethene was reported at concentrations exceeding commercial land use screening levels at locations SG-01 and SG-04 in shallow soil gas samples collected near the southeastern corner of the existing building and the former Frog Pond.

2.3.3.7 Sub-Slab Vapor Evaluation

Because elevated concentrations of VOCs were reported in the soil gas sample collected at SG-01, BASELINE collected vapor samples in February 2012 from beneath the concrete slab of the existing, on-site building. The vapor samples were collected from a vapor probe installed by BASELINE in the shallow slab-on-grade foundations and analyzed for VOCs (Table 11). The concentrations of VOCs in indoor air were estimated by applying the Department of Toxic Substances Control's recommended attenuation factor to analytical results from vapor samples collected beneath the shallow slab-on-grade foundations. This assumes that the VOC concentration in the indoor air would be 1/20th the concentration measured beneath the foundation slab. The estimated indoor air concentrations of VOCs were below the Regional Water Board's ambient and indoor air ESLs for residential and commercial/industrial land uses (Table 11).

Based on the results of the sub-slab sampling and chemical analysis, the vapors beneath the slab do not appear to represent an unacceptable health risk to the current users of the building. However, because the leak detection agent used during the sampling was detected in both samples collected at the site, the reported concentrations may be biased low.

2.3.4 Soil Gas Survey – 601 Brush Street

On 19 May 2009, P&D Environmental (P&D) performed a subsurface investigation for the property at 601 Brush Street, located adjacent to and southwest of the site, (P&D Environmental, 2009). P&D also collected two grab groundwater samples from two borings (B6 and B7) and installed two soil gas probes to a depth of 5 feet bgs (SG5 and SG6) on the southeastern portion of the 751-785 Seventh Street property (Figure 5).

The grab groundwater samples collected from the borings B6 and B7 on the 751-785 Seventh Street property were reported to contain TCE at 15 and 7.2 µg/L, respectively, both below commercial and residential ESLs. The soil gas samples collected from SG-5 and SG-6 at 5 feet bgs on the 751-785 Seventh Street property were reported to contain TCE at 3,400 and 5,900

micrograms per cubic meter ($\mu g/m^3$), respectively, which exceed the residential ESLs for soil gas but are below the commercial ESL.

2.4 Contaminants of Concern

2.4.1 Contaminants

Previous investigations have found that the soil and/or groundwater at the site have been impacted by metals and VOCs. Hexavalent chromium and TCE are the primary chemicals of concern for the site due to their relative prevalence in the subsurface compared to other contaminants and their lower human health risk thresholds. The contaminants are described below; potential source areas are discussed in detail in Section 3 of this report.

2.4.1.1 Metals

Hexavalent chromium has been detected in soil and groundwater samples above the residential and commercial ESLs where groundwater in not a potential drinking water source. The source of the Cr-VI has been identified as the subsurface containment vault located on the southwestern portion of the site referred to as the Frog Pond, which has been removed (Figure 5). Other metals detected in the soil or groundwater at the site in excess of the residential and commercial ESLs include total chromium, copper, lead, nickel, and zinc. Most of the elevated concentrations of metals correspond with the elevated concentrations of Cr-VI near the Frog Pond. Cadmium, total chromium, copper, nickel, and zinc have been reported in soil samples collected near the former track drain and just south of the northeastern building at levels exceeding residential and commercial ESLs.

Dissolved concentrations of Cr-VI, total chromium, cobalt, copper, nickel, thallium, and vanadium have been reported in groundwater samples collected from the groundwater monitoring wells at concentrations exceeding the residential and commercial ESLs. Dissolved concentrations of Cr-VI, total chromium, cobalt, copper, nickel, thallium, and vanadium have been detected at concentrations exceeding the ESLs but at lower concentrations in off-site groundwater wells along 6th Street.

These metals do not represent a health risk to the current users of the site (Kinetic Arts Center) because, except for some small landscaped areas and the strip along the western boundary of the site, the site is capped with concrete or asphalt and therefore there is no direct exposure pathway. The landscape areas and the strip along the western boundary of the site were remediated during the U.S. EPA cleanup operation in 2000. Engineering controls may be instituted to manage the risk to future users of the site and construction workers. The dissolved Cr-VI concentration in the groundwater is also not a health risk for the current site users since they have no exposure to groundwater. The off-site extent of Cr-VI and other dissolved metals has yet to be defined and further investigation is necessary to determine whether the off-site migration represents a risk to the environment.

2.4.1.2 VOCs

No VOCs have been detected in the soil at levels exceeding the residential or commercial ESLs where groundwater in not a potential drinking water source. Trichloroethene and its degradation product cis-1,2-DCE have been detected in the grab groundwater in the area immediately around

the former Frog Pond structure at concentrations above the ESLs. However, VOCs have not been detected at concentrations exceeding residential or commercial ESLs in the groundwater samples collected from groundwater monitoring wells (Table 9).

Co-located with the TCE and cis-1,2-DCE detections in groundwater have been lower levels of other TCE degradation products: trans-1,2-DCE and 1,1-DCE. 1,1,1-trichloroethane (1,1,1-TCA) has also been detected in the groundwater in some areas and 1,1-DCE may also be formed from the hydrolysis or thermal decomposition of 1,1,1-TCA. Other VOCs detected in the groundwater at the site include acetone, xylenes, MTBE, carbon disulfide, 2-chlorotoluene, and chloroform. However, these VOCs have only been detected infrequently and at levels below the ESLs.

Soil gas samples collected by BASELINE from the subsurface at the site in 2010 were reported to contain VOCs with TCE being the dominant volatile compound detected. Also detected in soil gas samples were 1,1,1-TCA and TCE degradation products cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, and vinyl chloride (BASELINE, 2010). The concentration of TCE in four of the shallow soil gas samples collected in the vadose zone exceeded residential ESL. The concentration of TCE in two of the shallow soil gas samples collected in the vadose zone exceeded commercial ESL. The highest concentration was located adjacent to the former Frog Pond structure. An elevated concentration was also reported in a sample collected near the southeastern corner of the existing building.

In response to elevated TCE concentrations reported in a soil gas sample collected near the existing building, Brush Street Group, LLC requested that BASELINE collect a vapor sample beneath the existing building's cement concrete slab. In 2012, BASELINE collected a sub-slab vapor sample and duplicate, which were reported to contain TCE, 1,1,1-TCA, tetrachloroethene, and xylenes at levels below human health concerns. However, the leak detection agent used during the sample collection was reported in the samples indicating the results are biased low.

While the VOCs in the soil and groundwater are below the ESLs where groundwater is not a source of drinking water, soil gas sampling has indicated that the VOCs may represent a health risk to existing and future users of the site. Although the sub-slab samples collected indicated the health risk was below health-based screening levels, further evaluation is needed to determine the health risk to the existing users at the site. Engineering controls may be instituted to manage the potential health risk from VOC vapor intrusion to future users of the site. To provide additional information about where elevated VOCs may be located, BASELINE has evaluated the various plating facility's processes in conjunction with the soil, groundwater, and soil gas data collected at the site to date.

3.0 POTENTIAL SOURCE AREA INVENTORY AND EVALUATION

This evaluation was performed to identify the possible source or sources of VOCs reported in the soil gas samples collected at the site.

3.1 Available Records

In 2004, BASELINE prepared a Site History and Data Summary Report for the site, which was submitted to ACEH (BASELINE, 2005). In preparation of the report, BASELINE obtained the following agency records:

- City of Oakland Fire Health Hazardous Material Inspection Reports from 1995, 1996 1997;
- Hazardous Material Management Plans from 1993 and 1995 prepared by Francis Plating summited to Alameda County Department of Environmental Health Hazardous Materials Division;
- Alameda County Department of Environmental Health Hazardous Material Inspection Forms from 1991 and 1994;
- Hazardous Materials Business Plans from 1989 and 1995 prepared by Francis Plating submitted to Alameda County Department of Environmental Health Hazardous Materials Division and the Oakland Fire Department Office or Emergency Services, Hazardous Materials Management Program; and
- East Bay Municipal Utility District (EBMUD) Wastewater Discharge Permit documentation, Spill Prevention Plan dated 1987, and Source Control Inspection Reports from 1996, 1997, and 1998.

Additional information was obtained from the following sources:

- Phase I report prepared by Hillman Environmental (Hillman, 1997);
- Draft Baseline Environmental Assessment, Francis Plating, Preliminary Results prepared by Versar (Versar, 1993);
- Memorandum documenting initiation of a Removal Action by the U.S. EPA On-Scene Coordinators (U.S. EPA, 1998); and
- Assessment and Removal Report documenting a U.S. EPA emergency response and removal action conducted at the site in 1999 [Ecology and Environment, Inc. (E&E), 2000].

These documents provide descriptions, site maps, and hazardous material inventories for Francis Plating's operations dating back to 1987. To facilitate the preparation of this Work Plan, BASELINE has compiled the historical information to identify areas within the site where activities conducted in the past may represent VOC contaminant sources. Plating operations often used solvents such as TCE and 1,1,1-TCA for cleaning metal parts of oil and grease prior to plating.

3.2 Francis Plating Process Areas

This general description of the operational layout of the various phases of Francis Plating operation precedes a detailed description of specific potential source areas (Section 3.3).

Using the available documents listed in Section 3.1, BASELINE has prepared a series of site maps depicting the various locations and arrangements of the plating facility operations (Figures 6 through 8).

Historically, Francis Plating performed anodizing, passivating, phosphate and chromium conversion coatings, electroless nickel, and electroplating of nickel, cadmium, chromium, silver, and zinc. Very little information is available about the plating operation prior to 1987. Aerial photographs and Sanborn Fire Insurance maps indicated that the plating operation was confined to the building on the western portion of the site (BASELINE, 2005). The operation expanded onto the rest of the site with the construction of the plating building in 1970.

Based on available site maps contained in the documents described above, it is apparent that the locations where specific processes were performed on-site changed over time. This is partially in reaction to the fire in 1992 but also may be due to innovations in the plating industry or reaction to changing market demand. For instance, a 1996 EBMUD Source Control Report notes that the Quality Assurance Manager for the facility stated that they no longer performed chromium plating and a 1997 EBMUD Source Control Report notes that the Plant Supervisor for the facility indicated that the facility performed approximately 60 percent anodizing and the remainder primarily nickel and cadmium plating (EBMUD, 1996, 1997).

Since at least 1987, but prior to the fire in 1992, plating operations were conducted in both the western and northeastern buildings. The configuration of the processes in 1987 is presented on Figure 6. Both western and northeastern buildings contained belowground concrete vaults and the tanks were suspended over the vaults to contain any spills or releases.

The process tanks in the western building were located over a 68-foot by 15-foot secondary containment vault (E&E, 2000) and a smaller 12-foot by 4-foot vault (BASELINE, 2005) located immediately adjacent.

The process tanks in the northeastern building were located over a 74-foot by 25-foot secondary containment vault (E&E, 2000). Nickel process tanks in the northeastern building were located over an additional secondary containment vessel in the southwestern portion of the containment vault. This vessel was 32 feet wide and 15 feet wide and constructed of stainless steel (E&E, 2000).

Plating and anodizing operations were performed in the northeastern building and acid storage was located in the yard on the southeastern portion of the site. Wastewater treatment was performed on the southern side to the northeastern building. The liquids were treated on-site to precipitate the metals out of solution and, prior to 1996, discharge to the sanitary sewer. Electroless nickel and cadmium plating and chromium electroplating were carried out in the Frog Pond. Offices, drying ovens, and a paint shop were located in the western building. Note that there is no indication of a process area, such as a degreasing station, where solvent use would be expected to occur. However, process area 39 (Figure 6) indicates that “Hot Alkaline Cleaner”

was one of the processes and the cleaning of the metal may have been performed using alkaline cleaners such as sodium hydroxide. Sodium hydroxide is listed in the Hazardous Material Management Plans inventory lists (Appendix A).

After the fire in 1992, the western building was demolished. The plating operations were consolidated in the plating building on the northeastern quarter of the site and the Frog Pond was used as a repository for liquids spilled during on-site treatment. The configuration of the processes in 1996 is presented on Figure 7. The plating building contained tanks for anodizing, acid activation, phosphate coatings, chromium conversion coating, cadmium cyanide plating, chrome plating, electrolytic nickel plating, and nitric acid stripping/passivation. Residual waste from the fire appeared to have been deposited in the Frog Pond and, since it was uncovered and open to the elements, the Frog Pond was reported to accumulate stormwater (EBMUD, 1998). As with the 1987 site map, there is no indication of a process area, such as a degreasing station, where solvent use would be expected to occur. Process areas 20 and 22 (Figure 7) are identified as "Soap Cleaner" and "Citric Cleaner" and the cleaning of the metal may have been performed using these methods.

The site plan in the 1996 EBMUD Wastewater Discharge Permit indicates the existence of stormdrain inlets on-site (Figure 7). While no evidence of these stormdrain inlets exists on-site today, the outlets can still be seen at the curb on Brush Street and 7th Street. Since the site's Spill Prevention Plan, dated 1987, indicates that the site used a combination of berms, containment pits, and trenches to provide complete property line surface runoff containment (Francis Plating, 1987), it may be assumed that the stormdrain system inlets were plugged at some time prior to 1987.

In 1996, EBMUD served the facility with violation notices for discharging wastewater with elevated levels of nickel. In the fourth quarter of 1996, EBMUD ordered the facility to cease wastewater discharge. The facility discontinued discharging to the sanitary sewer and sealed the on-site sewer connection with cement (E&E, 2000). After this time, the facility treated wastewater on-site under a "permit-by-rule" for on-site hazardous waste treatment and an authorization to operate a fixed treatment unit issued by Department of Toxic Substances Control (DTSC, 1994). The facility was issued a Discharge Prevention Permit from EBMUD and subjected to periodic "zero discharge" inspections. The Hazardous Material Management Plan, dated 1 June 1995, indicates the wastewater treatment unit continued to be located on the southern side to the northeastern building.

To treat the liquid waste, the facility would increase the pH of the liquid wastes in the containment vault to precipitate the metals out of the solution; the remaining liquid was pumped off the top into a 5,000-gallon Baker Tank in the southwestern corner of the site. The pH of the residual liquid in the Baker Tank was raised, sent to a boiler, and evaporated. Metal precipitates were collected and compressed into filter cakes using filter presses. No records are available indicating how the filter cakes were disposed. During an EBMUD inspection in 1998, a large amount of improperly stored filter cake was observed on-site (EBMUD, 1998).

The configuration of the processes in 1998 is presented on Figure 8 and is based on a removal action report prepared by (E&E, 2000). The report indicated that in 1998, the wastewater treatment system was located on the southern site of the Frog Pond (Figure 8). Batch

pretreatment of wastewater from nickel plating and nitric acid stripping processes was done in this area, and wastewater was contained in the Frog Pond. Drums were present in clusters scattered across the site and the area next to the northeastern building was designated for drum storage (Figure 8).

3.3 Francis Plating Potential VOC Source Areas

The following six potential VOC source areas have been identified based on the evaluation of the historic record, the descriptions of the types of activities performed at the site, or based on similar experience at other plating facilities:

- Potential Source Area 1 – Northeastern Building Containment Vault
- Potential Source Area 2 – The Frog Pond
- Potential Source Area 3 – Eastern Track Drain
- Potential Source Area 4 – Plating Areas 1 and 2
- Potential Source Area 5 – Drum Storage Areas
- Potential Source Area 6 – Degreasing Station

An evaluation of each of these potential VOC source areas and the existing soil, groundwater, and soil gas data for each is discussed below.

3.3.1 Potential Source Area 1 - Northeastern Building Containment Vault

Potential Source Area 1 is the containment vault that was located within the northeastern building (Figure 9). The vault was a 6-foot deep, 74-foot long by 25-foot wide concrete structure used to contain spills or releases from the various plating processes (E&E, 2000). Nickel process tanks were located over a second 5-foot deep, 32-foot long by 15-foot wide stainless steel secondary containment vessel in the southwestern portion of the containment vault (E&E, 2000). Until 1996, the liquids from this containment vault were discharged to the sanitary sewer after passing through a small sump (sometimes referred to as a sampling weir) located just off the northwest corner of the containment vault. The track drain located outside in the yard south of the building was also connected to the containment vault (Figures 6, 7, and 8).

3.3.1.1 Potential Source Area 1 Investigation Results

In 2003, BASELINE advanced a single boring, B-FP07, within the northeastern building near an existing sump and just east of the containment vault (Figure 5). The boring log from this investigation indicates that the top 4.5 feet of soil was sandy fill material, underlain by Merritt Sands (BASELINE, 2003). Soil samples were collected at 2.5 and 5.0 feet bgs. The soil samples were submitted for Title 22 Metals, Cr-VI, TPH as gasoline, TPH as diesel, VOCs, PAHs, PCBs, and cyanide. Neither soil sample contained VOCs above the laboratory reporting limits (Figure 9 and Table 4).

In 2005, BASELINE advanced five additional borings within the northeastern building: B-FP07A, B-FP07B, B-FP07C, B-FP08, and B-FP09 (Figure 5) to delineate the extent of PAHs

reported in the soil sample from B-FP07. Borings B-FP08 and B-FP09 were located within the containment vault.

Soil samples were collected at 2.5 feet bgs at borings B-FP07A, B-FP07B, B-FP07C and an additional soil sample was collected at 3.5 feet bgs at boring B-FP07B. The soil samples were submitted for PAH analysis. A grab groundwater sample was collected from B-FP07A and submitted for TPH as gasoline, TPH as diesel, VOCs, and PAHs. The grab groundwater sample collected at B-FP07A did not contain any VOCs above the laboratory reporting limit (Figure 9 and Table 9).

Borings B-FP08 and B-FP09 were located within the northeastern building's secondary containment vault (Figure 5). Soil samples were collected at 2.0 and 4.5 feet below the bottom of the containment vault or 8.0 and 10.5 feet below the building floor. Both borings were advance in Merritt Sands (BASELINE, 2006). The soil samples collected at 2.5 feet bgs were submitted for VOC analysis (Figure 9 and Table 4). A grab groundwater sample was collected from B-FP09 and also submitted for VOC analysis (Figure 9 and Table 9). With the exception of methylene chloride, no VOCs were reported in either soil samples. Methylene chloride was detected at a concentration of 0.28 milligrams per kilogram (mg/kg) in the soil sample from B-FP09. With the exception of 1,1,1-TCA, no VOCs were detected above the laboratory reporting limit in the grab groundwater sample from B-FP09. 1,1,1-TCA was reported in the groundwater samples at a concentration of 0.70 µg/L.

In 2012, BASELINE installed a sub-slab vapor probe in the southeast corner of the building adjacent to where the exterior track drain connects to the containment vault (Figure 5). A vapor sample and duplicate were collected from the probe and analyzed for VOCs. TCE was reported in the vapor samples at 18 and 19 $\mu g/m^3$ and 1,1,1-TCA was reported at 19 and 18 $\mu g/m^3$. Low levels of tetrachloroethene, m,p-xylene, and o-xylene were reported in one of the samples (Figure 9 and Table 11). However, the leak detection agent used during the sample collection was reported in both samples indicating the results are biased low.

3.3.1.2 Potential Source Area 1 Summary

Based on the review of the processes performed within Potential Source Area 1 and the analytical data collected to date, the containment vault within the northeastern building does not appear to be a source of VOCs found in the soil and groundwater at the site. Historical site maps depicting the plating processes do not indicate that solvents were used within the containment vault. Soil and groundwater samples collected from the beneath the bottom of the containment vault have not contained TCE above the laboratory reporting limits. Therefore, based on the review of the processes performed within Potential Source Area 1 and the analytical data collected to date, the containment vault within the northeastern building does not appear to be a source of the TCE or other VOCs found in the soil gas at the site. The TCE and 1,1,1-TCA reported in the sub-slab sample are likely migrating from outside the building.

3.3.2 Potential Source Area 2 – The Frog Pond

Potential Source Area 2 is the below grade concrete containment vault, an approximately 4-foot deep, 70-foot long, and 15-foot wide vault (E&E, 2000), referred to as the Frog Pond. The containment vault was originally located within the western building. The Frog Pond remained when the building was demolished after the 1992 fire. A 2006 investigation by BASELINE to

assess the presence of VOCs in the southwestern corner of the site identified high chromium concentrations in a grab groundwater sample (BASELINE, 2006). This finding suggested that the Frog Pond might have been a source of contamination. Therefore, the Brush Street Group proposed to remove the entire Frog Pond. The details and photographs of the Frog Pond removal are provided in BASELINE's report, "*Documentation of Frog Pond Removal Activities*", dated 29 February 2008.

It is not known when the Frog Pond was initially constructed. The former plating operations apparently used the Frog Pond to contain some plating operations prior to the fire in 1992, and to contain wastewater and liquids spilled from on-site treatment of wastes after the fire. Sometime before the Brush Street Group became the owner of the site in 2003, the Frog Pond had been sealed with asphalt at the ground surface. It is not known who sealed it or when it was sealed. Three surface grates located in the northeast corner appeared to allow stormwater to drain into the Frog Pond (Figure 5).

After the overlying asphalt had been removed, it was found that the Frog Pond had been filled with pea-gravel. The entire pond was lined with concrete and the sidewalls and bottom were stained (color ranged from emerald green to pale yellow) and deteriorated. However, no visible cracks or seams were observed. Chemicals formerly stored in the Frog Pond apparently permeated the concrete as evidenced in the gradation of staining that was observed in cross-sections of the walls. The exposed concrete surfaces were stained green-yellow, and the staining on the concrete cross-sections decreased with distance from the interior. The concrete surface on the exterior of the pond was consistently unstained. A narrow trench ran along the center of the pond along the entire length and drained into a small sump at the eastern end (Eastern Sump) (Figure 5).

During the removal of the Frog Pond, five additional structures were identified and investigated and/or removed (Figure 9). The structures included the following:

- Western Vault
- Northern Vault A
- Northern Vault B
- Lower Concrete Slab and Sump
- Vertical Concrete-Coated Corrugated Steel Pipe

These structures are described in further detail below.

Western Vault: At the time of the Frog Pond removal, the outline of the Western Vault was observed on the ground surface and the overlying concrete top was removed. The inside of the vault measured approximately 33 by 44 inches and was filled with fine-grained sand. There was no water in the vault and no odors were detected. Neither the sand nor the interior walls or bottom were stained. The vault appeared to have originally been separated into two compartments; remnants of a former concrete baffle could be seen along the sides and bottom.

The bottom on one side of the former baffle appeared to be fiberglass, and the other side appeared to be concrete. A pipe at a depth of 16 inches bgs connected the Western Vault to the Frog Pond. The metal pipe contained liquid with a greenish color. The purpose of the Western Vault is unknown, as it was not identified on the site plans for any of the documents reviewed.

Northern Vault A: The outline of the Northern Vault A could also be seen on the ground surface, at the time of the Frog Pond removal. The overlying concrete top of the vault was removed. The vault measured approximately 4 by 12 feet and was filled with course gravel and water. The water and gravel were stained black and had a distinct septage odor generally associated with anaerobically degraded organic material. The Northern Vault A and the Frog Pond were two separate structures with independent concrete walls. About a 4-inch layer of sand was observed between the two walls. One corner of the Northern Vault A had a depressed square corner where water would accumulate. A metal pipe, observed to penetrate the Frog Pond about four feet below grade, was located adjacent to and slightly above the depressed corner of the vault. Liquids that accumulated in the depressed corner of the vault may have been pumped or drained in the past through the lower metal pipe into the Frog Pond. Northern Vault A appears to have been used in conjunction with the plating operations conducted at the Frog Pond as a second containment area just north of the Frog Pond as it appears in the site plans from the Hazardous Material Management Plans, Hazardous Materials Business Plans, and inspection or assessment reports (Figures 6, 7, and 8).

Northern Vault B: When the northern and eastern concrete sidewalls of the Frog Pond were demolished and removed, a 4-inch diameter metal pipe was observed to terminate near, but not penetrate, the northern sidewall of the Frog Pond. This pipe appeared to lead toward another subsurface structure (Northern Vault B), as deduced from an outline on the concrete surface about 25 feet north of the Frog Pond (Figure 5). The concrete covering the Northern Vault B was removed and the vault observed to be filled with soil. The soil was removed and the sidewalls and bottom of vault were observed to be in good condition. There is no information referencing this structure in any of the documents reviewed. The fact that the pipe from this structure did not penetrate the Frog Pond indicates that it pre-dated construction of the Frog Pond and may have been associated with the former auto truck sales and service facility operated at the site in the late 1940s and early 1950s. Due to the lack of any apparent contamination in the structure, i.e., residual liquids in the pipe or staining in the vault, it does not appear that the vault was used in the plating process and is unlikely to be a source of contamination. A groundwater sample collected downgradient of Northern Vault B further supports this conclusion (MW-FP3, Figure 9). Therefore, Northern Vault B is not considered a contributing factor in the evaluation of Potential Source Area 2.

Lower Concrete Slab and Sump: When the concrete bottom of the Frog Pond was removed, a separate lower concrete pad was found near the western end. The concrete pad measured about 12 by 5 feet and had an integrated concrete sump in one corner. The pad and sump appeared to have been constructed in one continuous pour. There was about one foot of soil separating the bottom concrete of the Frog Pond and the concrete pad. There is no information referencing this structure in any of the documents reviewed. The structure may also have been associated with the former auto truck sales and service facility operated at the site in the late 1940s and early 1950s.

Vertical Concrete-Coated Corrugated Pipe: At the southwestern corner of the Frog Pond, a convex concrete dome was observed on the bottom of the pond. The surface of the concrete dome was light in color and unstained; notably different from the greenish-stained concrete on the surface of the Frog Pond bottom and sidewalls. The concrete, a few inches beneath the surface of the dome, was dark grey, different from the light gray concrete that typified the unstained concrete at the bottom and sidewalls of the pond, indicating the concrete may have been poured subsequent to the time when the Frog Pond was constructed.

The soil surrounding the structure was excavated which revealed several inches of concrete surrounding a corrugated metal pipe. The soil around the structure was excavated down to about 19 feet bgs. The groundwater seeping into the excavation had a yellowish-green color.

The concrete-coated corrugated pipe was subsequently removed. The structure was about 8 feet in diameter and extended from the bottom of the Frog Pond to about 20 feet below the surrounding grade, or about 16 feet below the bottom of the Frog Pond. The concrete-coated corrugated pipe wall filled with concrete and had 3- to 5-inch cobbles at the bottom. It appeared that the southwestern corner of the Frog Pond may have been originally constructed with a large sump or "dry well," which at some undocumented time was filled with concrete.

It is unknown what the function of this structure was or when it was constructed. It does not appear in any of the site plans from the Hazardous Material Management Plans, Hazardous Materials Business Plans, and inspection or assessment reports. This structure may have served as a dry well as one time to allow wastewater to drain into the subsurface. Based on observations noted in various inspection reports during the 1990s, which noted that the Frog Pond was frequently filled with liquids, it does not appear that the structure was functioning in this capacity during the latter part of the plating facility's operation.

3.3.2.1 Potential Source Area 2 Investigation Results

Between 2003 and 2010, BASELINE advanced 21 soil borings in the general area of the Frog Pond and collected soil and/or groundwater samples (Figure 5). Four borings were converted to groundwater monitoring wells. Groundwater monitoring wells MW-FP3, MW-FP4A and MW-FP5 were completed to a total depth of 25 feet bgs with 13 feet of well screen. Groundwater monitoring well MW-FP4B was completed to a total depth of 57 feet bgs with 12 feet of well screen.

Ten soil samples were collected from seven borings within Potential Source Area 2 at depths ranging from 2.5 to 12 feet below ground surface and analyzed for VOCs. The maximum TCE concentration of 0.040 mg/kg was reported in a soil sample collected from B-FP22 at 6.0 feet bgs (located just off the northwest corner of the Frog Pond, in between the Frog Pond and the Western Vault) (Figure 9 and Table 4). A soil sample collected from B-FP22 at 12.0 feet bgs was reported to contain TCE at a concentrations of 0.0077 mg/kg. TCE was also reported in soil samples from B-FP14 collected at 0.5 feet bgs at concentration of 0.0094 mg/kg and at B-FP23 collected at 12.0 feet bgs at concentrations of 0.0050 mg/kg (Figure 9 and Table 4).

The highest TCE concentration found in the groundwater in the Frog Pond area was from a grab groundwater sample collected at B-FP22. This groundwater sample was reported to contain TCE at a concentration of 1,500 µg/L (Figure 9 and Table 9). Grab groundwater samples collected at

other borings in the Frog Pond area also contained TCE; B-FP14 at 1,000 µg/L; B-FP18 at 600 µg/L, and B-FP23 at 310 µ/L. The concentration of TCE in grab groundwater samples generally decreased with distance from the Frog Pond. The groundwater sample from MW-3A, located upgradient of the former Frog Pond and downgradient of Northern Vault B, was reported to contain 0.90 µg/L TCE and no other VOCs above the laboratory reporting limit (Figure 9 and Table 9). The groundwater sample collected at MW-FP4A, located downgradient of the former Frog Pond, was reported to contain 51 µg/L of TCE (Figure 9 and Table 9). With the exception of chloroform, the downgradient well screened in the deeper portion of the shallow unconfined aquifer, MW-FP4B, did not contain any VOC above the laboratory reporting limit.

BASELINE collected soil gas samples just to the west of the Frog Pond in 2011 at location SG-04 (Figure 9 and Table 10). A shallow soil gas sample, collected with the probe pulled back from 5 to 4 feet bgs, was reported to contain TCE at 23,000 µg/m^3, trans-1,2-DCE at 110 µg/m^3, cis-1,2-DCE at 1,900 µg/m^3, and trichlorofluoromethane at 160 µg/m^3. The deeper sample, collected with the probe pulled back from 10 to 8 feet bgs, was reported to contain TCE at 160,000 µg/m^3, 1,1-DCE at 3,300 µg/m^3, trans-1,2-dichloroethene, at 12,000 µg/m^3, cis-1,2-DCE at 150,000 µg/m^3, and vinyl chloride at 3,000 µg/m^3.

3.3.2.2 Potential Source Area 2 Summary

The Frog Pond is a likely source of the majority of the VOC contamination found at the site based on the following: 1) use of the Frog Pond to contain waste liquids; 2) the data from soil, groundwater, and soil gas samples collected to date; and 3) the presence of the sump or dry well structure, which was a potential pathway for contaminants to enter the subsurface. The higher concentrations of TCE reported in groundwater and soil gas samples near the Frog Pond relative to the rest of the site are further evidence that the majority of the TCE contamination is from a source on the western portion of the site.

The area is capped with concrete and the soil at present does not represent a complete exposure pathway to any existing receptors at the site. Remediation, risk management plans, and/or engineering controls should be implemented to remove or manage the VOC contamination in this area prior to any future development.

3.3.3 Potential Source Area 3 – Eastern Track Drain

Potential Source Area 3 is the drainage trench located on the eastern border of the site (Figure 5). The drain was connected to the large containment vault located in the northeastern building. The drain appears to have acted as a spill containment measure by preventing incidental spills or releases from migrating off-site and into the municipal stormwater drainage system. The drain would have also contained stormwater runoff from the site. It is likely that this feature was installed during the construction of the northeastern building in 1970 or thereafter. The track drain has been filled and capped.

3.3.3.1 Potential Source Area 3 Investigation Results

In 2005, BASELINE advanced three borings in this area: B-FP10, B-FP11, and B-FP12 (Figure 9). Soil samples were collected at 0.5 and 3.5 feet bgs. The shallow soil samples were submitted for Title 22 metals and VOC analyses. The deeper soil samples were submitted for

Title 22 Metals analyses only. No VOCs were detected above the laboratory reporting limits in the shallow soil samples collected at 0.5 feet bgs (Figure 9 and Table 4).

Grab groundwater samples were also collected from B-FP10 and B-FP11 and submitted for VOC analyses (Figure 9). The grab groundwater sample from B-FP10 was reported to contain TCE at 8.9 µg/L, 1,1,1-TCA at 9.8 µg/L, and 1.1-DCE at 4.1 µg/L (Table 9). The grab groundwater sample from B-FP11 was reported to contain TCE at 1.2 µg/L, 1,1,1-TCA at 1.2 µg/L and 1,1-DCE at 0.5 µg/L (Figure 9 and Table 9).

BASELINE collected soil gas samples near the track drain in 2011 (Figure 9 and Table 10). Soil gas sample SG-01 was located outside the southeast corner of the existing building and close to the location of the former track drain. The shallow soil gas sample, collected with the probe pulled back from 5 to 4 feet bgs, was reported to contain TCE at 7,200 µg/m^3, 1,1-DCE at 270 µg/m^3, and 1,1,1-TCA at 510 µg/m^3. The deeper sample, collected with the probe pulled back from 10 to 8 feet bgs, was reported to contain TCE at 320 µg/m^3, 1,1,1-TCA at 270 µg/m^3, and benzene at 120 µg/m^3. The shallow soil gas concentration of TCE exceeded the residential and commercial ESL.

3.3.3.2 Potential Source Area 3 Summary

It is likely that the track drain was constructed at the time of or sometime after construction of the northeastern building. Based on the fact that the northeastern building was constructed in 1970 and the historical data indicate that TCE was not used or stored at the site after 1987, any releases of solvents that may have occurred were likely between the years 1970 and 1987; a short time relative to the potential time period when releases may have occurred on the western portions of the site. However, the detections of VOCs in this area indicate that the track drain may have been a source of VOCs entering the subsurface.

The TCE detected may have entered the track drain from small incidental surface releases, which could have been conveyed by the drain system into the eastern containment vault and, if there were cracks or joints in the drainage channel, contaminants may have leaked into the subsurface. The lack of detectable concentrations of TCE in shallow soil samples collected at 0.5 feet bgs seems to indicate that the soil is not impacted, but since the bottom of the drainage channel was below grade, these shallow soil samples may not have captured data from the impacted zone.

The area is capped with concrete and the soil at present does not represent a complete exposure pathway to any existing receptors at the site. Risk management plans should be implemented to manage any contamination in this area should future development include removing the cap and exposing the soil to future users or construction workers. Sub-slab vapor sampling within the existing building is necessary to evaluate whether vapor intrusion may be occurring that would expose the existing receptors to unacceptable health risks.

3.3.4 Potential Source Area 4 – Plating Areas 1 and 2

Potential Source Area 4 is the area within the western building identified by Versar (Versar, 1993) and in a site map contained in an Emergency Response Report prepared by ERTHCO (ERTHCO, 1992), which indicated that the western building contained two areas labeled “Plating Area 1” and “Plating Area 2” (Figure 6). The documentation indicates Plating Area 1 and Plating Area 2 are “Not in Use.” The memorandum prepared by E&E, the U.S. EPA’s

Technical Assistance Team contractor, summarizing the response actions to the fire, describes the area as containing two offices, a paint booth, and filter cake and sodium hydroxide (NaOH) storage. The Action Plan for Emergency Remedial and Environmental Response to the Francis Plating Fire prepared by ERTHCO states that the area adjacent to the men's bathroom was used as a "large chemical storage area." These areas identified in the earlier site maps may have been used for plating processes in the late 1950s and 1960s but it appears that by 1992 their use in the plating processes had been discontinued.

As part of the site 1999 U.S. EPA emergency response action, E&E evaluated the soil metals content at the site to a depth of 4.0 feet bgs using a combination of X-Ray Fluorescence (XRF) screening and analytical laboratory results. Included in this evaluation was screening of the exposed soil along the western boundary of the property. Assuming that the concrete area in 1999 represented the former western building footprint, it is likely that the soil samples collected were from an area that was outside the western building footprint and therefore would have only been exposed after the 1992 fire. Based on the XRF screening results, which indicated the shallow soil contained elevated chromium, 1 foot of soil was removed from this uncapped area on the western boundary of the site.

3.3.4.1 Potential Source Area 4 Investigation Results

In 2005, BASELINE collected shallow soil samples at the surface and at 1.0 foot bgs at two locations (SS-FP08 and SS-FP09) near Plating Area 1 and Plating Area 2 (Figure 5). The soil samples were collected within the exposed soil at the western boundary and, as stated above, was likely outside of the western building when Plating Area 1 and Plating Area 2 were active. The soil samples were submitted for metals analysis only. BASELINE also collected at grab groundwater sample at SS-FP09, which was submitted for VOC analysis.

The soil samples from SS-FP08 and SS-FP09 were composited along with soil from SS-FP10. The composite sample did not contain any metals above the commercial ESLs.

The groundwater sample from SS-FP09 was reported to contain TCE at 3.6 µg/L (Figure 9 and Table 9). Based on the results of the grab groundwater sample from SS-FP09, Plating Areas 1 and 2 do not appear to be sources of significant concentrations of VOCs.

3.3.4.2 Potential Source Area 4 Summary

Other than the fact that the Plating areas 1 and 2 in the western building were used as plating areas, no historical information about these areas is available. The historical site maps indicated that these areas were not in use for plating processes in 1987 and beyond. It is unlikely that there was a significant release of VOCs in this area since the grab groundwater sample (SS-FP09) collected closest to the area contained only a low level of TCE. However, the area is capped with concrete and at present does not represent a complete exposure pathway to any existing receptors at the site. Risk management plans should be implemented to manage any contamination in this area should future development include removing the cap and exposing the soil to future users or construction worker.

3.3.5 Potential Source Area 5 – Drum Storage Areas

Potential Source Area 5 is the drum storage areas. In general, specific drum storage areas are not identified on the various site maps reviewed by BASELINE. After the fire, drums were likely

stored in the temporary storage containers (Figure 7) Ecology and Environment's 2000 Assessment and Removal Report indicates that in 1998 drums were stored in areas throughout the site (E&E, 2000) (Figure 8). The report states that in December 1998 the yard south of the northeastern building contained several hundred 55-gallon drums and small containers. The site map contained in the report designates the southern side of the northeastern building as a drum storage area (Figure 8).

Some of the drums stored on-site may not have been associated with the plating operations. Title documents for the property indicate that in 1994 the plating facility was transferred to ERTHCO (North American Tile Company, 2000). The property was transferred in lieu of payment for fees associated with post-fire facility cleanup (E&E, 2000). Reports indicated that ERTHCO brought waste from other site cleanups onto the site during the period of their ownership, though the rate at which these materials accumulated over time or how the wastes were disposed of is unknown. Inspection by Hillmann in 1997 and by Oakland Fire Department indicated that many of these materials were stored in unlabeled drums and containers, which had not been properly sealed (E&E, 2000).

3.3.5.1 Potential Source Area 5 Investigation Results

In 2003 and 2005, BASELINE advanced two borings, B-FP06 and B-FP10, in the drum storage area next to the eastern building (Figure 9). This drum storage area is identified in the E&E 1998 site plan (Figure 8) but in the site plans from 1996 and 1987 (Figure 6 and 7) the area was used for wastewater treatment. Soil samples were collected at 2.5 and 5.5 feet bgs at B-FP06 and 0.5 feet bgs at B-FP10. The soil samples were submitted for Title 22 metals and VOC analyses, the soil samples from B-FP06 were also submitted for PCB and PAH analyses. No VOCs were detected above the laboratory reporting limits in these soil samples (Figure 9 and Table 4).

BASELINE also collected soil gas samples from within this area (SG-03) (Figure 9). Shallow and deep soil gas samples were collected from SG-03, which was located at the west side of the northwestern building. The shallow soil gas sample, collected with the probe pulled back from 5 to 4.5 feet bgs, was reported to contain TCE at 1,300 µg/m^3 and 1,1,1-TCA at 780 µg/m^3. The deeper sample, collected with the probe pulled back from 10 to 8 feet bgs, was reported to contain TCE at 1,000 µg/m^3, 1,1,1-TCA at 130 µg/m^3, and benzene at 100 µg/m^3. These soil gas concentrations are below the residential and commercial ESLs.

The soil sample analytical results, along with the fact that the hazardous material inventories do not indicate that TCE was used or stored at the site after 1987, indicated that drum leakage or spills are unlikely to be a source of TCE since such a release would result in near-surface contamination.

3.3.5.2 Potential Source Area 5 Summary

It is impossible to identify with certainty the contributory effect of the drummed waste handling, though the fact that the activity was perhaps of relatively short duration and that the areas where waste was stored were paved could suggest the contribution, if any, may not be substantial. Small incidental releases from drums may have resulted in shallow impact to the soil as observed in the soil gas samples where the concentration in the soil gas decreased with depth.

The drum storage area located next to the northeastern building in 1998 is unlikely to be a significant source area since soil samples collected at B-FP06 did not contain reportable concentrations of TCE. The area would only have been used for drum storage for a small percentage of the time the plating facility operated since all earlier site maps indicate that the area was used as a wastewater treatment area.

Because of uncertainty as to where drums were stored and the documented evidence of poor hazardous material/waste management on-site, it is not possible to determine the potential impact from drum storage.

However, the site is capped with concrete and asphalt and at present does not represent a complete exposure pathway to any existing receptors at the site. Risk management plans should be implemented to manage any contamination in this area should future development include removing the cap and exposing the soil to future users or construction worker.

3.3.6 Potential Source Area 6 – Degreasing Station

The primary function of solvents in the metal plating industry is for the cleaning of metal parts prior to plating. Traditional industry solvents such as TCE and 1,1,1-TCA have the advantage of rapidly dissolving oils and greases on metal, and of rapidly evaporating thereby minimizing drying time. No feature on any of the site maps in the documents reviewed indicates the presence of a degreasing station. Most large plating operations had such stations, and a strong possibility exists that the Francis Plating facility did as well. Identifying the area where these activities may have taken place is complicated by the fact that no investigator of the property during periods of process operation made any mention of the presence of a degreasing or materials preparation sub-process other than the sand blasting areas.

The lack of historical data on the use and storage of TCE makes the source of TCE difficult to ascertain. TCE is not listed as a material stored on-site in the Hazardous Material Management Plans, Hazardous Materials Business Plans, or Spill Prevention Plans, which contained detailed list of hazardous materials stored at the site (Appendix A). The only solvents listed on the inventories were methyl ethyl ketone, methyl isobutyl ketone, toluene, and acetone. With the exception of acetone (detected at low levels in a soil sample from boring B-FP23 at 12 feet bgs and in the groundwater sample at MW-4A, both near the Frog Pond) none of these solvents has been detected in the soil and groundwater at the site. None of the documents reviewed indicates that the site had a degreasing area that used solvent for cleaning. However, as noted earlier a "Hot Alki Soap" process tank was located in the containment vault in the northeastern building in 1987 (Figure 6, Item 39) and sodium hydroxide, a chemical used for alkaline cleaning is listed in the hazardous materials inventories. Therefore, while the presence of elevated concentrations of TCE in the soil, groundwater, and soil gas sample suggests that TCE was used at the site, it was likely before 1987 since historical records from that date forward do not indicate that TCE was used or stored on-site.

Sandblast and/or bead blast areas were located on the south-central portion of the site (Figures 6 and 7). Sand blasting is the process employed to remove exterior coatings from metal surfaces prior to plating, while degreasing processes remove oil, often from newly milled pieces, before they are sent to the line for plating. It is possible that the degreasing operation, if one existed, was located in the portion of the property near the sandblasting area, as it would be logical to

have material preparation processes near one another. The fact that concentrations of solvents are highest near the western end of the Frog Pond suggests degreasing process waste may have been directed to this feature for disposal prior to the sealing of the drainage sump (dry well).

3.3.6.1 Potential Source Area 6 Investigation Results

In 2003, BASELINE collected soil samples from 2.5 and 5.5 feet bgs at boring B-FP05 within the presumed degreasing area (Figure 9). BASELINE also collected at grab groundwater sample at this location. Both the soil and groundwater samples were submitted for VOC analysis. The soil sample from 2.5 feet bgs was reported to contain TCE at 0.033 mg/kg. 1,1,1-TCA was also reported in the soil sample at a concentration of 0.0054 mg/kg. The soil sample from 5.5 feet bgs did not contain TCE or 1,1,1-TCA above the laboratory reporting limit. The groundwater sample from B-FP05 was reported to contain TCE at 42 µg/L (Figure 9 and Table 9).

On 19 October 2009, P&D collected two grab groundwater samples from two borings (B6 and B7) and installed two soil gas probes to a depth of 5 feet bgs (SG5 and SG6) on the southeastern portion of the site (Figure 9) (P&D, 2009). Grab groundwater samples collected from the borings B6 and B7 were reported to contain TCE at 15 and 7.1 µg/L, respectively. Due to rainy conditions, P&D did not collect the soil gas samples on the site until five days after installing the soil gas probes. Soil gas samples collected from SG-5 and SG-6 at 5 feet bgs on the site were reported to contain TCE at 3,400 and 5,900 $\mu g/m^3$, respectively. The soil gas concentrations of TCE exceeded the residential ESL, but were below the commercial ESL for vapor intrusion concerns.

3.3.6.2 Potential Source Area 6 Summary

The historical site maps do not indicate that there was a degreasing station on-site from 1987 until the site was abandoned in 1998. While it is reasonable to suspect that a degreasing station existed at one time because TCE has been detected in the groundwater at the site, the use of alkaline cleaning processes seemed to have replaced the uses of degreasers in the late 1980s and 1990s. No substantial concentration of TCE has been found in near-surface soil samples collected to indicate a particular area where there was frequent use of solvents. Near the sandblasting area, which would be the logical place to have a degreasing station, based on preparation processes, soils sample collected at 2.5 and 5.5 feet bgs from B-FP05 did not contain elevated concentrations of TCE.

Due to uncertainty about where the actual degreasing activities took place, it is not possible to determine the potential impact from degreasing activities. Due to uncertainty about the location of a degreasing station, it is not known whether these detections are related to this potential source area. However, the site is capped with concrete and asphalt and the soil at present does not represent a complete exposure pathway to any existing receptors at the site. Risk management plans should be implemented to manage any contamination in this area should future development include removing the cap and exposing the soil to future users or construction workers.

4.0 CONCUSIONS AND RECOMMENDATIONS

4.1 Conclusions

As previously stated, this report has focused on evaluation of VOC contamination and sources. The site and its potential VOC source areas have been evaluated through review of historic records and analytical results from subsurface sampling of soil, groundwater, and soil vapors. With the exception of the area around the Frog Pond, no specific VOC source or source areas have been identified on the site. VOC contamination in the vicinity of the Frog Pond would be addressed in concert with remediation of this area prior to site development. Depending on future site development alternatives, protective remedies may require further investigation in the future. The nature and need for such an investigation will be better understood when the details of site development alternatives are known.

The concentrations of VOCs in the soil and groundwater in other areas are relatively low and may be associated with vapor migration beneath the paved surface from the higher-strength Frog Pond area or other small incidental releases. Evaluation of the potential for VOCs to impact the indoor air quality of the existing building on-site is recommended to ensure that the current and potential future use of this portion of the site is acceptable. Remediation of the VOCs in the soil and groundwater in areas other than the Frog Pond area may not be practical given the lack of clarity about specific sources and risk management appears to be a more realistic future protective remedy. Such a remedy would include a risk management plan, development restrictions, and engineering controls for future land-use scenarios to ensure that there would be no complete pathways to expose site occupants to VOC vapors migrating from the subsurface into indoor air and to protect construction workers who may come in contact with subsurface soil and/or groundwater. Therefore, with the exception of the area near the currently occupied building, no further assessment of VOC occurrence is recommended at this time.

4.2 Recommendations

With respect to the remainder of the property (areas away from the Frog Pond), BASELINE recommends that a sub-slab vapor investigation be performed within the existing building to evaluate the health risk for the existing users of the site from exposure to VOC vapors, which may be migrating into the building. The following section presents a workplan for performing the sub-slab vapor investigation.

5.0 PROPOSED SUB-SLAB VAPOR INVESTIGATION WORK PLAN

5.1 Objective

The objective of the proposed sub-slab vapor sampling is to evaluate the potential health risk of VOC vapors migrating into the existing building on-site to the current users of the building.

5.2 Proposed Sampling Activities

The Vapor Intrusion Guidance recommends that at least two sub-slab probes be installed for evaluating residential structures, that one probe be installed in the center of the building's foundation, and that the probes should not be installed near the edges of the foundation due to the effects of wind on the representativeness of contaminant concentrations (DTSC, 2011). No

specific recommendations are provided for the number of probes to be used for evaluating commercial buildings.

As discussed in Section 1.2, BASELINE collected a sub-slab vapor sample and duplicate at the location shown on Figure 9 (Sub-slab-1a and Sub-slab-1b). These vapor samples were reported to contain TCE, 1,1,1-TCA, tetrachloroethene, and xylenes at levels below human health concerns. However, the leak detection agent used during the sample collection was reported in the samples indicating the results are biased low. This work plan proposes the installation of two additional permanent sub-slab vapor probes and collect vapor samples for VOC analysis from the existing probe location Sub-Slab-1 and the two new sub-slab vapor probes, designated Sub-Slab-2 and Sub-Slab-3.

This work plan proposes the installation Sub-Slab-2 and Sub-Slab-3 at the locations shown on Figure 10. Because the central portion of the existing building contains the former containment vault, which has been filled with crushed concrete and capped with cement concrete, the probes cannot be located in the center of the building's foundation. BASELINE proposes to locate Sub-Slab-2 near the former containment vault and Sub-Slab-3 in the western wing of the building. The actual locations may be adjusted depending on access.

5.3 Vapor Probe Installation

Using a rotary hammer, a 1.25-inch hole will be drilled approximately 1/8-inch deep, followed by a 1-inch hole through the slab; the slab is expected to be approximately 6 inches thick at the sample locations. A vapor probe, constructed of 1/8-inch diameter tubing with a permeable probe tip, will be installed at each location. The sub-slab hole will be advanced 3 inches into the engineering fill below the slab. All drill cuttings will be removed from the borehole. Each vapor probe will be cleaned with an Alconox solution and rinsed with de-ionized water prior to installation.

The vapor probes will be placed in the hole with the top of the probe slightly below grade. The annular space around the permeable probe tip will be filled with clean sand. Dry granular bentonite will be used to fill the borehole annular space from above the sand to just above the base of the concrete foundation. The remaining annular space to just below the top of the slab's ground surface will be filled with quick-drying bentonite grout. A stainless steel cap will be screwed into the top of the probe to seat into the 1.25-inch inset until flush with the floor surface. Figure 11 presents a construction diagram of the vapor probe.

5.4 Vapor Sample Collection

No earlier than 2 hours after installation of the probes, a vapor sample will be collected from each vapor probe (Sub-slab-1, Sub-slab-2, and Sub-slab-3) in 1.4-liter Summa canisters supplied by Curtis & Tompkins Laboratories (C&T). The canisters will be equipped with flow regulators limiting the flow rate to less than 200 milliliters per minute (ml/min).

Leak detection during sampling will be conducted using a helium tracer shroud provided by C&T. The helium tracer shroud will be used to test the sampling train for leaks during purging and as a quality control measure during sampling. An air concentration of 20 percent helium will be maintained around the sampling train and above the sample probe by positioning a

shroud and sampling train with canister and helium detector over the vapor probe. The shroud will be constructed of a food-grade polycarbonate box that contains the sampling train integrated with a 3-way stainless steel valve for directing the airflow for purging and sampling.

Helium will be released into the shroud until the concentration of helium inside the shroud is 20 percent. The helium gas concentration inside the shroud will be monitored by a diffusion cell helium detector. The assembly will also include a flow-through helium detector in the purge line to monitor the helium content during purging. Both helium detectors will be capable of measuring helium in air to an accuracy and precision of 0.1 percent over the range of helium concentrations in air between 0.5 and 95 percent. Additional helium will be fed into the shroud to maintain the target helium concentration at 20 percent, as needed. Field personnel will record the helium concentration in the shroud at 2-minute intervals during each the sampling event.

The sub-slab vapor probe and sampling train assembly will be field-screened for leaks by drawing air from the vapor probe at less than 200 ml/min using a sampling pump. The purge air will be monitored for helium using the helium detector mounted on the purge line. If helium is detected in the purge air, indicating a leak, the field personnel will take corrective action to correct the problem prior to collecting a sample for laboratory analysis. Purging will be complete when three volumes of air of the sampling train have been removed and no concentration of helium detected.

After the purging and leak detection activities have been successfully completed, sub-slab vapor samples will be collected in the 1.4-liter Summa canisters. The flow regulators will maintain the airflow rate as less than 200 ml/min. The Summa canisters will initially have a vacuum of approximately 30 inches of mercury (in-Hg) and sampling will terminate when the vacuum on the Summa canisters has been expended. It is estimated that the sampling should take approximately 7 minutes.

Each canister will be labeled with the sample location, the sampler's initials, the initial and final vacuum readings, and the time that sampling started and ended.

5.5 Vapor Sample Analyses

Sub-slab vapor samples will be submitted to C&T under Chain-of-Custody protocol for VOC analysis in accordance with US EPA Method TO-15 and helium in accordance with ASTM D1946. The analyte list and C&T's reporting limits are presented in Appendix B. The reporting limits for the constituents of concern; TCE, cis-1,2-DCE, trans-1,2-DCE, vinyl chloride, 1,1,1-TCE, and 1,1-DCE, along with the ESL values are presented on Table 5. To evaluate whether the reporting limits would be low enough, the reporting limits were compared to indoor air screening values considering a sub-slab-to-indoor air attenuation factor (Table 12). With the exception of vinyl chloride, all reporting limits would be expected to meet the data objectives for health risk evaluation. The laboratory will be requested to report vinyl chloride to the method detection limit.

5.6 Quality Control

The representativeness of the vapor sample will be confirmed by analyzing the sample for helium. The laboratory will quantify all detections of helium at a reporting limit equal to 1,000 microliters per liter or 0.1 percent.

If helium is detected in samples, the proportion of the sample attributable to ambient air leakage can be determined by the ratio of helium concentration determined in the sample to the average helium concentration recorded in the shroud during the sampling event. DTSC guidance states that an ambient air leak up to 5 percent is acceptable if quantitative tracer testing is performed by shrouding (DTSC, 2012). If helium is detected in the sample at 5 percent or lower, the target compound concentrations will be corrected using a Dilution Factor (DF). The DF will be calculated using the following equation:

> DF = [Concentration of Helium in Sample (%)] ÷ [Concentration of Helium in the Shroud (%)]

The corrected target compound concentration will be determined by applying the DF using the following equation:

> Corrected Concentration ($\mu g/m^3$) = Reported Concentration + [Reported Concentration x DF].

If helium is detected at a concentration over 5 percent, the samples will be corrected but reported as biased low.

5.7 Sub-slab Vapor Sampling Reporting

An investigative results report will be prepared at the conclusion of this phase of project activity. The report will include a description of methods utilized and results of analysis. The results of the sub-slab vapor sampling will be compared against the Regional Water Board ESLs for ambient and indoor air and commercial land use (Regional Water Board, 2008). The ESLs are based on the lowest chemical-specific value that would be expected to represent an adverse cancer or non-cancer health risk, using conservative exposure assumptions. The ESLs assume an unacceptable health risk to be an excess cancer risk over one in a million (10^{-6}) or a non-cancer Hazard Index over 1.0 (Regional Water Board, 2008).[1] An attenuation factor of 0.05 will be used for estimating indoor air concentrations from sub-slab vapor measurement as recommended by the DTSC (DTSC, 2011).

If the estimated indoor air concentrations of detected VOCs exceed the ESLs, site-specific health risk calculations will be performed to determine if the health risk for the existing users is unacceptable. The cancer and non-cancer health risk will be calculated in accordance with Regional Water Board guidance (Regional Water Board, 2008) by summing the risk of the individual detected chemicals of concern. The cancer risk will be evaluated by comparing the results of the health risk assessment to an increased cancer risk of one in a million or 10^{-6}. The

[1] The ESLs use a chemical-specific Hazard Quotient of 0.2 to account for exposure of up to five separate chemicals. The Hazard Index is a sum of the chemical-specific Hazard Quotients.

non-cancer health risks will be evaluated by comparing the results of the health risk assessment to a health index of one.

If the health risk assessment indicates that the cancer risk exceeds 10^{-6} or the non-cancer risk exceeds a health index of one, mitigation or remediation will be proposed. Remediation may include active remediation such as soil vapor extraction or mitigation by installing a sub-slab venting system.

If the health risk assessment does not indicate that the cancer risk exceeds 10^{-6} or the non-cancer risk exceeds a health index of one, a risk management plan will be developed to allow continued use of the site while ensuring that the current cap on the site remains in place and that any breach of the cap or exposure to residual contaminants in the soil are performed in a manner that does not expose users of the site or construction workers to unacceptable health risks.

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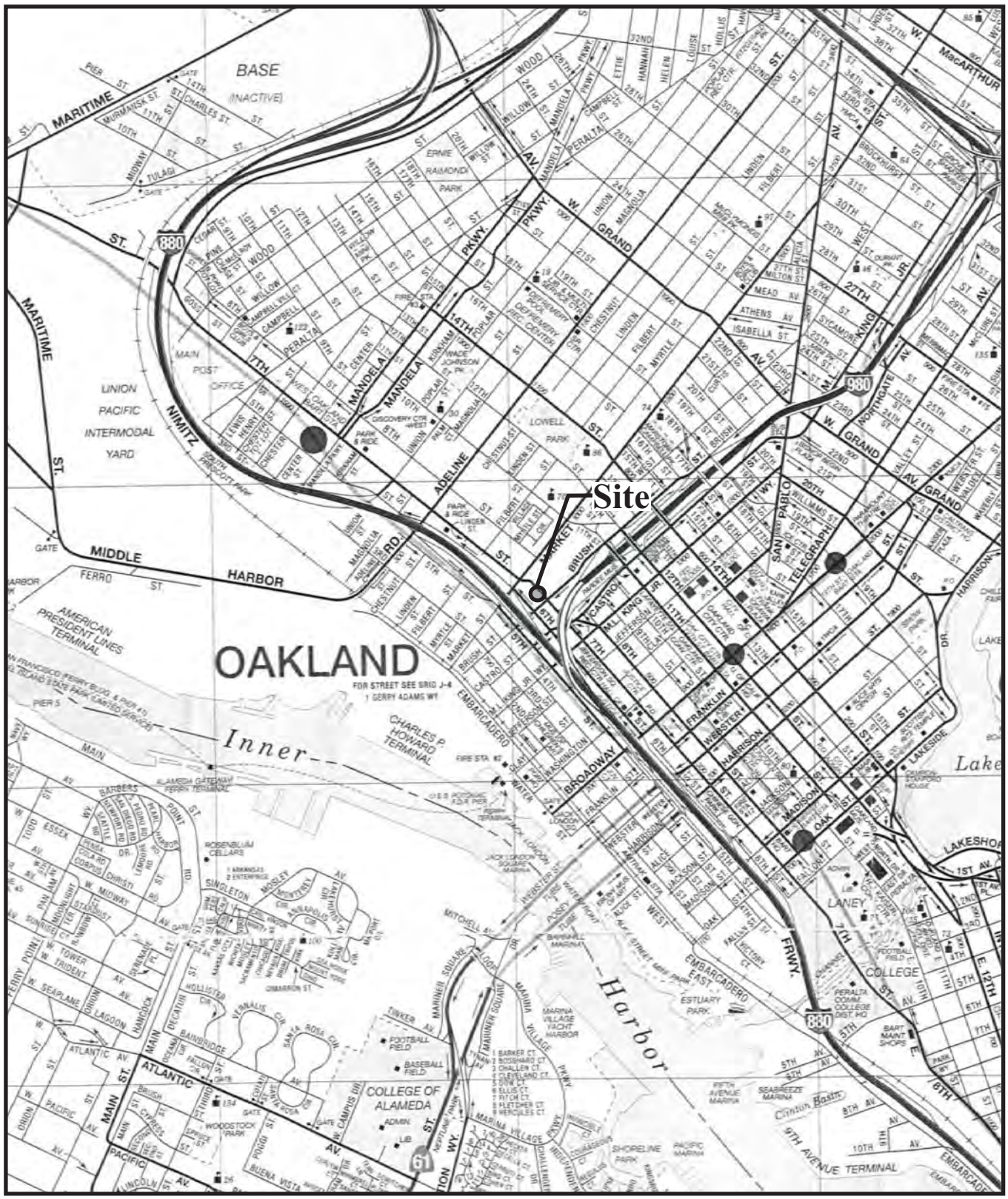
FIGURES

REGIONAL LOCATION

Figure 1



751-785 Seventh Street
Oakland, California

0 2000 Feet

BASELINE

Y0323-05.01842.Fig1-3.cdr 06/11/12

AERIAL MAP - 2009

Figure 2

751-785 Seventh Street
Oakland, California

LEGEND
Site Boundary
Groundwater Monitoring Well

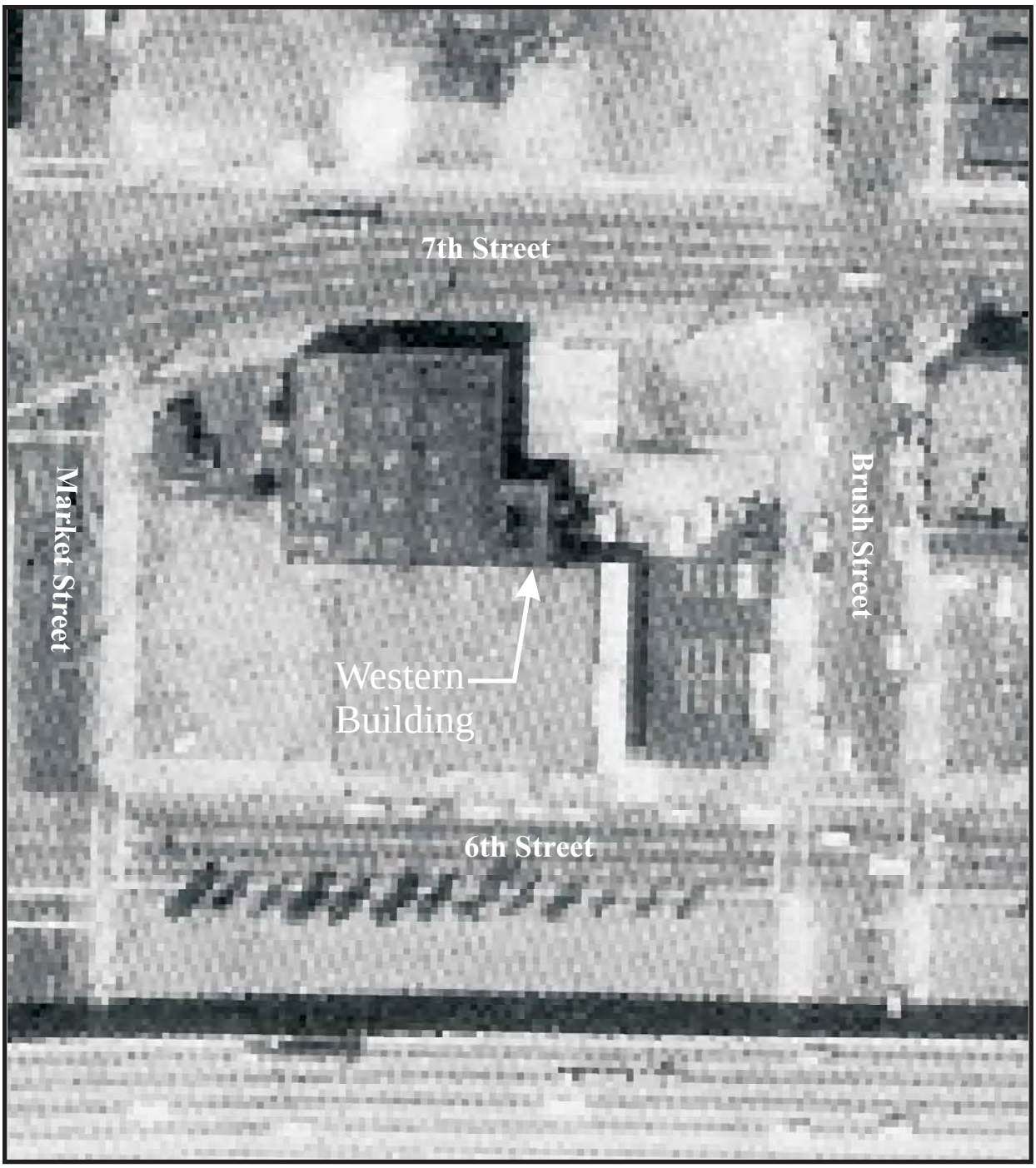
0 80 Feet

BASELINE

Y0323-05.01842.Fig1-3.cdr 06/11/12

AERIAL MAP - 1965

Figure 3

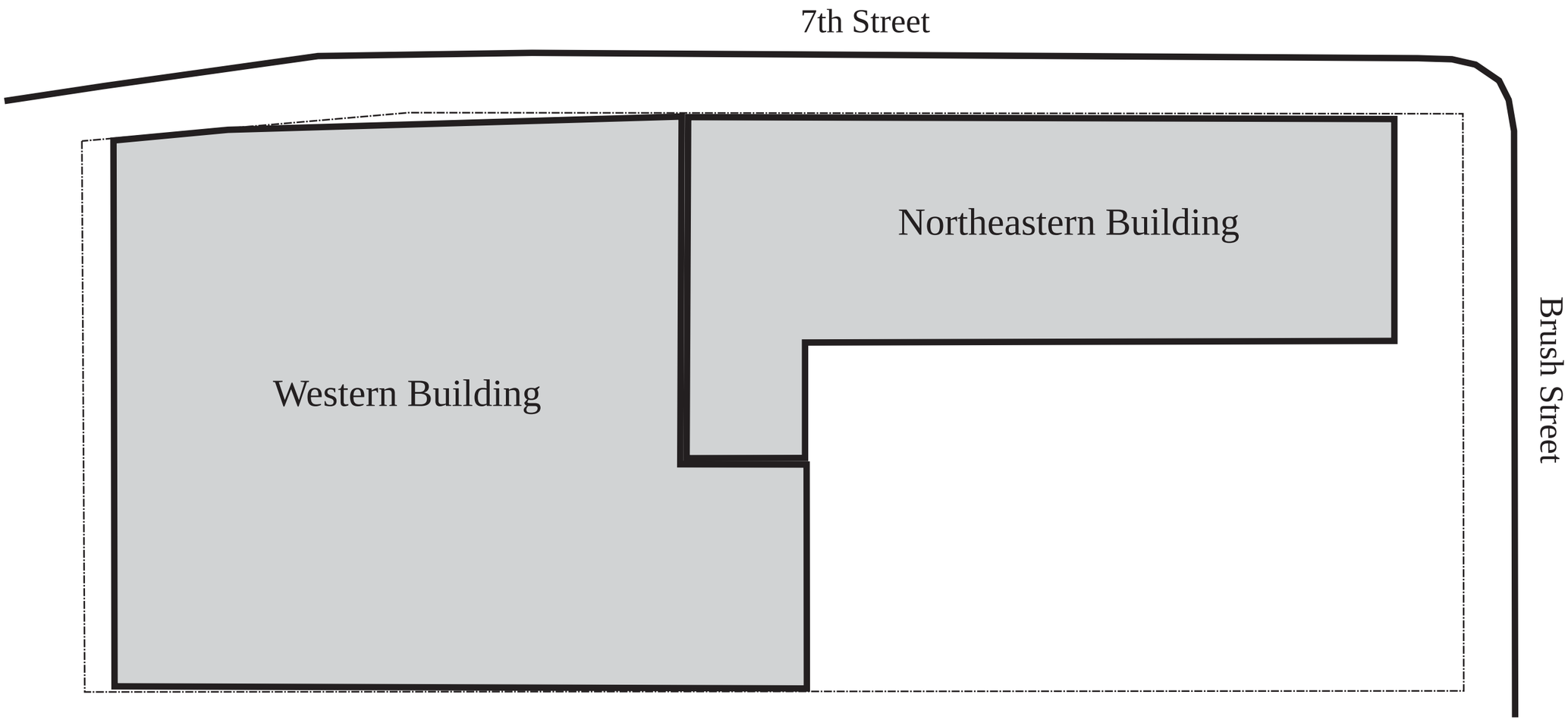


751-785 Seventh Street
Oakland, California

BASELINE

Y0323-05.01842.Fig1-3.cdr 06/11/12

SITE PLAN - 1970 - 1992 **Figure 4**



LEGEND

Present Day Property Boundary

751-785 Brush Street
Oakland, California

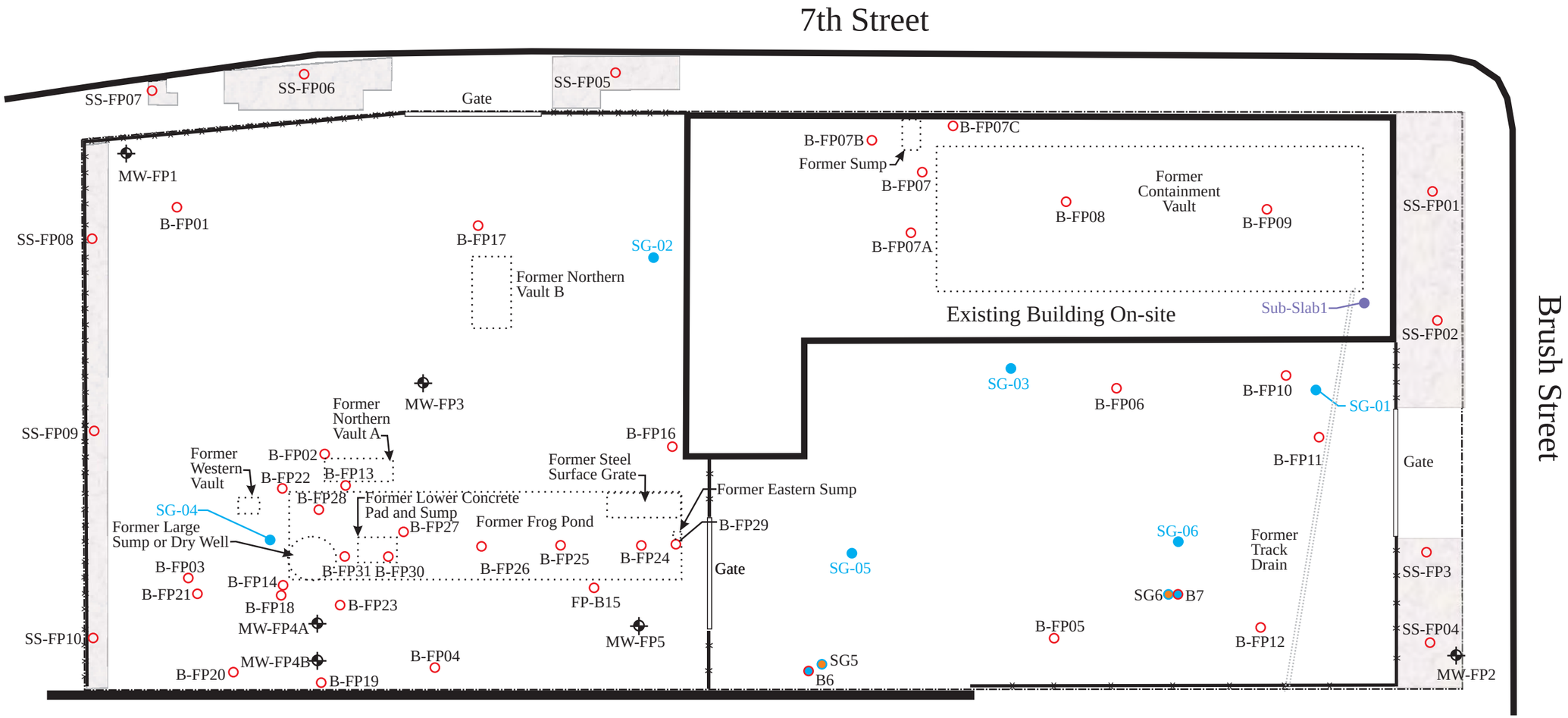
0 20 Feet

BASELINE

Y0323-05.01875.Fig4-10.cdr 06/12/12

SOIL, GROUNDWATER, SOIL GAS, AND SUB-SLAB VAPOR SAMPLE LOCATIONS

Figure 5



LEGEND

- Property Boundary
- Exposed Soil Areas
- Boring Location (BASELINE, 2003, 2005, 2006)
- Monitoring Well Location (BASELINE, 2003, 2010)
- Soil Gas Sample Location (BASELINE, 2011)
- Sub-Slab Vapor Probe (BASELINE, 2012)
- Soil Gas Sample Location (P&D, 2009)
- Grab Groundwater Sample Location (P&D, 2009)

751-785 Brush Street
Oakland, California

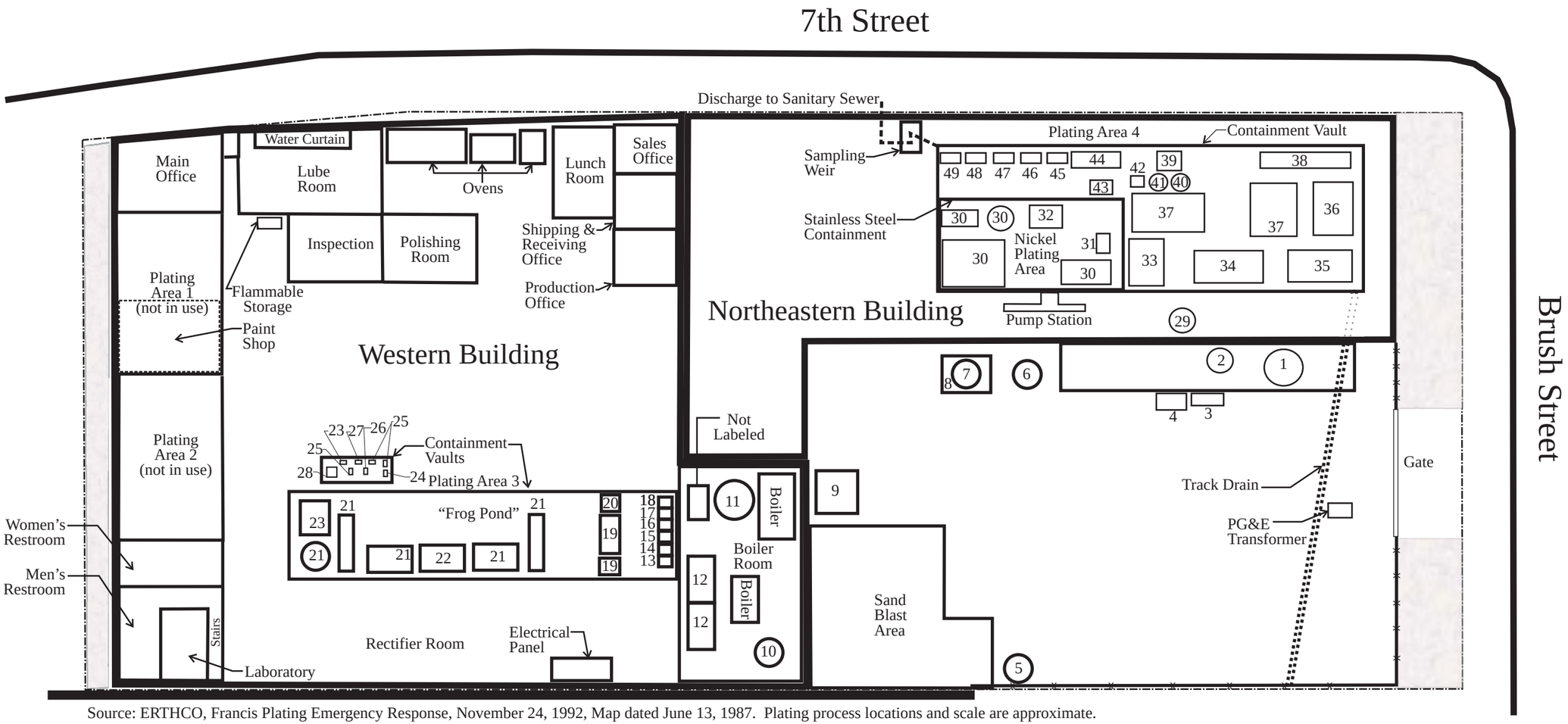
0 20 Feet

BASELINE

Y0323-05.01875.Fig4-10.cdr 06/12/12

FRANCIS PLATING SITE PLAN - 1987

Figure 6



Source: ERTHCO, Francis Plating Emergency Response, November 24, 1992, Map dated June 13, 1987. Plating process locations and scale are approximate.

LEGEND

Exposed Soil Areas

Property Boundary

1. Waste Treatment Tank
2. Supernatant Tank
3. Filter Press
4. Sludge Tank
5. Extra Tank (empty)
6. Electroless Nickel Plating Storage Tank
7. Nitric Acid for Possivation, Storage Tank
8. Secondary Containment for Tank #7
9. 2800 °F Kiln
10. Boiler Condensate Return Tank
11. Cooling Tower (roof mounted)
12. Chrome Fume Scrubber
13. Cadmium Conversion Coating
14. Cadmium Conversion Coating
15. Conversion Coating Rinse 1st Stage
16. Conversion Coating Rinse 2nd Stage
17. Hot Water Rinse
18. Cadmium Strip Rinse
19. Cadmium Plating Tanks
20. Cadmium Strip Tanks
21. Chrome Plating Tanks
22. Chrome Strip Tanks
23. Nickel Strip Tanks
24. Electro Clean
25. Hot and Cold Water Rinse
26. Chrome Kill (Na_2SO_4)
27. Acid Activator (M629)
28. Electrolitic Nickel Plating Tank
29. Salt Spray Test Chamber
30. Electroless Plating Tank
31. Electrolitic Nickel Plating Tank
32. HCL Acid Activator Tank
33. Clear Anodizing Tank
34. Hard Anodizing Tank
35. Hard Anodizing Tank
36. Hot Caustic Etch Tank
37. Cold Water Rinse
38. Cold Caustic Etch
39. Hot Alkaline Cleaner
40. Bright Dip
41. De Oxidizer
42. Hot Water Seal
43. Black Dye
44. Mangenses Phosphate
45. Zinc Phosphate
46. Acid Activation (M629)
47. Cold Water Rinse
48. Electro Clean
49. Hot Alkaline Clean

751-785 Brush Street
Oakland, California

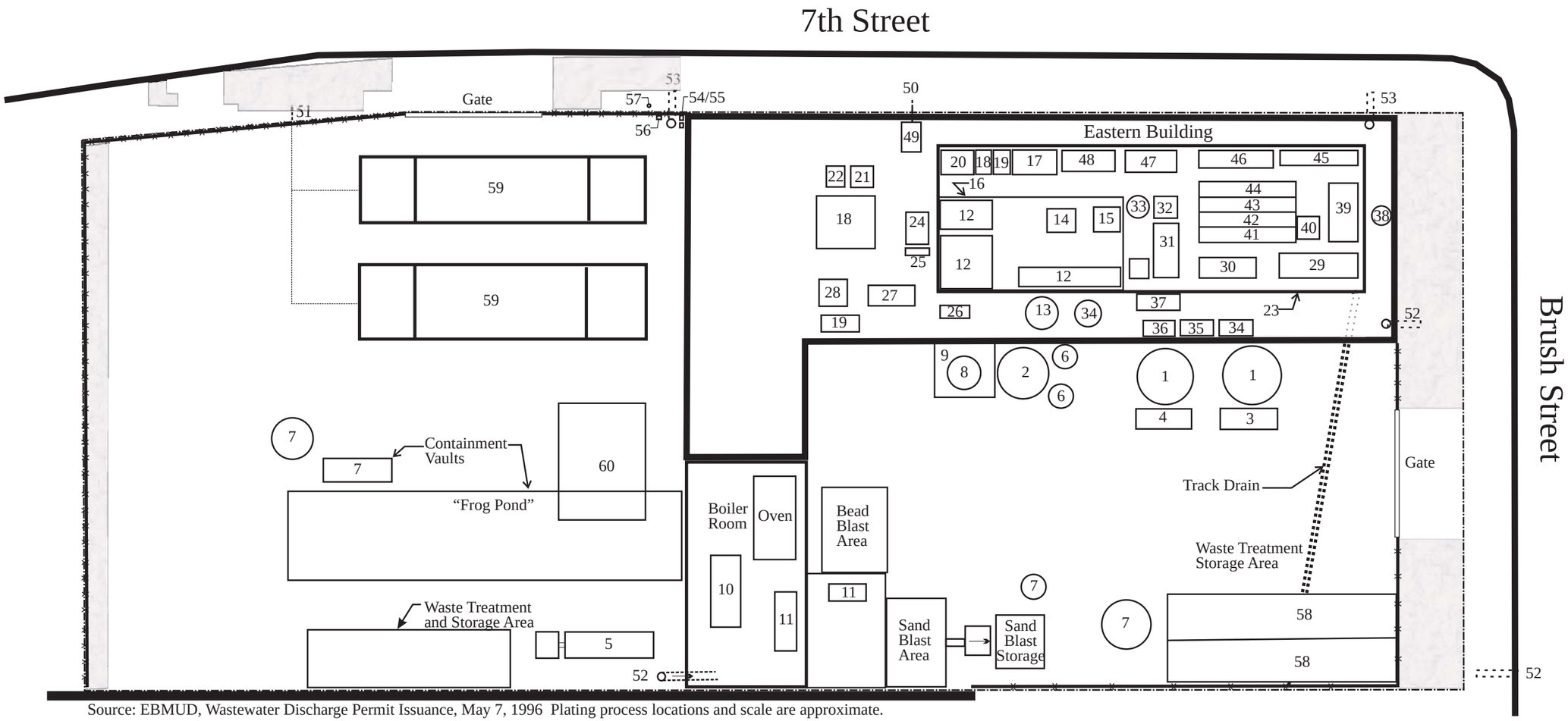
0 20 Feet

BASELINE

Y0323-05.01875.Fig4-10.cdr 06/12/12

FRANCIS PLATING SITE PLAN - 1996

Figure 7



Source: EBMUD, Wastewater Discharge Permit Issuance, May 7, 1996 Plating process locations and scale are approximate.

LEGEND

Exposed Soil Areas

Property Boundary

1. Treatment Tanks
2. Supernatant (Top Water)
3. 36" Press
4. 24" Press
5. Dryer
6. Condensate Return Tank
7. Temporary Storage Tank
8. Nitric Storage Tank
9. Secondary Containment Nitric Acid
10. Scrubber
11. Boiler
12. Nickel Tanks
13. Temporary Nickel Storage
14. 629 Acid Activator
15. Glycolic Nickel
16. Secondary Containment - Stainless
17. Rinse Tank
18. Zinc Phosphate
19. Cadmium Plating Tanks
20. Soap Cleaner
21. Nitric Acid Strip
22. Citric Cleaner
23. Secondary Containment - Concrete
24. Gold Chromate
25. Clear Chromate
26. Zinc Chromate
27. Zinc Plating Tank
28. Woods Nickel
29. Clear Anodize Tank
30. Rinse Tank
31. Clear Anodize Tank
32. Hot Di Water Seal
33. Sodium DiChromate Seal
34. Gold Dye
35. Red Dye
36. Blue Dye
37. Black Dye
38. Teflon Seal
39. Caustic Etch
40. Rinse Tank
41. Alodine Tank
42. Rinse Tank
43. Etch Tank
44. Etch Tank
45. Rinse Tank
46. Non-Etch Tank
47. Work Bench
48. Dioxidzing Tank
49. Sampling Wier
50. Side Sewer #1
51. Side Sewer #2
52. Storm Drain Outlets - Brush Street
53. Storm Drain Outlets - Seventh Street
54. Gas Turnoff Valve
55. Water Turnoff Valve
56. Main Water Inlet
57. Water Meter
58. Storage Trailers
59. Temporary Trailers
60. Temporary Storage

751-785 Brush Street
Oakland, California

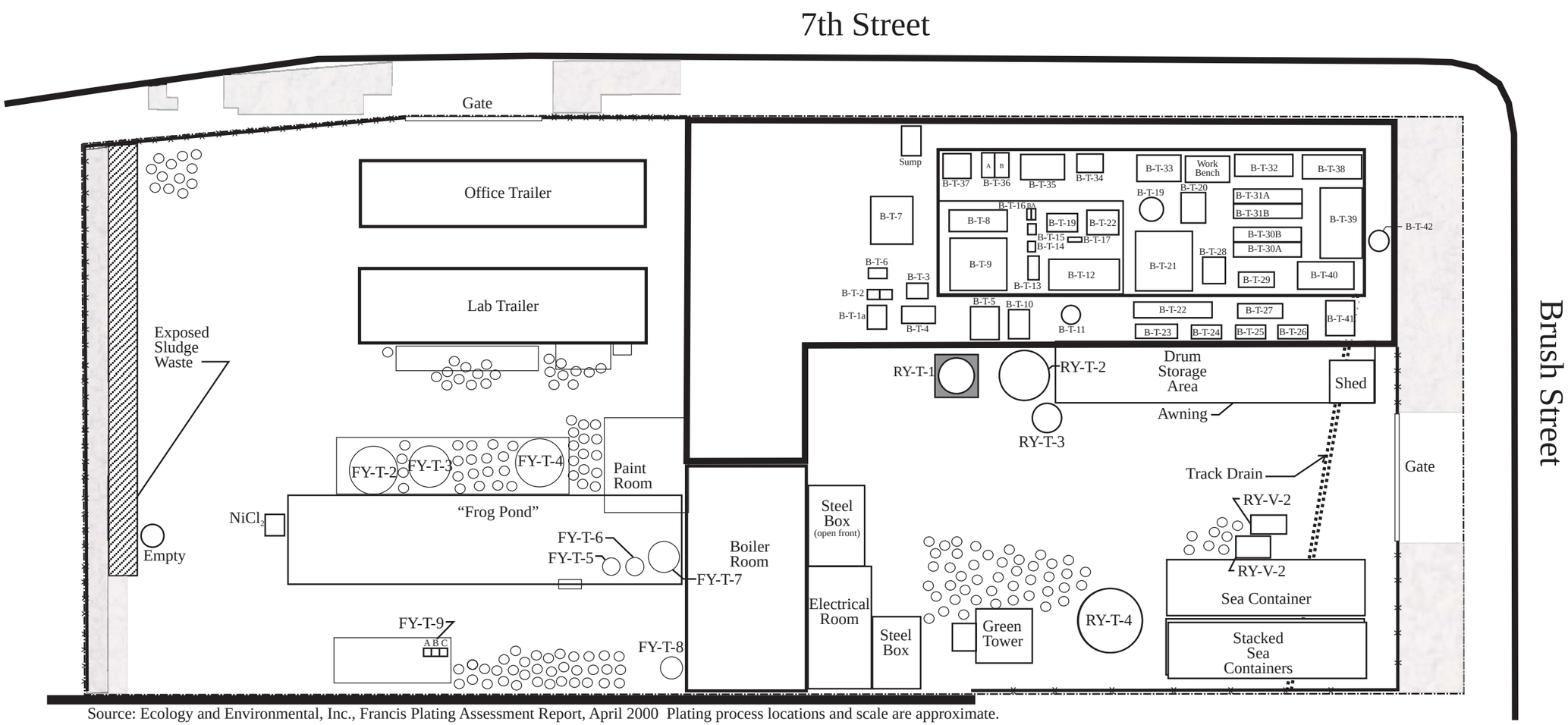
0 20 Feet

BASELINE

Y0323-05.01875.Fig4-10.cdr 06/12/12

FRANCIS PLATING SITE PLAN - 1998

Figure 8



Source: Ecology and Environmental, Inc., Francis Plating Assessment Report, April 2000 Plating process locations and scale are approximate.

LEGEND

Exposed Soil Areas
Property Boundary
Drum

B-T-1a. Cadmium Cyanide
B-T-2. Rinse Water
B-T-3. Electroless Nickel
B-T-4. Chromate Conversion
B-T-5. Contents Unkown
B-T-6. Silver Cyanide
B-T-7. Electroless Nickel
B-T-8. Water
B-T-9. Electroless Nickel
B-T-10. Contents Unknown
B-T-11. Electroless Nickel
B-T-12. Evaporation
B-T-13. Nitric
B-T-14. Nitric
B-T-15. Copper Bright
B-T-16. A-Water/B-HCL
B-T-17. Contents Unknown
B-T-18. Electroless Nickel
B-T-19. Contents Unknown
B-T-20. Water
B-T-21. Sulphuric
B-T-22. Dilute HCL
B-T-23. Yellow Dye
B-T-24. Red Dye
B-T-25. Red Dye
B-T-26. Nickel Acetate
B-T-27. Aladine
B-T-28. Nitric
B-T-29. Rinse Water
B-T-30. A-Alodine/B-Nitric
B-T-31. A-Contents Unknown/B-Water
B-T-32. Soap
B-T-33. Nitric
B-T-34. Water
B-T-35. Empty
B-T-36. A-Zinc Phosphate/B-Cyanide
B-T-37. Water
B-T-38. Nitric
B-T-39. Sodium Hydroxide
B-T-40. Sulphuric
B-T-41. Bronze Dye
B-T-42. Contents Unknown
RY-1. Nitric
RY-2. Rinse Water
RY-3. HCL
RY-4. Nickel Sulfate
RY-V-1. Contents Unknown
RY-V-2 . Contents Unknown
FY-2. Electroless Nickel, Rainwater, Rinse Water
FY-T-3. Electroless Nickel, Rainwater, Rinse Water
FY-T-4. Electroless Nickel
FY-T-5. Cyanide
FY-T-6. Aladine
FY-T-7. Chromic Acid
FY-T-8. Contents Unknown
FY-T-9. Water Treatment

751-785 Brush Street
Oakland, California

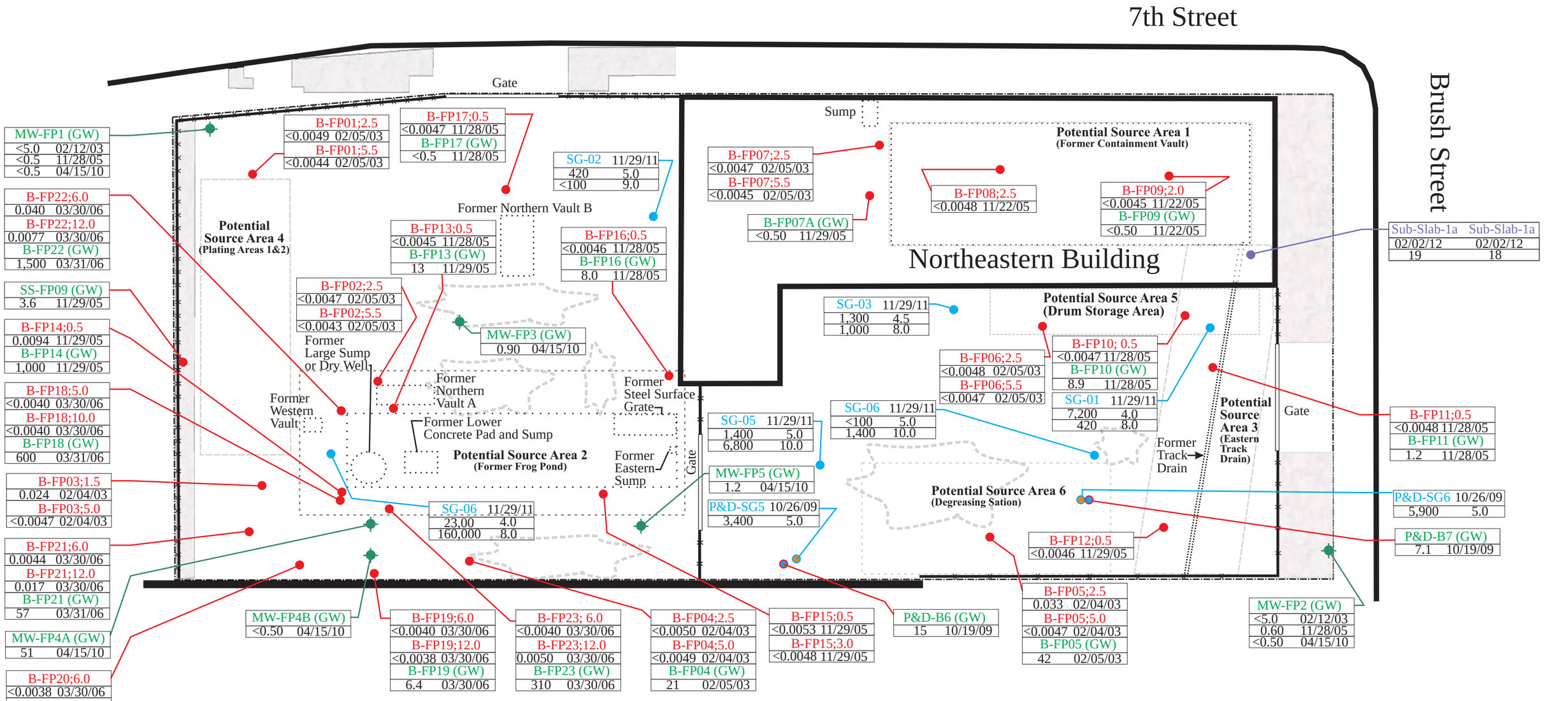
0 20 Feet

BASELINE

Y0323-05.01875.Fig4-10.cdr 06/12/12

TCE CONCENTRATIONS IN SOIL, GROUNDWATER, SOIL GAS, AND SUB-SLAB VAPOR

Figure 9



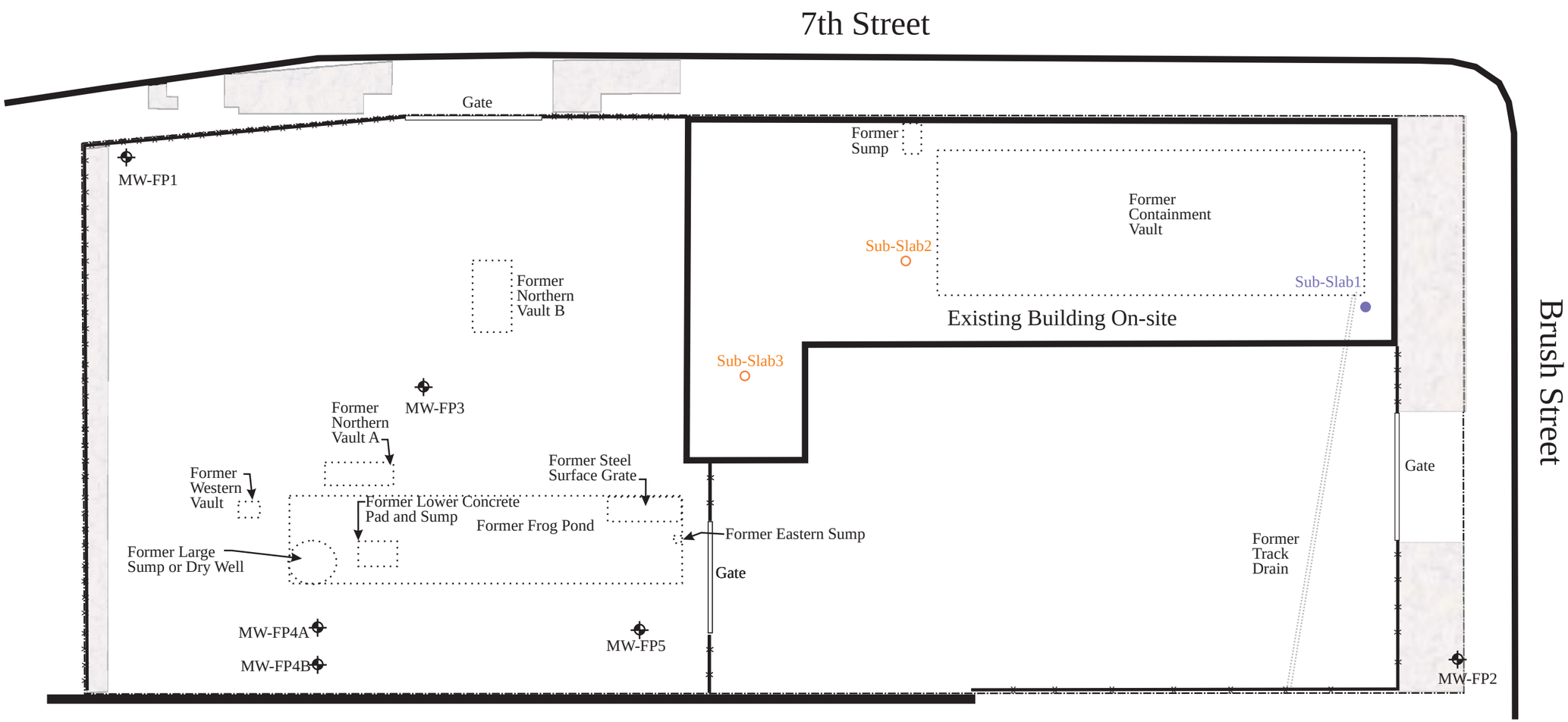
751-785 Brush Street
Oakland, California

Y0323-05.01875.Fig4-10.cdr 06/12/12

BASELINE

PROPOSED SUB-SLAB VAPOR PROBE LOCATIONS

Figure 10



LEGEND

- Property Boundary
- Monitoring Well Location
- Sub-Slab Vapor Probe
- Proposed Sub-Slab Vapor Probe Location
- Exposed Soil Areas

751-785 Brush Street
Oakland, California

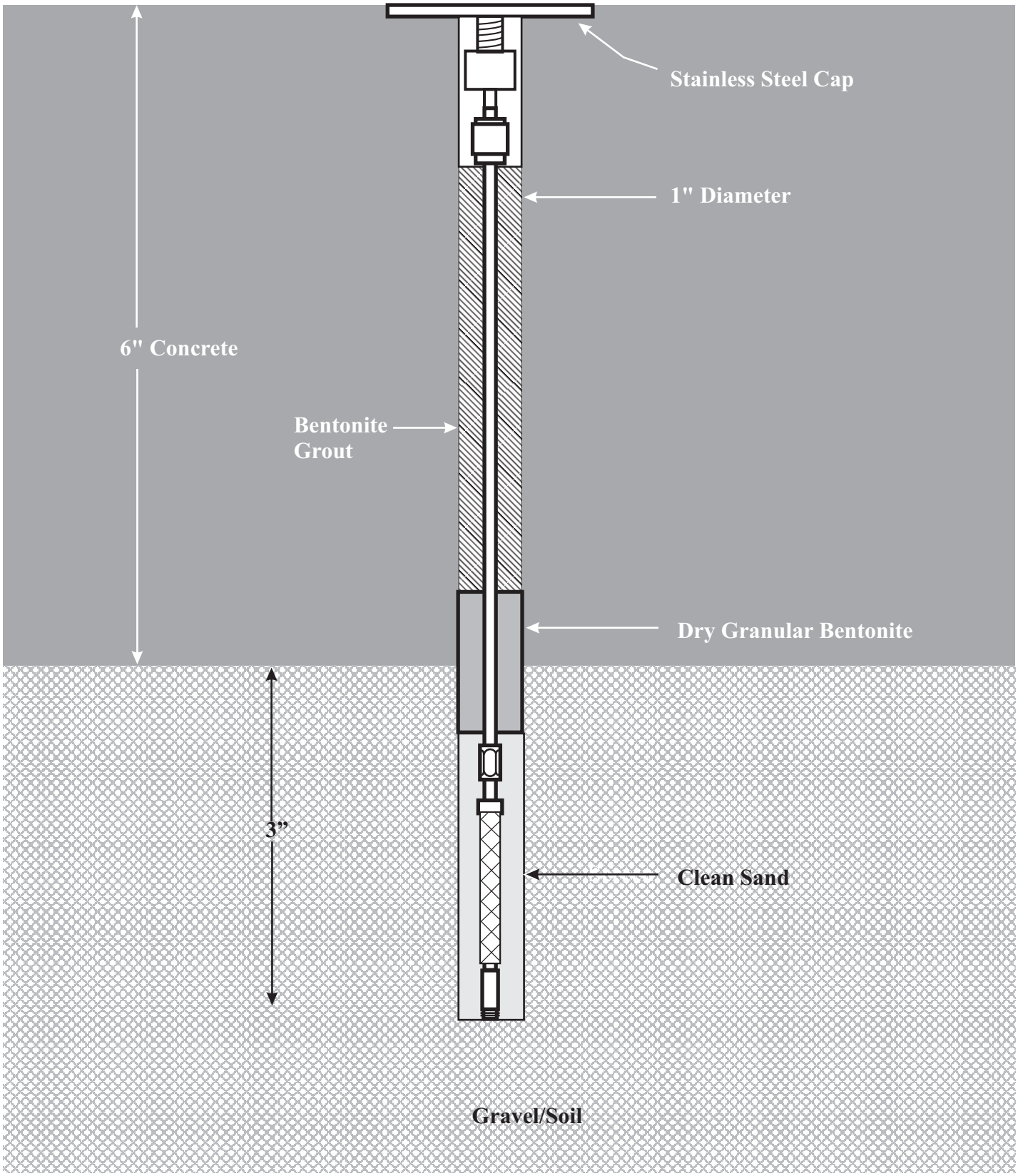
0 20 Feet

BASELINE

Y0323-05.01875.Fig4-10.cdr 06/12/12

VAPOR PROBE CONSTRUCTION DIAGRAM

Figure 11



785 Seventh Street
Oakland, California

BASELINE

Y0323-05.01842.Fig11.cdr 06/11/12

TABLES

Table 1: Groundwater Elevation Data, 781-785 Seventh Street, Oakland, California

Well ID	Date Measured	Top of Well Casing Elevation (ft)	Depth to Water (ft btc)	Groundwater Elevation (ft NAVD88)	Screened Interval (ft bgs)
On-Site Groundwater Monitoring Wells					
MW-FP1	02/12/03	25.77	13.91	11.86	12-25
MW-FP1	11/25/05	25.77	15.50	10.27	
MW-FP1	04/15/10	25.77	14.82	10.95	
MW-FP2	02/12/03	23.81	12.30	11.51	12-25
MW-FP2	11/25/05	23.81	13.84	9.97	
MW-FP2	04/15/10	23.81	13.19	10.62	
MW-FP3	04/15/10	25.66	14.82	10.84	12-25
MW-FP4A	04/15/10	25.64	15.01	10.63	12-25
MW-FP4B	04/15/10	25.44	14.92	10.52	45-57
MW-FP5	04/15/10	25.69	15.01	10.68	12-25
Off-Site Groundwater Monitoring Wells					
MW-FP6	04/15/10	21.04	10.98	10.06	12-25
MW-FP7B	04/15/10	20.51	10.48	10.03	39-49
MW-3 (Shell)	04/15/10	NS	11.00	NS	--
MW-9 (Shell)	04/15/10	21.03	10.98	10.05	5-20

Notes:
ft = feet
btc = below top of casing
bgs = below ground surface
NS = not surveyed
-- = unknown
Elevation datum is North American Vertical Datum of 1988 (NAVD88).
Well locations shown on Figure 2.

Table 2: Metals in Soil, 781-785 Seventh Street, Oakland, California (mg/kg)

Sample Location	Top of Sample Interval (feet bgs)	SampleDate	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium VI	Chromium, Total	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Residential ESLs ≤3 meters (9.8 feet) [1]			6.3	0.39	750	4.0	1.7	8.0	750 [3]	40	230	200	1.3	40	150	10	20	1.3	16	600
Residential ESLs >3 meters (9.8 feet) [2]			310	15	2,500	98	39	0.53	2,500 [3]	94	2,500	750	58	2,500	260	2,500	2,500	62	770	2,500
Commercial ESLs ≤3 meters (9.8 feet) [1]			40	1.6	1,500	8.0	7.4	8.0	750 [3]	80	230	750	10	40	150	10	40	16	200	600
Commercial ESLs >3 meters (9.8 feet) [2]			310	15	2,600	98	39	0.53	5,000 [3]	94	5,000	750	58	3,900	260	3,900	3,900	62	770	5,000
Background [4]			<6	11	410	1.0	5.6	NE	120	25	63	24 [5]	0.42	4.8	272	4.9	2.9	10	90	140
Phase I																				
B-FP01	2.5	02/05/03	<0.75	**1.2**	**53**	<0.25	<0.50	<0.050	**28**	**3.9**	**5.3**	**2.3**	<0.084	<0.25	**16**	<0.75	<0.25	<0.75	**20**	**15**
B-FP01	5.5	02/05/03	<0.75	**1.0**	**60**	**0.38**	<0.50	**0.59**	**49**	**17**	**9.0**	**3.8**	<0.084	<0.25	**54**	<0.75	<0.25	<0.75	**35**	**24**
B-FP02	2.5	02/05/03	<0.75	<0.75	**56**	<0.25	<0.50	<0.050	**29**	**4.2**	**5.7**	**2.4**	<0.084	<0.25	**17**	<0.75	<0.25	<0.75	**20**	**16**
B-FP02	5.5	02/05/03	<0.75	<0.75	**71**	**0.32**	<0.50	<0.050	**83**	**6.9**	**10**	**3.3**	<0.084	<0.25	**99**	<0.75	<0.25	<0.75	**35**	**24**
B-FP03	1.5	02/04/03	<0.75	**0.93**	**71**	<0.25	<0.50	<0.050	**38**	**4.4**	**5.6**	**5.0**	<0.084	**0.37**	**17**	<0.75	<0.25	<0.75	**18**	**16**
B-FP03	5.0	02/04/03	<0.75	**1.4**	**53**	**0.35**	<0.50	<0.050	**67**	**9.7**	**10**	**3.5**	<0.084	<0.25	**995**	<0.75	<0.25	<0.75	**43**	**24**
B-FP04	2.0	02/04/03	<0.75	<0.75	**76**	<0.25	<0.50	<0.050	**27**	**4.1**	**5.8**	**2.4**	<0.084	<0.25	**17**	<0.75	<0.25	<0.75	**19**	**17**
B-FP04	5.0	02/04/03	<0.75	**1.1**	**43**	**0.33**	<0.50	<0.050	**48**	**11**	**6.6**	**3.2**	<0.084	**0.87**	**37**	<0.75	<0.25	<0.75	**33**	**45**
B-FP05	2.0	02/04/03	<0.75	**0.79**	**56**	<0.25	<0.50	**0.090**	**37**	**3.9**	**4.8**	**2.8**	<0.084	<0.25	**17**	<0.75	<0.25	<0.75	**20**	**14**
B-FP05	5.0	02/04/03	<0.75	**0.76**	**28**	<0.25	<0.50	**1.9**	**35**	**2.6**	**4.6**	**2.1**	<0.084	<0.25	**19**	<0.75	<0.25	<0.75	**22**	**11**
B-FP06	2.0	02/05/03	<0.75	**3.4**	**134**	<0.25	**0.69**	<0.050	**220**	**5.2**	**20**	**1,260**	**0.42**	**2.0**	**368**	<0.75	<0.25	<0.75	**19**	**1,260**
B-FP06	5.0	02/05/03	<0.75	**1.8**	**49**	**0.34**	<0.50	<0.050	**49**	**11**	**7.8**	**4.0**	<0.084	<0.25	**320**	<0.75	<0.25	<0.75	**36**	**22**
B-FP07	2.5	02/05/03	<0.75	**4.4**	**108**	<0.25	<0.50	<0.050	**39**	**4.6**	**25**	**141**	**0.14**	**0.65**	**39**	<0.75	<0.25	<0.75	**22**	**94**
B-FP07	5.0	02/05/03	<0.75	<0.75	**81**	**0.42**	<0.50	**0.090**	**85**	**7.3**	**9.7**	**4.1**	<0.084	<0.25	**164**	<0.75	<0.25	<0.75	**47**	**28**
COMP FY [6]	7.0	02/05/03	<0.75	**1.2**	**64**	**0.28**	<0.50	<0.050	**54**	**7.8**	**7.5**	**3.0**	<0.084	<0.25	**75**	<0.75	<0.25	<0.75	**32**	**23**
COMP RY [7]	7.0	02/05/03	<0.75	<0.75	**66**	**0.27**	<0.50	<0.050	**48**	**6.9**	**7.8**	**2.8**	<0.084	<0.25	**55**	<0.75	<0.25	<0.75	**31**	**22**
Phase II																				
B-FP08	2.5	11/22/05	<2.7	**2.6**	**40**	**0.23**	<0.23	<0.050	**42**	**5.3**	**7.0**	**2.5**	<0.020	<0.90	**32**	<0.23	<0.23	<0.23	**25**	**24**
B-FP08	4.5	11/22/05	<3.1	**2.6**	**50**	**0.24**	<0.26	<0.050	**52**	**6.4**	**9.1**	**2.8**	<0.018	<1.0	**34**	<0.26	<0.26	<0.26	**32**	**27**
B-FP09	2.0	11/22/05	<3.2	**2.3**	**52**	**0.23**	<0.27	<0.050	**50**	**7.8**	**9.0**	**18**	<0.019	<1.1	**38**	<0.27	<0.27	<0.27	**26**	**33**
B-FP09	4.5	11/22/05	<3.0	**3.3**	**63**	**0.28**	<0.25	<0.050	**51**	**6.7**	**10**	**3.1**	<0.019	<1.0	**35**	<0.25	<0.25	<0.25	**37**	**26**
B-FP10	0.5	11/28/05	<3.1	**2.5**	**66**	**0.14**	**0.67**	<0.050	**30**	**1.9**	**26**	**60**	**0.029**	<1.0	**13**	<0.26	<0.26	**0.34**	**22**	**67**
B-FP10	3.5	11/28/05	<2.9	**2.3**	**23**	**0.16**	**0.35**	<0.050	**41**	**12**	**12**	**3.8**	**0.024**	<0.95	**77**	<0.24	<0.24	<0.24	**24**	**69**
B-FP11	0.5	11/28/05	<2.5	**1.8**	**65**	<0.083	**9.0**	<0.050	**1,800**	**3.0**	**56**	**72**	**0.031**	<0.83	**660**	**0.47**	<0.21	**0.96**	**15**	**38**
B-FP11	3.5	11/28/05	<2.1	**1.8**	**37**	**0.22**	**39**	<0.050	**680**	**2.3**	**410**	**2.7**	**0.033**	<0.7	**170**	<0.17	<0.17	**0.52**	**22**	**100**
B-FP12	0.5	11/29/05	<2.1	**2.8**	**68**	**0.15**	**0.39**	**0.18**	**88**	**4.8**	**78**	**2.9**	**0.035**	<0.71	**1,100**	<0.18	<0.18	<0.18	**19**	**69**
B-FP12	3.5	11/29/05	<2.6	**1.8**	**45**	**0.14**	**0.30**	**0.060**	**43**	**2.1**	**4.8**	**1.8**	**0.034**	<0.88	**190**	<0.22	<0.22	<0.22	**20**	**25**
B-FP13	0.5	11/28/05	<2.5	**3.8**	**68**	**0.18**	**0.39**	<0.050	**38**	**3.4**	**12**	**66**	**0.13**	<0.83	**16**	<0.21	<0.21	**0.43**	**22**	**43**
B-FP13	3.5	11/28/05	<3.1	**2.3**	**49**	**0.14**	**0.35**	<0.050	**26**	**2.6**	**7.2**	**38**	**0.079**	<1.0	**16**	<0.26	<0.26	**0.52**	**19**	**28**
B-FP14	0.5	11/29/05	<3.0	**5.3**	**180**	**0.19**	**0.69**	**19**	**1,000**	**4.0**	**30**	**290**	**0.44**	<0.99	**19**	<0.25	<0.25	**0.79**	**24**	**170**
B-FP14	3.5	11/29/05	**17**	**2.8**	**24**	**0.10**	**4.2**	**22**	**5,500**	**5.2**	**170**	**3.2**	**0.088**	**1.9**	**520**	<0.26	<0.26	<0.26	**28**	**33**
B-FP15	0.5	11/29/05	<2.9	**2.1**	**71**	**0.17**	**0.36**	<0.050	**32**	**3.5**	**5.5**	**2.6**	<0.020	<0.98	**17**	<0.25	<0.25	<0.25	**23**	**18**
B-FP15	3.0	11/29/05	<2.1	**2.3**	**44**	**0.17**	**0.46**	<0.050	**140**	**3.2**	**16**	**2.3**	**0.020**	<0.68	**22**	<0.17	<0.17	**0.22**	**23**	**16**
B-FP16	0.5	11/28/05	<2.9	**2.1**	**52**	**0.15**	**0.43**	**0.060**	**150**	**3.2**	**4.9**	**2.3**	**0.045**	<0.96	**16**	<0.24	<0.24	<0.24	**21**	**16**
B-FP16	3.5	11/28/05	<2.6	**3.7**	**43**	**0.30**	**0.75**	**0.090**	**77**	**19**	**7.2**	**3.4**	<0.021	**1.6**	**36**	<0.22	<0.22	<0.22	**44**	**20**
B-FP17	0.5	11/28/05	<2.8	**1.9**	**60**	**0.16**	**0.47**	<0.050	**39**	**3.1**	**7.0**	**2.7**	<0.020	<0.93	**20**	<0.23	<0.23	<0.23	**22**	**18**
B-FP17	3.5	11/28/05	<2.9	**2.1**	**29**	**0.15**	**0.33**	<0.050	**31**	**2.5**	**4.6**	**2.1**	<0.023	**1.3**	**16**	<0.24	<0.24	**0.25**	**23**	**14**

Table 2: Metals in Soil, 781-785 Seventh Street, Oakland, California (mg/kg)

Sample Location	Top of Sample Interval (feet bgs)	SampleDate	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium VI	Chromium, Total	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Residential ESLs ≤3 meters (9.8 feet) [1]			6.3	0.39	750	4.0	1.7	8.0	750 [3]	40	230	200	1.3	40	150	10	20	1.3	16	600
Residential ESLs >3 meters (9.8 feet) [2]			310	15	2,500	98	39	0.53	2,500 [3]	94	2,500	750	58	2,500	260	2,500	2,500	62	770	2,500
Commercial ESLs ≤3 meters (9.8 feet) [1]			40	1.6	1,500	8.0	7.4	8.0	750 [3]	80	230	750	10	40	150	10	40	16	200	600
Commercial ESLs >3 meters (9.8 feet) [2]			310	15	2,600	98	39	0.53	5,000 [3]	94	5,000	750	58	3,900	260	3,900	3,900	62	770	5,000
Background [4]			<6	11	410	1.0	5.6	NE	120	25	63	24 [5]	0.42	4.8	272	4.9	2.9	10	90	140
COMP 1 [8]	0.0	11/21/05	<3.0	**4.9**	**97**	**0.25**	**2.3**	<0.050	**79**	**5.7**	**48**	**180**	**0.24**	**1.1**	**71**	<0.25	<0.25	<0.25	**33**	**140**
COMP 2 [9]	1.0	11/21/05	<2.6	**2.4**	**66**	**0.24**	**2.9**	<0.050	**40**	**5.3**	**18**	**7.7**	**0.072**	<0.86	**71**	<0.22	<0.22	<0.22	**25**	**44**
COMP 3 [10]	0.0	11/21/05	<2.3	**2.5**	**65**	**0.25**	**1.5**	<0.050	**42**	**5.7**	**19**	**47**	**0.19**	**2.1**	**48**	<0.19	<0.19	<0.19	**25**	**69**
COMP 4 [11]	1.0	11/21/05	<2.6	**2.3**	**62**	**0.27**	**0.60**	<0.050	**27**	**6.1**	**16**	**32**	**0.32**	**1.6**	**38**	<0.21	<0.21	<0.21	**26**	**65**
COMP 5 [12]	0.0	11/22/05	<2.8	**3.0**	**84**	**0.25**	<0.23	<0.050	**40**	**4.6**	**30**	**190**	**0.22**	<0.93	**22**	<0.23	<0.23	<0.23	**27**	**95**
COMP 6 [13]	1.0	11/22/05	<2.5	**4.6**	**130**	**0.30**	**5.0**	<0.050	**42**	**5.9**	**41**	**230**	**0.40**	**1.2**	**150**	<0.2	**0.37**	<0.20	**23**	**250**
Phase III																				
B-FP23	6.0	03/30/06	--	--	--	--	--	**30**	--	--	--	--	--	--	--	--	--	--	--	--
Frog Pond Removal																				
B-FP24	4.5	05/31/07	<0.25	**2.0**	**51**	<0.25	<0.25	**33**	**48**	**3.1**	**6.7**	**19**	**0.14**	**0.35**	**17**	<0.25	<0.25	<0.25	**18**	**27**
B-FP24	9.5	05/31/07	<0.25	**2.6**	**52**	<0.25	<0.25	**67**	**140**	**6.2**	**7.6**	**2.6**	<0.020	<0.25	**34**	<0.25	<0.25	<0.25	**27**	**23**
B-FP25	4.5	06/01/07	**0.29**	**3.8**	**40**	**0.38**	**0.61**	**10**	**610**	**14**	**49**	**13**	<0.020	**0.85**	**240**	<0.25	<0.25	<0.25	**37**	**30**
B-FP25	9.5	06/01/07	<0.25	**2.2**	**50**	<0.25	**0.31**	**6.5**	**180**	**5.5**	**20**	**2.4**	<0.020	<0.25	**76**	<0.25	<0.25	<0.25	**24**	**25**
B-FP26	4.5	06/01/07	<0.25	**2.7**	**33**	<0.25	<0.25	<0.050	**44**	**2.9**	**4.7**	**2.7**	<0.020	**0.61**	**89**	<0.25	<0.25	<0.25	**29**	**14**
B-FP26	9.5	06/01/07	<0.25	**2.1**	**41**	<0.25	<0.25	<0.050	**36**	**4.3**	**6.9**	**2.2**	<0.020	**0.34**	**33**	<0.25	<0.25	<0.25	**23**	**24**
B-FP27	4.5	06/01/07	**0.81**	**2.0**	**40**	<0.25	**3.1**	**0.77**	**290**	**3.4**	**12**	**48**	**0.045**	**0.59**	**160**	<0.25	<0.25	<0.25	**19**	**28**
B-FP27	9.5	06/01/07	<0.25	**2.1**	**49**	<0.25	<0.25	**3.7**	**44**	**5.0**	**6.8**	**2.5**	<0.020	<0.25	**36**	<0.25	<0.25	<0.25	**23**	**26**
B-FP28	4.5	06/01/07	<0.25	**4.0**	**65**	**0.35**	<0.25	**3.8**	**110**	**7.2**	**9.2**	**3.2**	<0.020	**0.41**	**74**	<0.25	<0.25	<0.25	**42**	**20**
B-FP29	7.0	06/01/07	**0.47**	**2.9**	**62**	**0.33**	**1.5**	**0.31**	**430**	**9.9**	**260**	**4.4**	<0.020	**0.64**	**580**	<0.25	<0.25	<0.25	**32**	**72**
B-FP30	7.0	06/01/07	<0.25	**2.7**	**63**	**0.28**	**0.31**	<0.050	**170**	**6.4**	**10**	**3.7**	<0.020	**0.37**	**1,100**	<0.25	<0.25	<0.25	**32**	**25**
B-FP31 [14]	11.5	06/01/07	<0.25	**3.1**	**59**	**0.33**	<0.25	<0.050	**65**	**10**	**9.4**	**3.9**	<0.021	**0.34**	**51**	<0.25	<0.25	<0.25	**32**	**25**
B-FP31 [14]	18.5	06/05/07	**0.85**	**2.5**	**34**	<0.25	<0.25	<0.050	**1,400**	**7.7**	**220**	**1.6**	<0.020	**0.30**	**1,800**	<0.25	<0.25	<0.25	**22**	**39**
Bottom of Concrete Column	20.0	09/05/07	**1.4**	**2.6**	**52**	**0.22**	**3.2**	**3.9**	**240**	**6.1**	**41**	**36**	<0.020	**0.74**	**230**	<0.5	<0.25	<0.5	**29**	**63**
Phase IV																				
MW-FP3	5.0	03/03/10	<0.50	**3.2**	**47**	**0.43**	<0.25	<0.4	**72**	**5.5**	**20**	**3.5**	<0.021	<0.25	**51**	**0.69**	<0.25	<0.50	**38**	**33**
MW-FP4A	5.0	03/03/10	<0.50	**2.1**	**47**	**0.22**	**1.8**	**92**	**1,400**	**6.3**	**88**	**1.7**	<0.02	<0.25	**36**	<0.50	<0.25	<0.50	**29**	**22**
MW-FP4A	10.0	03/03/10	<0.50	**2.1**	**46**	**0.27**	**2.0**	**310**	**440**	**4.9**	**140**	**2.2**	<0.021	<0.25	**62**	<0.50	<0.25	<0.50	**27**	**27**
MW-FP4A	15.0	03/03/10	<0.50	**2.5**	**40**	**0.25**	<0.25	**19**	**130**	**5.6**	**7.1**	**2.1**	<0.020	<0.25	**76**	<0.50	<0.25	<0.50	**33**	**21**
MW-FP4A	20.0	03/03/10	<0.50	**3.0**	**44**	**0.13**	<0.25	**460**	**560**	**4.3**	**5.9**	**0.83**	<0.021	<0.25	**42**	<0.50	<0.25	<0.50	**25**	**18**
MW-FP5	5.0	03/03/10	<0.50	**3.0**	**44**	**0.31**	<0.25	**1.0**	**120**	**2.4**	**23**	**3.3**	<0.02	<0.25	**31**	<0.50	<0.25	<0.50	**45**	**29**
MW-FP5	10.0	03/03/10	<0.50	**2.1**	**43**	**0.21**	<0.25	**5.3**	**43**	**5.7**	**7.6**	**2.0**	<0.021	<0.25	**30**	<0.50	<0.25	<0.50	**28**	**21**
MW-FP5	15.0	03/03/10	<0.50	**4.4**	**66**	**0.33**	<0.25	**11**	**65**	**8.4**	**10**	**2.5**	<0.020	<0.25	**35**	<0.50	<0.25	<0.50	**43**	**23**
MW-FP5	20.0	03/03/10	<0.50	**1.9**	**28**	**0.11**	<0.25	**21**	**62**	**4.5**	**7.4**	**1.2**	<0.020	<0.25	**28**	<0.50	<0.25	<0.50	**24**	**18**

Table 2: Metals in Soil, 781-785 Seventh Street, Oakland, California (mg/kg)

Notes:
ESLs = Environmental Screening Levels; Source: RWQCB, 2007, Revised May 2008.
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
<x.x = compound not identified above laboratory reporting limit of x.x
Analyzed in accordance with EPA Methods 6010B/7400/7196A.
Sample locations shown on Figure 5.
Underlined values exceed the Commercial ESL and background value.
Values reported above the laboratory reporting limit are indicated in bold text.
Yellow shaded values exceed the residential ESL and background value.

[1] Table B, Environmental Screening Levels, Shallow Soils, (≤ 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.
[2] Table D, Environmental Screening Levels, Deep Soils, (> 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.
[3] ESL for Chromium III
[4] Background metals - Lawrence Berkeley National Laboratory ("LBNL"), 2002, Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory, June, revised April 2009 (99th percentile).
Background for arsenic based on San Francisco Bay Area Water Quality Control Board's "Background Arsenic Concentration in Soil of the Urbanized San Francisco Bay Region", dated December 2011.
[5] Greater than five feet below ground surface.
[6] Composite sample from B-FP1, B-FP2, and B-FP4 collected at 7.0-7.5 feet below ground surface.
[7] Composite sample from B-FP5, B-FP6, and B-FP7 collected at 7.0-7.5 feet below ground surface.
[8] Composite sample from SS-FP1 to SS-FP4 collected at 0.0-0.5 feet below ground surface.
[9] Composite sample from SS-FP1 to SS-FP4 collected at 1.0-1.5 feet below ground surface.
[10] Composite sample from SS-FP5 to SS-FP7 collected at 0.0-0.5 feet below ground surface.
[11] Composite sample from SS-FP5 to SS-FP7 collected at 1.0-1.5 feet below ground surface.
[12] Composite sample from SS-FP8 to SS-FP10 collected at 0.0-0.5 feet below ground surface.
[13] Composite sample from SS-FP1 to SS-FP4 collected at 1.0-1.5 feet below ground surface.
[14] Results were reported by the laboratory on a dry-weight basis. Values in the table have been converted to "as received"-weight basis to be consistent with other samples. Moisture content 14 to 15 percent.

Table 3: WET and TCLP Metal Concentrations in Soil, 751-785 Seventh Street, Oakland, California (mg/L)

Sample ID	Top of Sample Interval (ft bgs)	Sample Date	Cadmium, DI WET	Copper, DI WET	Lead, DI WET	Nickel, DI WET	Lead, WET	Nickel, WET	Lead, TCLP
Hazardous Waste Criteria [1]			**NA**	**NA**	**NA**	**NA**	**5**	**20**	**5**
Phase I									
B-FP03	5.0	2/4/03	--	--	--	--	--	**31**	--
B-FP06	2.0	2/5/03	--	--	--	--	--	--	<0.30
B-FP06	2.0	2/5/03	--	--	--	--	**1.5**	**17**	--
B-FP06	5.0	2/5/03	--	--	--	--	--	**26**	--
Phase II									
B-FP10	0.5	11/28/05	--	--	**0.52**	--	--	--	--
B-FP11	0.5	11/28/05	--	--	**0.61**	**0.64**	--	--	--
B-FP11	3.5	11/28/05	**0.031**	**0.061**	--	--	--	--	--
B-FP12	0.5	11/29/05	--	--	--	**1.2**	--	--	--
B-FP13	0.5	11/28/05	--	--	**0.031**	--	--	--	--
B-FP14	0.5	11/29/05	--	--	**0.011**	--	--	--	--
B-FP14	3.5	11/29/05	--	--	--	**0.25**	--	--	--
COMP 1	0.0	11/21/05	--	--	**0.0070**	--	--	--	--
COMP 5	0.0	11/22/05	--	--	**0.014**	--	--	--	--
COMP 6	1.0	11/22/05	--	--	**0.013**	--	--	--	--

Notes:
COMP X = composite sample
DI WET = Waste Extraction Test using deionized water
NA = not applicable
TCLP = toxicity characteristic leaching procedure
mg/L = milligrams per liter
<x.x = compound not identified above laboratory reporting limit of x.x
-- = not analyzed
Sample locations are shown on Figure 5.
Underlined values exceed hazardous waste criteria.
Values shown in bold are concentrations quantified above laboratory reporting limits.
[1] WET - California Hazardous Waste criteria; TCLP - RCRA Hazardous Waste criteria.

Table 4: Volatile Organic Compounds in Soil, 781-785 Seventh Street, Oakland, California (mg/kg)

Sample Location	Top of Sample Interval (ft bgs)	Sample Date	Acetone	Carbon Disulfide	Methylene Chloride	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	Trichloroethene
Residential ESLs ≤3 meters (9.8 feet) [1]			0.50	NE	7.2	6.5	10	7.8	1.9
Residential ESLs >3 meters (9.8 feet) [2]			0.50	NE	34	18	39	7.8	33
Commercial ESLs ≤3 meters (9.8 feet) [1]			0.50	NE	17	18	34	7.8	4.1
Commercial ESLs >3 meters (9.8 feet) [2]			0.50	NE	34	18	39	7.8	33
Phase I									
B-FP01	2.5	02/05/03	<0.02	<0.0049	<0.02	<0.0049	<0.0049	<0.0049	<0.0049
B-FP01	5.5	02/05/03	<0.018	<0.0044	<0.018	<0.0044	<0.0044	<0.0044	<0.0044
B-FP02	2.5	02/05/03	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0047
B-FP02	5.5	02/05/03	<0.017	<0.0043	<0.017	<0.0043	<0.0043	<0.0043	<0.0043
B-FP03	1.5	02/04/03	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	**0.024**
B-FP03	5.0	02/04/03	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0047
B-FP04	2.5	02/04/03	<0.02	<0.005	<0.020	<0.0050	<0.0050	<0.0050	<0.0050
B-FP04	5.0	02/04/03	<0.02	<0.0049	<0.020	<0.0049	<0.0049	<0.0049	<0.0049
B-FP05	2.5	02/04/03	<0.018	<0.0044	<0.018	<0.0044	<0.0044	**0.0054**	**0.033**
B-FP05	5.5	02/04/03	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0047
B-FP06	2.5	02/05/03	<0.019	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0048
B-FP06	5.5	02/05/03	<0.018	<0.0044	<0.018	<0.0044	<0.0044	**0.0050**	<0.0044
B-FP07	2.5	02/05/03	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0047
B-FP07	5.5	02/05/03	<0.018	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0045
COMP FY[3]	7.0	02/05/03	<0.02	<0.0051	<0.020	<0.0051	<0.0051	<0.0051	<0.0051
COMP RY[4]	7.0	02/05/03	<0.021	<0.0052	<0.021	<0.0052	<0.0052	<0.0052	<0.0052
Phase II									
B-FP08	2.5	11/22/05	<0.019	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0048
B-FP09	2.0	11/22/05	<0.018	<0.0045	**0.028**	<0.0045	<0.0045	<0.0045	<0.0045
B-FP10	0.5	11/28/05	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0047
B-FP11	0.5	11/28/05	<0.019	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0048
B-FP12	0.5	11/29/05	<0.019	<0.0046	<0.019	<0.0046	<0.0046	<0.0046	<0.0046
B-FP13	0.5	11/28/05	<0.018	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0045
B-FP14	0.5	11/29/05	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	**0.0094**
B-FP15	0.5	11/29/05	<0.021	<0.0053	<0.021	<0.0053	<0.0053	<0.0053	<0.0053
B-FP15	3.0	11/29/05	<0.019	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0048
B-FP16	0.5	11/28/05	<0.019	<0.0046	<0.019	<0.0046	<0.0046	<0.0046	<0.0046
B-FP17	0.5	11/28/05	<0.019	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0047
Phase III									
B-FP18	5.0	03/30/06	<0.016	<0.0040	<0.016	<0.0040	<0.0040	<0.0040	<0.0040
B-FP18	10.0	03/30/06	<0.016	<0.0040	<0.016	<0.0040	<0.0040	<0.0040	<0.0040
B-FP19	6.0	03/30/06	<0.016	<0.0040	<0.016	<0.0040	<0.0040	<0.0040	<0.0040
B-FP19	12.0	03/30/06	<0.015	<0.0038	<0.015	<0.0038	<0.0038	<0.0038	<0.0038

Table 4: Volatile Organic Compounds in Soil, 781-785 Seventh Street, Oakland, California (mg/kg)

Sample Location	Top of Sample Interval (ft bgs)	Sample Date	Acetone	Carbon Disulfide	Methylene Chloride	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	Trichloroethene
Residential ESLs ≤3 meters (9.8 feet) [1]			0.50	NE	7.2	6.5	10	7.8	1.9
Residential ESLs >3 meters (9.8 feet) [2]			0.50	NE	34	18	39	7.8	33
Commercial ESLs ≤3 meters (9.8 feet) [1]			0.50	NE	17	18	34	7.8	4.1
Commercial ESLs >3 meters (9.8 feet) [2]			0.50	NE	34	18	39	7.8	33
B-FP20	6.0	03/30/06	<0.015	<0.0038	<0.015	<0.0038	<0.0038	<0.0038	<0.0038
B-FP20	12.0	03/30/06	<0.016	<0.0040	<0.016	<0.0040	<0.0040	<0.0040	<0.0040
B-FP21	6.0	03/30/06	<0.015	<0.0038	<0.015	<0.0038	<0.0038	<0.0038	**0.0044**
B-FP21	12.0	03/30/06	<0.016	<0.004	<0.016	**0.020**	<0.004	<0.004	**0.017**
B-FP22	6.0	03/30/06	<0.017	**0.0092**	<0.017	**0.066**	**0.0045**	<0.0042	**0.040**
B-FP22	12.0	03/30/06	<0.016	<0.004	<0.016	**0.027**	<0.004	<0.004	**0.0077**
B-FP23	6.0	03/30/06	<0.016	<0.0040	<0.016	<0.0040	<0.0040	<0.0040	<0.0040
B-FP23	12.0	03/30/06	**0.061**	<0.0037	<0.015	<0.0037	<0.0037	<0.0037	**0.0050**

Notes:

ESLs = Environmental Screening Levels; Source: RWQCB, 2007, Revised May 2008.

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

NE = not established

<x.x = compound not identified above laboratory reporting limit of x.x

Analyzed in accordance with EPA Method 8260B.

Only those analytes reported above the laboratory reporting limit in at least one sample are shown.

Sample locations shown on Figure 5.

Values reported above the laboratory reporting limit are indicated in bold text.

[1] Table B, Environmental Screening Levels, Shallow Soils, (≤ 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.

[2] Table D, Environmental Screening Levels, Deep Soils, (> 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.

[3] Composite samples from B-FP01, B-FP02, and B-FP04 collected at 7.0-7.5 feet below ground surface.

[4] Composite samples from B-FP05, B-FP06, and B-FP07 collected at 7.0-7.5 feet below ground surface.

Table 5: Polynuclear Aromatic Hydrocarbons in Soil, 781-785 Seventh Street, Oakland, California (mg/kg)

Sample Location	Top of Sample Interval (feet bgs)	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
Residential ESLs ≤3 meters (9.8 feet) [1]			**19**	**13**	**2.8**	**0.38**	**0.038**	**0.38**	**27**	**0.38**	**23**	**0.062**	**40**	**8.9**	**0.62**	**1.3**	**11**	**85**
Commercial ESLs ≤3 meters (9.8 feet) [1]			**19**	**13**	**2.8**	**1.3**	**0.13**	**1.3**	**27**	**1.3**	**23**	**0.21**	**40**	**8.9**	**2.1**	**2.8**	**11**	**85**
Phase I																		
B-FP01	2.5	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP01	5.5	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP02	2.5	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP02	5.5	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP03	1.5	02/04/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP03	5.0	02/04/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP04	2.0	02/04/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP04	5.0	02/04/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP05	2.0	02/04/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP05	5.0	02/04/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP06	2.0	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP06	5.0	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B-FP07	2.5	02/05/03	**0.14**	**0.55**	**0.20**	**1.5**	**3.9**	**2.0**	**3.4**	**0.85**	**2.2**	**2.6**	**3.0**	**0.091**	**2.4**	**1.8**	**1.3**	**4.6**
B-FP07	5.0	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
COMP FY [2]	7.0	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
COMP RY [3]	7.0	02/05/03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phase II																		
B-FP07A	2.5	11/28/05	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
B-FP07B	2.0	11/29/05	<0.005	<0.005	<0.005	**0.011**	**0.023**	**0.015**	**0.027**	**0.016**	**0.016**	**0.0065**	**0.017**	<0.005	**0.019**	<0.005	**0.0097**	**0.018**
B-FP07B	3.5	11/29/05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0069**	<0.005	<0.005
B-FP07C	2.5	11/22/05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

COMP X = composite sample

ESLs = Environmental Screening Levels; Source: RWQCB, 2007, Revised May 2008.

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

<x.x = compound not identified above laboratory reporting limit of x.x

Analyzed in accordance with EPA Methods 8310.

Sample locations are shown on Figure 5.

Underlined values exceed the Commercial ESL and background value.

Values reported above the laboratory reporting limit are indicated in bold text.

Yellow shaded values exceed the residential ESL.

[1] Table B, Environmental Screening Levels, Shallow Soils, (≤ 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.

[2] Composite sample from B-FP1, B-FP2, and B-FP4 collected at 7.0-7.5 feet below ground surface.

[3] Composite sample from B-FP5, B-FP6, and B-FP7 collected at 7.0-7.5 feet below ground surface.

Table 6: Cyanide and pH in Soil, 781-785 Seventh Street, Oakland, California

Sample Location	Top of Sample Interval (feet bgs)	Sample Date	Total Cyanide (mg/kg)	pH
Residential ESLs ≤3 meters (9.8 feet) [1]			0.0036	NA
Commercial ESLs ≤3 meters (9.8 feet) [1]			0.0036	NA
Phase I				
B-FP01	2.5	02/05/03	<1.0	5.9
B-FP01	5.5	02/05/03	<1.0	6.3
B-FP02	2.5	02/05/03	<1.0	5.7
B-FP02	5.5	02/05/03	<1.0	5.2
B-FP03	1.5	02/04/03	<1.0	7.0
B-FP03	5.0	02/04/03	<1.0	6.4
B-FP04	2.0	02/04/03	<1.0	5.9
B-FP04	5.0	02/04/03	<1.0	7.5
B-FP05	2.0	02/04/03	<1.0	7.8
B-FP05	5.0	02/04/03	<1.0	7.5
B-FP06	2.0	02/05/03	<1.0	5.9
B-FP06	5.0	02/05/03	<1.0	6.1
B-FP07	2.5	02/05/03	<1.0	9.2
B-FP07	5.0	02/05/03	**11**	8.0
COMP FY [2]	7.0	02/05/03	<1.0	6.2
COMP RY [3]	7.0	02/05/03	<1.0	7.4

Notes:

COMP X = composite sample

ESLs = Environmental Screening Levels; Source: RWQCB, 2007, Revised May 2008.

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

<x.x = compound not identified above laboratory reporting limit of x.x

Cyanide analyzed in accordance with EPA Methods 335.2.

pH analyzed in accordance with EPA Methods 9045C.

Sample locations are shown on Figure 5.

Underlined values exceed the Commercial ESL and background value.

Values reported above the laboratory reporting limit are indicated in bold text.

Yellow shaded values exceed the residential ESL.

[1] Table B, Environmental Screening Levels, Shallow Soils, (≤ 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.

[2] Composite sample from B-FP1, B-FP2, and B-FP4 collected at 7.0-7.5 feet below ground surface.

[3] Composite sample from B-FP5, B-FP6, and B-FP7 collected at 7.0-7.5 feet below ground surface.

Table 7: Dissolved Metals in Groundwater, 781-785 Seventh Street, Oakland, California (µg/L)

Sample Location	Sample Date	Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium VI, Dissolved	Chromium, Dissolved	Cobalt, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Molybdenum, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Vanadium, Dissolved	Zinc, Dissolved
Residential/Commercial ESLs [1]		30	36	1,000	0.53	0.25	11	180	3.0	3.1	2.5	0.025	240	8.2	5.0	0.19	4.0	19	81
Phase I																			
B-FP04	02/05/03	<60	<5	**110**	<2	<5	<10	<10	<20	<10	<3	<0.2	<20	**32**	<5	<5	<5	<10	<20
B-FP05	02/05/03	<60	<5	**62**	<2	<5	**10**	**17**	<20	<10	<3	<0.2	<20	**96**	**11**	<5	<5	<10	<20
MW-FP1	02/12/03	<60	<5	**67**	<2	<5	<10	<10	<20	<10	<3	<0.2	<20	**24**	<5	<5	<5	<10	<20
MW-FP2	02/12/03	<60	<5	**74**	<2	<5	**70**	**61**	<20	<10	<3	<0.2	<20	<20	<5	<5	<5	<10	<20
Phase III																			
B-FP23	03/31/06	<600	<5	<10	<2	<5	**360,000**	**1,300,000**	**300**	<10	**120**	**0.25**	**160**	**1,000**	<50	**18**	**250**	**160**	<200
FP-GRAB GW [2]	06/04/07	**180**	**13**	**15**	<2	<5	**100,000**	**93,000**	**37**	**15**	<3	<0.2	**23**	**270**	<10	<5	**16**	**25**	<20
Phase IV																			
MW-FP1	04/15/10	<10	<5.0	**41**	<2.0	<5.0	**20**	**13**	<5.0	<5.0	<5.0	<0.20	<5.0	**16**	<10	<5.0	<10	<5.0	<2.0
MW-FP2	04/15/10	<10	<5.0	**61**	<2.0	<5.0	**30**	**22**	<5.0	<5.0	<5.0	<0.20	<5.0	<5.0	<10	<5.0	<10	<5.0	<2.0
MW-FP3	04/15/10	<10	<5.0	**49**	<2.0	<5.0	**180**	**150**	<5.0	<5.0	<5.0	<0.20	<5.0	**25**	<10	<5.0	<10	<5.0	**71**
MW-FP4A	04/15/10	<10	<5.0	<5.0	<2.0	<5.0	**460,000**	**400,000**	**180**	**37**	<5.0	<0.20	**68**	**930**	<10	<5.0	**110**	<5.0	**61**
MW-FP4B	04/15/10	<10	<5.0	**41**	<2.0	<5.0	**30**	**43**	<5.0	<5.0	<5.0	<0.20	<5.0	<5.0	<10	<5.0	<10	**20**	**30**
MW-FP5	04/15/10	<10	<5.0	**51**	<2.0	<5.0	**14,000**	**11,000**	**5.6**	<5.0	<5.0	<0.20	**16**	**9.9**	<10	<5.0	<10	<5.0	**25**
MW-FP6	04/15/10	<10	<5.0	**40**	<2.0	<5.0	**15,000**	**11,000**	**6.1**	**6.5**	<5.0	<0.20	<5.0	**26**	<10	<5.0	<100	<5.0	**33**
MW-FP7B	04/15/10	<10	<5.0	**34**	<2.0	<5.0	**1,200**	**1,200**	<5.0	<5.0	<5.0	<0.20	<5.0	<5.0	<10	<5.0	<10	<5.0	<2.0
MW-3 (Shell)	04/15/10	<10	<5.0	**190**	<2.0	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<0.20	<5.0	<5.0	<10	<5.0	<10	<5.0	**20**
MW-9 (Shell)	04/15/10	<10	<5.0	**64**	<2.0	<5.0	**5,700**	**4,900**	<5.0	**5.8**	<5.0	<0.20	<5.0	**19**	<10	<5.0	<10	<5.0	**26**

Notes:

ESLs = Environmental Screening Levels; Source: RWQCB, 2007, Revised May 2008.

Shell = groundwater monitoring wells from Shell Service Station at 610 Market Street.

µg/L = micrograms per liter

<x.x = compound not identified above laboratory reporting limit of x.x

Analyzed in accordance with EPA Methods 6010B/7400/7196A.

Sample locations shown on Figure 5.

Values reported above the laboratory reporting limit are indicated in bold text.

Yellow shaded values exceed the ESL.

[1] Table B, Environmental Screening Levels, Shallow Soils, (≤ 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.

[2] Grab goundwater sample collected underneath former Frog Pond, adjacent to concrete column.

Table 8 : Petroleum Hydrocarbons in Groundwater, 781-785 Seventh Street, Oakland, California (µg/L)

Sample Location	Sample Date	TPH as diesel	TPH as gasoline
Residential/Commercial ESLs [1]		**210**	**210**
Phase I			
B-FP03	02/04/03	<50	**150**
B-FP04	02/05/03	<50	<50
B-FP05	02/05/03	<50	<50
MW-FP1	02/12/03	**260**	<50
MW-FP2	02/12/03	**110**	<50
Phase II			
B-FP07A	11/29/05	<50	<50
MW-FP1	11/28/05	<50	<50
MW-FP2	11/28/05	<50	<50

Notes:

ESLs = Environmental Screening Levels; Source: RWQCB, 2007, Revised May 2008.

TPH = total petroluem hydrocarbons

µg/L = micrograms per liter

<x.x = compound not identified above laboratory reporting limit of x.x

Sample locations are shown on Figure 5.

TPH as diesel analyzed in accordance with EPA Methods 8015M with silica gel clean-up.

TPH as gasoline analyzed in accordance with EPA Methods 8015M.

Values reported above the laboratory reporting limit are indicated in bold text.

Yellow shaded values exceed the ESL.

[1] Table B, Environmental Screening Levels, Shallow Soils, (≤ 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.

Table 9: Volatile Organic Compounds in Groundwater, 781-785 Seventh Street, Oakland, California (µg/L)

Sample Location	Sample Date	Acetone	m,p-Xylenes	o-Xylene	MTBE	Carbon Disulfide	2-Chlorotoluene	Chloroform	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	Trichloroethene
Residential/Commercial ESLs [1]		1,500	100	100	1,800	NE	NE	330	25	590	590	62	360
Phase I													
B-FP04	02/05/03	<20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**21**
B-FP05	02/05/03	<20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**42**
MW-FP1	02/12/03	<20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
MW-FP2	02/12/03	<20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Phase II													
B-FP07A	11/29/05	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
B-FP09	11/22/05	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.70**	<0.50
B-FP10	11/28/05	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**5.1**	<0.50	<0.50	**9.8**	**8.9**
B-FP11	11/28/05	<10	<0.50	<0.50	**7.7**	<0.50	<0.50	<0.50	**0.50**	<0.50	<0.50	**1.2**	**1.2**
B-FP13	11/29/05	**13**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**11**	**0.90**	<0.50	**13**
B-FP14	11/29/05	<400	<20	<20	<20	<20	<20	<20	<20	**2,200**	**58**	<20	**1,000**
B-FP16	11/28/05	<10	<0.50	<0.50	<0.50	<0.50	<0.50	**0.60**	<0.50	<0.50	<0.50	<0.50	**8.0**
B-FP17	11/28/05	<10	<0.50	<0.50	**1.3**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SS-FP09	11/29/05	<10	<0.50	**1.0**	<0.50	<0.50	**4.1**	<0.50	<0.50	**1.7**	<0.50	<0.50	**3.6**
MW-FP1	11/28/05	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-FP2	11/28/05	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.60**
Phase III													
B-FP18	03/31/06	<170	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	**1,200**	**26**	<8.3	**600**
B-FP19	03/30/06	<10	**0.60**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**1.1**	<0.50	<0.50	**6.4**
B-FP20	03/30/06	<400	<20	<20	<20	<20	<20	<20	<20	**3,000**	**31**	<20	**390**
B-FP21	03/31/06	<63	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	**540**	**6.3**	<3.1	**57**
B-FP22	03/31/06	<630	<31	<31	<31	<31	<31	<31	<31	**3,400**	**88**	<31	**1,500**
B-FP23	03/30/06	<71	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	**5.3**	**520**	**11**	<3.6	**310**

Table 9: Volatile Organic Compounds in Groundwater, 781-785 Seventh Street, Oakland, California (µg/L)

Sample Location	Sample Date	Acetone	m,p-Xylenes	o-Xylene	MTBE	Carbon Disulfide	2-Chlorotoluene	Chloroform	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	Trichloroethene
Residential/Commercial ESLs [1]		1,500	100	100	1,800	NE	NE	330	25	590	590	62	360
Phase IV													
MW-FP1	04/15/10	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-FP2	04/15/10	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-FP3	04/15/10	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.90**
MW-FP4A	04/15/10	**34**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.50**	**31**	**1.9**	<0.50	**51**
MW-FP4B [2]	04/15/10	<10	<0.50	<0.50	<0.50	<0.50	<0.50	**19**	<0.50	<0.50	<0.50	<0.50	<0.50
MW-FP5	04/15/10	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**1.2**
MW-FP6	04/15/10	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**9.4**
MW-FP7B	04/15/10	<10	<0.50	<0.50	**1.3**	<0.50	<0.50	**7.9**	<0.50	**2.3**	<0.50	<0.50	**4.9**
MW-3 (Shell)	04/15/10	<10	<0.50	<0.50	**1.0**	**0.60**	<0.50	**0.50**	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9 (Shell)	04/15/10	<10	<0.50	<0.50	**1.3**	<0.50	<0.50	<0.50	<0.50	**48**	**0.90**	<0.50	**27**

Notes:

ESLs = Environmental Screening Levels; Source: RWQCB, 2007, Revised May 2008.

MTBE = methyl tertiary-butyl ether

NE = not established

Shell =groundwater monitoring wells from Shell Service Station at 610 Market Street

µg/L = microgram per liter

<x.x = compound not identified above laboratory reporting limit of x.x

Analyzed in accordance with EPA Method 8260B.

Only those analytes reported above the laboratory reporting limit in at least one sample are shown.

Sample locations shown on Figure 5.

Values reported above the laboratory reporting limit are indicated in bold text.

Yellow shaded values exceed the ESL.

[1] Table B, Environmental Screening Levels, Shallow Soils, (≤ 3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water.

[2] The groundwater sample for volatile organic analysis from MW-FB4B reportedly contains more than one milliliter of headspace, and therefore, may be biased low.

Table 10: Soil Gas Survey Analytical Results (µg/m^3)
751-785 7th Street
Oakland, CA

SAMPLE NUMBER:	SG-01@ 4	SG-01@ 8	SG-02 @ 5	SG-02 @ 9	SG-03 @ 4.5	SG-03 @ 8	SG-04@ 4	SG-04@ 8	SG-05@ 5	SG-05@ 10	SG-06@ 5	SG-06@ 8	Soil Gas Residential ESL [1]	Soil Gas Commercial/ Industrial ESL [1]
Dichlorodifluoromethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	NE	NE
Vinyl Chloride	<100	<100	<100	<100	<100	<100	<100	**3,000**	<100	<100	<100	<100	31	100
Chloroethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	21,000	58,000
Trichlorofluoromethane	<100	<100	<100	<100	<100	<100	**160**	<100	<100	<100	<100	<100	NE	NE
1,l-Dichloroethene	**270**	<100	<100	<100	<100	<100	<100	**3,300**	<100	**260**	<100	**680**	42,000	120,000
1,1,2-Trichloro-trifluoroethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	NE	NE
Methylene Chloride	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	5,200	17,000
trans-1,2-Dichloroethene	<100	<100	<100	<100	<100	<100	**110**	**12,000**	<100	<100	<100	<100	15,000	41,000
1,1-Dichloroethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	1,500	5,100
cis-1,2-Dichloroethene	<100	<100	<100	<100	<100	<100	**1,900**	**150,000**	<100	<100	<100	<100	7,300	20,000
Chloroform	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	1,500	1,500
1,1,1-Trichloroethane	**510**	**270**	<100	<100	**780**	**130**	<100	<100	**250**	**470**	**490**	**690**	460,000	1,300,000
Carbon Tetrachloride	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	19	63
1,2-Dichloroethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	94	310
Benzene	<80	**120**	<80	<80	<80	**100**	<80	<80	<80	<80	<80	**120**	84	280
Trichloroethene	**7,200**	**320**	**420**	<100	**1,300**	**1,000**	**23,000**	**160,000**	**1,400**	**6,800**	<100	**1,400**	1,200	4,100
Toluene	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	63,000	180,000
1,1,2-Trichloroethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	150	510
Tetrachloroethene	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	410	1,400
Ethylbenzene	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	980	3,300
1,1,1,2-Tetrachloroethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	320	1,100
m,p-Xylene	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	21,000	58,000
o-Xylene	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	21,000	58,000
1,1,2,2-Tetrachloroethane	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	42	140
1,1-Difluoroethane (leak check)	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	NA	NA

Notes:
Soil gas samples collected on 29 November 2011.
µg/m^3 = micrograms per cubic meter.
Soil gas sample locations are shown on Figure 5.
For shallow samples, probe advanced to 5 feet below ground surface and then pulled back to the depth indicated in the sample number until exposed soil premeability allowed collection of soil gas sample.
For deep samples, probe advanced to 10 feet below ground surface and then pulled back to the depth indicated in the sample number until exposed soil premeability allowed collection of soil gas sample.
<x.x = Compound was not identified above laboratory reporting limit of x.x.
Values reported above the laboratory reporting limits are shown in **bold font.**
Results shaded yellow are shallow samples that exceed residential ESLs.
Results underlined are shallow samples that exceed commercial ESLs.
ESL = Environmental Screening Levels
NA = not applicable
[1] California Regional Water Quality Control Board, San Francisco Bay Region, 2008,*Screening for Environmental Concerns at Sites with Contaminated Soil*

Table 11: Sub-Slab Vapor Analytical Results (µg/m^3)
785 7th Street
Oakland, CA

Analyte	Sub-Slab Sample Results Sub-slab-1a	Sub-Slab Sample Results Sub-slab-1b	Estimated Indoor Air Concentration Sub-Slab-1a [1]	Estimated Indoor Air Concentration Sub-Slab-1b [1]	Residential Ambient and Indoor Air ESL [2]	Commercial/ Industrial Ambient and Indoor Air ESL [2]
Vinyl Chloride	<0.040	<0.40	<0.0020	<0.020	0.031	0.052
1,1-Dichloroethene	<0.062	<0.62	<0.0031	<0.031	42	58
1,1-Dichloroethane	<0.13	<1.3	<0.0065	<0.065	1.5	2.6
cis-1,2-Dichloroethene	<0.12	<1.2	<0.0060	<0.060	7.3	10
1,1,1-Trichloroethane	**19**	**18**	**0.95**	**0.90**	460	640
Benzene	<0.25	<2.5	<0.013	<0.13	0.084	0.14
1,2-Dichloroethane	<0.13	<1.3	<0.0065	<0.065	0.094	0.16
Trichloroethene	**18**	**19**	**0.90**	**0.95**	1.2	2.0
Toluene	**0.91**	**1.4**	**0.046**	**0.070**	63	88
1,1,2-Trichloroethane	<0.17	<1.7	<0.0085	<0.085	0.15	0.26
Tetrachloroethene	**0.79**	<2.1	0.040	<0.11	0.41	0.69
Ethylbenzene	<0.14	<1.4	<0.0070	<0.070	0.98	1.6
m,p-Xylene	**0.36**	<2.7	**0.018**	<0.14	21 [3]	29 [3]
o-Xylene	**0.20**	<1.4	**0.010**	<0.070	21 [3]	29 [3]
1,1,2,2-Tetrachloroethane	<0.22	<2.1	<0.011	<0.11	0.042	0.070
trans-1,2-Dichloroethene	<0.62	<6.2	<0.031	<0.31	15	20
Methyl tert-butyl ether	<0.57	<5.6	<0.029	<0.28	9.4	16
1,1-Difluoroethane (leak check)	**1,300 E**	**1,100 E**	NA	NA	NA	NA

Notes:
µg/m^3 = micrograms per cubic meter.
Vapor samples collected on 2 February 2012.
Sample location shown on Figure 5.
Samples were collected simultaneously with Summa canisters arranged in parallel.
ESLs = Environmental Screening Levels.
NA = not applicable since analyte is tracer compound.
<x.x = Compound was not identified above laboratory reporting limit of x.x.
Values reported above the laboratory reporting limits are shown in bold font.
E = Concentration exceeded instrument calibration range.

[1] Results multiplied by 0.05 attenuation factor as recommended by the Cal/EPA Department of Toxic Substances Control.
Department of Toxic Substances Control California Environmental Protection Agency, 2011, Final Guidance for the Evaluation And Mitigation Of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). Available on the internet at:http://www.dtsc.ca.gov/SiteCleanup/Vapor_Intrusion.cfm

[2] California Regional Water Quality Control Board, San Francisco Bay Region, 2008,*Screening for Environmental Concerns at Sites with Contaminated Soil* and Groundwater, Interim Final, May, Table E-3, Ambient and Indoor Air Screening Levels

[3] Based on ESL for total xylenes.

Table 12: Curtis & Tompkins TO-15 Reporting Limits for Chemicals of Concern (µg/m^3)
785 7th Street
Oakland, CA

Analyte	Curtis & Tompkins Reporting Limit	Equivalent Indoor Air Concentration[1]	Commercial/ Industrial Ambient and Indoor Air ESL [2]
1,1,1-Trichloroethane	2.7	0.14	640
1,1-Dichloroethene	2.0	0.10	58
cis-1,2-Dichloroethene	2.3	0.12	10
trans-1,2-Dichloroethene	2.0	0.10	20
Trichloroethene	2.7	0.14	2.0
Vinyl Chloride	1.3	0.065	0.052

Notes:
µg/m^3 = micrograms per cubic meter.
Samples were collected simultaneously with Summa canisters arranged in parallel.
ESLs = Environmental Screening Levels.

[1] Results multiplied by 0.05 attenuation factor as recommended by the Cal/EPA Department of Toxic Substances Control. Department of Toxic Substances Control California Environmental Protection Agency, 2011, Final Guidance for the Evaluation And Mitigation Of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance).

[2] California Regional Water Quality Control Board, San Francisco Bay Region, 2008, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* , Interim Final, May, Table E-3, Ambient and Indoor Air Screening Levels.

APPENDICES

APPENDIX A
HAZARDOUS MATERIAL INVENTORIES

NCIS
TING
Oakland Inc
PLATING & CERTIFICATION TO MILITARY SPECIFICATION

June 30, 1987

Mr. Lewis M. Jones
East Bay Municipal Utility District
Source Control Division, #59
P.O. Box 24055
Oakland, CA 94623

Dear Mr. Lewis M. Jones:

FRANCIS PLATING SPILL PREVENTION PLAN

The plating facility located at 785 7th Street is completely contained. Secondary containment is adequate to prevent effluent from accidental spill entering sanitary sewer system. However, in addition to secondary containment Francis Plating has provided complete property line containment I.E. burms, containment pits and trenches.

The process flow to side sewer #1 has only tow access points. Access #1 is located in anodizing rinse tank as surface weir above any other possible liquid level. Access #2 is located adjacent to shipping and receiving area and is a collection and sample point. As with access #1 this area is not exposed to possible contamination by any process spill.

In addition Francis Plating has an emergency alarm for spill prevention and containment. We provide and inventory of absorbant and neutralizer for spill containment and clean up and have cross trained management and employees in their proper use.

The following information and instruments are posted in numerous areas throught out the plant.

SPILL CONTAINMENT AND CLEAN UP PROCEEDURES

Wear proper safety equipment at all times.

1. Sound spill alarm.
2. Advise supervisor of spill nature and quanity of spill potential.
3. Contain spill to as small as area as possible.
4. Neutralize spilled chemical with dense soda ash.
5. Absorb if appropriate with "Non Flam".
6. Proceed to clean up and place neutralized chemical in proper containers.
7. Make out spill report to include spill cause and plan for future prevention of similar occurrence.

If you have any questions please feel free to contact me any time.

Respectfully

Randall E. Lewis

785 - Seventh Street (415) 444-5535 Oakland, CA 94607

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Bulfoc 528 Other Name _____

Chemical Category Alkaline

Use Waste Treatment Trade Secret: Yes [ ] No [X]

Maximum Amount 200 Units gal

Manufacturer's Name, Address, and Phone No.
Buckman Labs; Memphis, TN 38108; (901) 278-0330

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Diethyldithio Carbamate		128-04-1		38

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Gronodine Other Name Zinc Phosphate

Chemical Category Corrosive, Acid

Use Zinc Phosphate Trade Secret: Yes [ ] No [x]

Maximum Amount 30 Units gal

Manufacturer's Name, Address, and Phone No.

Amchem; Ambles, PA 19002; (215) 628-1000

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Zinc Dihydrogen Phosphate		13598-37-3		12
Zinc Nitrate		7779-88-6		12
Phosphoric Acid		7664-38-2		12

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sulfuric Acid Other Name _____

Chemical Category Acid

Use Anodizing Trade Secret: Yes [ ] No [x]

Maximum Amount 200 Units gal

Manufacturer's Name, Address, and Phone No.

Stauffer Chemical Co.; Westport, CA 06880 (203) 226-6602

Location: Bldg yd Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sulfuric Acid	705			98

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Hydrochloric Acid Other Name Muriatic Acid

Chemical Category Acid

Use Metal Pickel Trade Secret: Yes [ ] No [x]

Maximum Amount 100 Units gal

Manufacturer's Name, Address, and Phone No.

Stauffer Chemical Co. Westport, Ca 06880; (203) 226-6602

Location: Bldg yd Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Hydrochloric Acid	381			95

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Propionic Acid Other Name N/A

Chemical Category Acid

Use Metal Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Union Carbide; Danbury, CT 06817 (304) 744-3487

Location: Bldg Yd Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Propionic Acid		79-09-4		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Everlube Other Name Solid Film Lubricant

Chemical Category Graphite

Use Lubrication Trade Secret: Yes [ ] No [X]

Maximum Amount 10 Units gal

Manufacturer's Name, Address, and Phone No.

E/M Corp; West Lafayette, In 47906; (317) 463-2511

Location: Bldg M Floor 1 st Room Lube room

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Molybdenum Disulfide		1317-33-5		5
Graphite		7782-42-5		2
Solvent		108-88-3		20
solvent		64-17-5		50

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Braycote 154 Other Name Oil

Chemical Category Petroleum

Use Corrosion Prevention Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Brumah-Castrol Inc. ; Irvine, CA 92714 (714) 660-9414

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Stoddard solvent		8052-41-3		75

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Coretch Other Name _____

Chemical Category Alkaline

Use Cleaner Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

Coral Chemical Co. Paramount, CA 90723 (213) 531-6363

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Caustic Soda		1310-73-2		90

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Aluminetch Lf Other Name Caustic

Chemical Category Alkaline

Use Etch alum Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemco Products Co. Rancho Dominguez CA 90221 (213) 537-5530

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Hydroxide		1310732		85
Alkaline		N/C		15

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Acetone Other Name N/A

Chemical Category Ketones

Use Solvent Trade Secret: Yes [ ] No [x]

Maximum Amount 55 Units gal

Manufacturer's Name, Address, and Phone No.

Union Chemicals division, Union Oil Corp. of California; 1342 North Meacham rd

Schaumburg, Il ; (312) 885-5450

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Dimethyl Ketone		67-64-1		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Alodine Other Name Conversion Coating

Chemical Category Chromic-acid Mixture

Use Protect alum Trade Secret: Yes [ ] No [x]

Maximum Amount 100 Units lbs

Manufacturer's Name, Address, and Phone No.
Amchem, Ambler, PA 19002 (215) 628-1000

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Chromic Acid		1333-82-0		25
Sodium Fluoride		7681-49-4		8
Patassium Fluozirconate		16923-95-8		8
Patassium Fluoborate		14075-53-7		25
Potassium Ferricyanide		13746-66-2		12

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Chromium Trioxide Other Name _____

Chemical Category Metal Oxide

Use chrome Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 500 Units lbs

Manufacturer's Name, Address, and Phone No.

American Chrome & Chemical; Corpus Christi; TX 78469 (512) 883-6421

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Chromium Trioxide		1333-82-0		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Cadmium Cyanide Other Name N/A

Chemical Category Alkaline Metal Cyanide

Use Cadmium Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 100 Units lbs

Manufacturer's Name, Address, and Phone No.

Du Pont Wilmington DE 19898 (800) 441-9442

Location: Bldg M Floor 1 Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Cadmium Cyanide	153			100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sodium Cyanide Other Name N/A

Chemical Category Alkaline metal cyanide

Use Cadmium Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 100 Units lbs

Manufacturer's Name, Address, and Phone No.

Du Pont/Wilmington, DE 19898 (800) 441-9442

Location: Bldg M Floor 1st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Cyanide		143-33-9		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Gronodine 112 Other Name Manganese Phosphate

Chemical Category Corrosive and metal

Use Manganese Phosphate Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 30 Units gal

Manufacturer's Name, Address, and Phone No.

Amchem Products 300 Brookaide ave Ambler, PA 19002 (215) 628-1364

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Phosphoric Acid		7664-38-2		8
Nitric Acid		7697-37-2		2
Manganese Dihydrogen		18718-07-5		20
Phosphate				

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Hydroxyacetic Acid Other Name _____

Chemical Category Organic Acid

Use Nickel Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

E. I. Du Pont de Nemours & Co. Wilmington, De 19898

(302) 774-2421

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Hydroxy Acetic Acid		79-14-1		70

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Nitric Acid Other Name _____

Chemical Category Inorganic Acid

Use Strip Parts Trade Secret: Yes [ ] No [x]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

E. I. Du Pont de Nemours & Co., Inc. ; Wilmington De, 19898

(302) 774-2421

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Nitric Acid		7967-37-2		96

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Calcium Hydroxide Other Name Lime

Chemical Category Alaline Earth Hydroxide

Use Waste Treatment Trade Secret: Yes [ ] No [X]

Maximum Amount 4000 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemstar Inc. P.O.Box 127; Henderson, NV 89015

(702) 565-8995

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Calcium Hydroxide		1305-62-0		95
Calcium Hydroxide		1317-65-3		5
Magnesium Hydroxide		1309-42-8		5
Silicon Dioxide		14808-60-7		1

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Metex M-629 Other Name N/A

Chemical Category Acid Salts

Use Activator Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

MacDermid Incorporated; 526 Hunington; Waterbury, CT 06720

(313 644-5626

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Bisulfate		7681-38-1		90
Inorganic Flourides		7681-49-4		10

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Soda Ash Other Name Sodium Carbonate

Chemical Category Alkaline

Use Waste Treatment Trade Secret: Yes [ ] No [X]

Maximum Amount 1000 Units lbs

Manufacturer's Name, Address, and Phone No.

Stauffer Chemical Co. Basic Chemical Division, Westport CT 06881

(205) 226-6602

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Carbonate		497-19-8		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark MIBK Other Name Methyl Isobutyl Ketone

Chemical Category Ketone

Use Solvent Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Union Carbide Corp/Solvents & Intermediates division Old Ridgebury Rd,

DanBury, CT 06817 /(304) 744-3487

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Methyl IsoButyl Ketone		108-10-1		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Carbonate of Potash Other Name Potassium Carbonate

Chemical Category Alkaline

Use Nickel Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 2000 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemicals & Plastics ; Raritan Plaza II; Edison, NJ 08837

(315) 487-4700

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Postassium Carbonate		584087		91

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Nickel Sulfate Crystal Other Name Nickel Sulfate Hexahydrate

Chemical Category Metallic Salts

Use Nickel Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 1000 Units lbs

Manufacturer's Name, Address, and Phone No.

Harshaw/Filtrol Partnership ; 30100 Chagrin Blvd ; Cleveland, OH 44124

(216) 292-9200

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Nickel Sulfate Hexahydrate		7786-81-4		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sodium Acid Sulfite Other Name Sodium MetaBisulfite

Chemical Category Alkaline

Use Waste Treatment Trade Secret: Yes [ ] No [x]

Maximum Amount 2000 Units lbs

Manufacturer's Name, Address, and Phone No.

Great Western Chemical ; 860 Wharf St ; Richmond, CA 94804

(415) 235-4810

Location: Bldg M Floor I st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium MetaBisulfite		7681-57-4		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sodium Hypophosphite Other Name _____

Chemical Category Sodium Hypophosphite Monohydrate

Use Metal Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 4000 Units lbs

Manufacturer's Name, Address, and Phone No.

Atochem ; 266 Harristown Rd.; P.O. Box 607; Glen Rock, New Jersey

(209) 652-8575

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Hypophosphite		7681-53-0		100
Monohydrate				

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Toluene Other Name Methyl Benzene

Chemical Category Aromatic Hydrocarbons

Use solvent Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Ashland Chemicals co. ; P.O. Box 2219; Columbus, Ohio 43216

(514) 880-3333

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Toluene		108-88-3		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark FCC Clean-up 101 Other Name Solvent

Chemical Category Petroleum

Use Degrease Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Fluid Tech; 1127 57th Ave; Oakland, CA 94621 (415) 797-6751

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Methylene Chloride		75-09-2		3
Xylene		108-38-1		6
Kerosine		8008-20-6		85
Detergent	N/A			N/A
CO-630				3
CO-430				3

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark NSA Cleaner Other Name Sodium Nitrate

Chemical Category Alkaline

Use Cleaner (steel) Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemco Products Co. ; Rancho Dominguez, CA 90221

(213) 537-5530

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Borates, Tetra, sodium salts-decahydrate		1303964		
Borates, Tetra, sodium Salts-penrahydrate		1303964		

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Acetylene Other Name Ethyne

Chemical Category Alkynes

Use Welding Trade Secret: Yes [ ] No [x]

Maximum Amount 600 Units Cu ft

Manufacturer's Name, Address, and Phone No.

Pacific Oxygen, Oakland, CA 94607

(415) 444-8081

Location: Bldg M Floor 1 st Room N/A

Storage Types L Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Acetylene, Ethyne		74-86-2		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Oxygen Other Name N/A

Chemical Category Oxidizer

Use Welding Trade Secret: Yes [ ] No [X]

Maximum Amount 1500 Units Cu ft

Manufacturer's Name, Address, and Phone No.

Pacific Oxygen, Oakland, Ca 94607 (415) 444-8081

Location: Bldg M Floor 1 st Room N/A

Storage Types L Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Oxygen		1072		100

(H - 2)

HAZARDOUS WASTE INFORMATION

IDENTIFICATION

Chemical Category: Metal Finishing Wastewater Treatment Sludge Trade Secret: Yes [ ] No [X]

Location: Bldg Main Floor 1 st Room N/A

Amount Generated / Year 24.5 Units tons

PA Waste Category No. (Table 3) F006 CIN No. (Table 2) 926

Storage Types 0 Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Calcium Hydroxide		1305-62-0		5
Nickel Hydroxide		12054-48-7		12
Trivalent Chromium	204			12
Sodium Diethyldithio Carbamate		128-04-0		5
Magnesium Oxide		1309-48-4		5
Water		N/A		60

FRANCIS PLATING
of Oakland Inc

PLATING & CERTIFICATION TO MILITARY SPECIFICATION

January 13, 1989

Thomas F. Peacock
Division Hazardous Material
Department of Enviromental Health
80 Swan way Room 200
Oakland, CA 94621

Dear Mr. Peacock:

Please find Francis Plating's business plan and the additional information that the county has requested.

Please advise if additional information is required at your earliest convenience.

Respectfully,

Randall E. Lewis
General Manager

'85 - Seventh Street (415) 444-5535 FAX (415) 444-6140 Oakland, CA 94607

HAZARDOUS MATERIAL BUSINESS PLAN

Francis Plating of Oakland
785 Seventh St.
Oakland, CA 94607

A. BUSINESS NAME & MAILING ADDRESS

Francis Plating of Oakland, Inc.
785 Seventh Street
Oakland, CA 94607

B. BUSINESS PHONE

415 444-5535

C. OWNER

Wallace M. Francis

D. SIC CODE

3470

E. ADDRESS OF FACILITY

Same as above

F. NATURE OF BUSINESS

Metal Finishing

G. EMERGENCY CONTACT PERSON

	Name & Title	H. 24-Hour Phone Numbers Business	Non-Business
Primary	Wallace M. Francis President	444-5535	254-0664
Alternate	Randall E. Lewis General Manager	444-5535	685-8884

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Bulfoc 528 Other Name _____

Chemical Category Alkaline

Use Waste Treatment Trade Secret: Yes [ ] No [X]

Maximum Amount 200 Units gal

Manufacturer's Name, Address, and Phone No.
Buckman Labs; Memphis, TN 38108; (901) 278-0330

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Diethyldithio Carbamate		128-04-1		38

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Gronodine Other Name Zinc Phosphate

Chemical Category Corrosive, Acid

Use Zinc Phosphate Trade Secret: Yes [ ] No [x]

Maximum Amount 30 Units gal

Manufacturer's Name, Address, and Phone No.
Amchem; Ambles, PA 19002; (215) 628-1000

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Zinc Dihydrogen Phosphate		13598-37-3		12
Zinc Nitrate		7779-88-6		12
Phosphoric Acid		7664-38-2		12

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sulfuric Acid Other Name _____

Chemical Category Acid

Use Anodizing Trade Secret: Yes [ ] No [x]

Maximum Amount 200 Units gal

Manufacturer's Name, Address, and Phone No.

Stauffer Chemical Co.; Westport, CA 06880 (203) 226-6602

Location: Bldg yd Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sulfuric Acid	705			98

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Hydrochloric Acid Other Name Muriatic Acid

Chemical Category Acid

Use Metal Pickel Trade Secret: Yes [ ] No [x]

Maximum Amount 100 Units gal

Manufacturer's Name, Address, and Phone No.

Stauffer Chemical Co. Westport, Ca 06880; (203) 226-6602

Location: Bldg yd Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Hydrochloric Acid	381			95

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Propionic Acid Other Name N/A

Chemical Category Acid

Use Metal Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Union Carbide; Danbury, CT 06817 (304) 744-3487

Location: Bldg Yd Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Propionic Acid		79-09-4		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Everlube Other Name Solid Film Lubricant

Chemical Category Graphite

Use Lubrication Trade Secret: Yes [ ] No [X]

Maximum Amount 10 Units gal

Manufacturer's Name, Address, and Phone No.

E/M Corp; West Lafayette, In 47906; (317) 463-2511

Location: Bldg M Floor 1 st Room Lube room

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Molybdenum Disulfide		1317-33-5		5
Graphite		7782-42-5		2
Solvent		108-88-3		20
solvent		64-17-5		50

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Braycote 154 Other Name Oil

Chemical Category Petroleum

Use Corrosion Prevention Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Brumah-Castrol Inc. ; Irvine, CA 92714 (714) 660-9414

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Stoddard solvent		8052-41-3		75

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Coretch Other Name _____

Chemical Category Alkaline

Use Cleaner Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

Coral Chemical Co. Paramount, CA 90723 (213) 531-6363

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Caustic Soda		1310-73-2		90

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Aluminetch Lf Other Name Caustic

Chemical Category Alkaline

Use Etch alum Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemco Products Co. Rancho Dominguez CA 90221 (213) 537-5530

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Hydroxide		1310732		85
Alkaline		N/C		15

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Acetone Other Name N/A

Chemical Category Ketones

Use Solvent Trade Secret: Yes [ ] No [x]

Maximum Amount 55 Units gal

Manufacturer's Name, Address, and Phone No.

Union Chemicals division, Union Oil Corp. of California; 1342 North Meacham rd.

Schaumburg, Il ; (312) 885-5450

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Dimethyl Ketone		67-64-1		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Alodine Other Name Conversion Coating

Chemical Category Chromic-acid Mixture

Use Protect.alum Trade Secret: Yes [ ] No [x]

Maximum Amount 100 Units lbs

Manufacturer's Name, Address, and Phone No.

Amchem, Ambler, PA 19002 (215) 628-1000

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Chromic Acid		1333-82-0		25
Sodium Fluoride		7681-49-4		8
Patassium Fluozirconate		16923-95-8		8
Patassium Fluoborate		14075-53-7		25
Potassium Ferricyanide		13746-66-2		12

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Chromium Trioxide Other Name _____

Chemical Category Metal Oxide

Use chrome Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 500 Units lbs

Manufacturer's Name, Address, and Phone No.

American Chrome & Chemical; Corpus Christi; TX 78469 (512) 883-6421

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Chromium Trioxide		1333-82-0		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Cadmium Cyanide Other Name N/A

Chemical Category Alkaline Metal Cyanide

Use Cadmium Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 100 Units lbs

Manufacturer's Name, Address, and Phone No.

Du Pont Wilmington DE 19898 (800) 441-9442

Location: Bldg M Floor 1 Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Cadmium Cyanide	153			100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sodium Cyanide Other Name N/A

Chemical Category Alkaline metal cyanide

Use Cadmium Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 100 Units lbs

Manufacturer's Name, Address, and Phone No.

Du Pont/Wilmington, DE 19898 (800) 441-9442

Location: Bldg M Floor 1st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Cyanide		143-33-9		100
$				

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Gronodine 112 Other Name Manganese Phosphate

Chemical Category Corrosive and metal

Use Manganese Phosphate Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 30 Units gal

Manufacturer's Name, Address, and Phone No.

Amchem Products 300 Brookaide ave Ambler, PA 19002 (215) 628-1364

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Phosphoric Acid		7664-38-2		8
Nitric Acid		7697-37-2		2
Manganese Dihydrogen		18718-07-5		20
Phosphate				

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Hydroxyacetic Acid Other Name _____

Chemical Category Organic Acid

Use Nickel Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

E. I. Du Pont de Nemours & Co. Wilmington, De 19898

(302) 774-2421

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Hydroxy Acetic Acid		79-14-1		70

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Nitric Acid Other Name _____

Chemical Category Inorganic Acid

Use Strip Parts Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

E. I. Du Pont de Nemours & Co. Inc. ; Wilmington De, 19898

(302) 774-2421

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Nitric Acid		7967-37-2		96

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Calcium Hydroxide Other Name Lime

Chemical Category Alaline Earth Hydroxide

Use Waste Treatment Trade Secret: Yes [ ] No [X]

Maximum Amount 4000 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemstar Inc. P.O.Box 127; Henderson, NV 89015

(702) 565-8995

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Calcium Hydroxide		1305-62-0		95
Calcium Hydroxide		1317-65-3		5
Magnesium Hydroxide		1309-42-8		5
Silicon Dioxide		14808-60-7		1

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Metex M-629 Other Name N/A

Chemical Category Acid Salts

Use Activator Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

MacDermid Incorporated; 526 Hunington; Waterbury, CT 06720

(313 644-5626

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Bisulfate		7681-38-1		90
Inorganic Flourides		7681-49-4		10

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Soda Ash Other Name Sodium Carbonate

Chemical Category Alkaline

Use Waste Treatment Trade Secret: Yes [ ] No [X]

Maximum Amount 1000 Units lbs

Manufacturer's Name, Address, and Phone No.

Stauffer Chemical Co. Basic Chemical Division, Westport CT 06881

(205) 226-6602

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Carbonate		497-19-8		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark MIBK Other Name Methyl Isobutyl Ketone

Chemical Category Ketone

Use Solvent Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Union Carbide Corp/Solvents & Intermediates division Old Ridgebury Rd,

DanBury, CT 06817 /(304) 744-3487

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Methyl IsoButyl Ketone		108-10-1		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Carbonate of Potash Other Name Potassium Carbonate

Chemical Category Alkaline

Use Nickel Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 2000 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemicals & Plastics ; Raritan Plaza II; Edison, NJ 08837

(315) 487-4700

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Postassium Carbonate		584087		91

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Nickel Sulfate Crystal Other Name Nickel Sulfate Hexahydrate

Chemical Category Metallic Salts

Use Nickel Plating Trade Secret: Yes [ ] No [x]

Maximum Amount 1000 Units lbs

Manufacturer's Name, Address, and Phone No.

Harshaw/Filtrol Partnership ; 30100 Chagrin Blvd ; Cleveland, OH 44124

(216) 292-9200

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Nickel Sulfate Hexahydrate		7786-81-4		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sodium Acid Sulfite Other Name Sodium MetaBisulfite

Chemical Category Alkaline

Use Waste Treatment Trade Secret: Yes [ ] No [x]

Maximum Amount 2000 Units lbs

Manufacturer's Name, Address, and Phone No.

Great Western Chemical ; 860 Wharf St ; Richmond, CA 94804

(415) 235-4810

Location: Bldg M Floor 1 st Room N/A

Storage Types J Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium MetaBisulfite		7681-57-4		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Sodium Hypophosphite Other Name

Chemical Category Sodium Hypophosphite Monohydrate

Use Metal Plating Trade Secret: Yes [ ] No [X]

Maximum Amount 4000 Units lbs

Manufacturer's Name, Address, and Phone No.

Atochem ; 266 Harristown Rd.; P.O. Box 607; Glen Rock, New Jersey

(209) 652-8575

Location: Bldg M Floor 1 st Room N/A

Storage Types I Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Sodium Hypophosphite		7681-53-0		100
Monohydrate				

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Toluene Other Name Methyl Benzene

Chemical Category Aromatic Hydrocarbons

Use solvent Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Ashland Chemicals co. ; P.O. Box 2219; Columbus, Ohio 43216

(514) 880-3333

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Toluene		108-88-3		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark FCC Clean-up 101 Other Name Solvent

Chemical Category Petroleum

Use Degrease Trade Secret: Yes [ ] No [X]

Maximum Amount 50 Units gal

Manufacturer's Name, Address, and Phone No.

Fluid Tech; 1127 57th Ave; Oakland, CA 94621 (415) 797-6751

Location: Bldg M Floor 1 st Room N/A

Storage Types D Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Methylene Chloride		75-09-2		3
Xylene		108-38-1		6
Kerosine		8008-20-6		85
Detergent	N/A			N/A
CO-630				3
CO-430				3

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark NSA Cleaner Other Name Sodium Nitrate

Chemical Category Alkaline

Use Cleaner (steel) Trade Secret: Yes [ ] No [X]

Maximum Amount 400 Units lbs

Manufacturer's Name, Address, and Phone No.

Chemco Products Co. ; Rancho Dominguez, CA 90221

(213) 537-5530

Location: Bldg M Floor 1 st Room N/A

Storage Types E Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Borates, Tetra, sodium salts-decahydrate		1303964		
Borates, Tetra, sodium Salts-penrahydrate		1303964		

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Acetylene Other Name Ethyne

Chemical Category Alkynes

Use Welding Trade Secret: Yes [ ] No [x]

Maximum Amount 600 Units Cu ft

Manufacturer's Name, Address, and Phone No.

Pacific Oxygen, Oakland, CA 94607

(415) 444-8081

Location: Bldg M Floor 1 st Room N/A

Storage Types L Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Acetylene, Ethyne		74-86-2		100

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION

Trademark Oxygen Other Name N/A

Chemical Category Oxidizer

Use Welding Trade Secret: Yes [ ] No [X]

Maximum Amount 1500 Units Cu ft

Manufacturer's Name, Address, and Phone No.

Pacific Oxygen, Oakland, Ca 94607 (415) 444-8081

Location: Bldg M Floor 1 st Room N/A

Storage Types L Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Oxygen		1072		100

(H - 2)

HAZARDOUS WASTE INFORMATION

IDENTIFICATION

Chemical Category: Metal Finishing Wastewater Treatment Sludge Trade Secret: Yes [ ] No [x]

Location: Bldg Main Floor 1 st Room N/A

Amount Generated / Year 24.5 Units tons

EPA Waste Category No. (Table 3) F006 CIN No.(Table 2) 926

Storage Types 0 Temperature/Pressure Conditions 1/4

INGREDIENTS

Chemical Name	CIN No. (Table 1)	CAS No.	DOT No.	Percent
Calcium Hydroxide		1305-62-0		5
Nickel Hydroxide		12054-48-7		12
Trivalent Chromium	204			12
Sodium Diethyldithio Carbamate		128-04-0		5
Magnesium Oxide		1309-48-4		5
Water		N/A		60

Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Hazardous Materials Management Plan

(Part II)

Francis Plating of Oakland, Inc.
(Facility Name and ID)

785 7th. Street
(Facility Address)

Oakland, California 94607
(Facility City)

NOTE: *This plan is temporary until construction of damaged building is complete. Additinal data or revised plan will be completed at that time, approximately 1994 (June or July).*

Certification

I hereby certify, under penalty of perjury, that the information contained in this Hazardous Materials Management Plan is, to the best of my knowledge, true and correct. I understand that I may be required to show proof of compliance during any facility inspection conducted by local, County, State, or Federal authorities.

Wallace M. Francis
Authorized Signature

WALLACE M. FRANCIS
Print Name

1/29/93
Date

President/Owner
Title

rev 92790

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name FCC Clean up 101

28) Manufacturer Fluid Tech Phone (415)797-675

29)

Constituent 1	30) CAS # 75092	31) Percent (%) by wt	3%
Constituent Name	Methylene Chloride		
Constituent 2	CAS # 180381	Percent (%) by wt	6%
Constituent Name	Xylene		
Constituent 3	CAS # 8008206	Percent (%) by wt	85%
Constituent Name	Kerosine		
Constituent 4	CAS # ____	Percent (%) by wt	3%
Constituent Name	CO-630		
Constituent 5	CAS # ____	Percent (%) by wt	3%
Constituent Name	CO-43		

32) Generic Name/Use (optional) Clean up 101

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☒ Yes ☐ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) .867

38) DOT Hazard Class FL 39) UNNA # 1993 40) Pressure? ____

41) Health Hazard 0 43) Reactivity 0

44) Flammability 3 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	55	30	55		365
Tradename Totals					55	30	55		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Toluene

28) Manufacturer Ashland Chemical Phone (514) 880-[illegible]

29)

Constituent 1 30) CAS # 108883 31) Percent (%) by wt 100%
Constituent Name Methyl Benzane

Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Toluene

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [ ] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) .866

38) DOT Hazard Class FL 39) UNNA # 1294 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 3 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	55	30	55		365
Tradename Totals					55	30	55		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland Facility ID 033-00921

785 7th. Street Oakland, CA. 94607

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Mid Floc #1300L

28) Manufacturer Rochester Midland Phone 538-1900

29)
Constituent 1 30) CAS # ____ 31) Percent (%) by wt 40
Constituent Name Sodium Dimethyldithiocarbmate
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Thiocarbamates/Waste Treatment

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) 1.18

38) DOT Hazard Class ORMB 39) UNNA# 1760 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 1

44) Flammability 1 45) Special Hazards AUC microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal	Avg Daily Amt 52) Gal	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
18	East Yard	E	1	1	300	200	55		365
Tradename Totals					300	200	55		

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID *033-00921*

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name *Zinc Phosphate*

28) Manufacturer *Allied - Kelite* Phone *(312) 297-3570*

29)

Constituent 1 30) CAS # *13598-37-3* 31) Percent (%) by wt *12*
Constituent Name *Zinc Dihydrogen Phosphate*

Constituent 2 CAS # *7779-88-6* Percent (%) by wt *12*
Constituent Name *Zinc Nitrate*

Constituent 3 CAS # *7664-38-2* Percent (%) by wt *12*
Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt *Bal. Water*
Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) *Acid phosphate / Rust Preventive*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) *1.5*

38) DOT Hazard Class *Corrosive Material* 39) UNNA# *1760* 40) Pressure? _____

41) Health Hazard *2* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *COR* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal	Avg Daily Amt 52) Gal	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
16	*Trailer*	*E*	*1*	*1*	*100*	*55*	*55*		*365*
45	*Tank*								
Tradename Totals					*100*	*55*	*55*		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Sulfuric Acid

28) Manufacturer Stauffer Chemical Co. Phone (203) 226-6602

29)

Constituent 1 30) CAS # 7664939 31) Percent (%) by wt 98%
Constituent Name CIN-#705 Sulfuric Acid
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name Water
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Inorganic Acid Anodizing PH

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☒ Yes ☐ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) 2.5

38) DOT Hazard Class CORR 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 4 43) Reactivity 1

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBoy Sto	G	1	1	400	200	400		365
34	Ano. Tank								
33	Ano. Tank								
Tradename Totals					400	200	400		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Hydrochloric Acid

28) Manufacturer Stauffer Chemcat Phone (203) 226-6602

29)

Constituent 1 30) CAS # 7647010 31) Percent (%) by wt 95%

Constituent Name _____

Constituent 2 CAS # _____ Percent (%) by wt _____

Constituent Name Water

Constituent 3 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____

Constituent Name _____

32) Generic Name/Use (optional) Inorganic Acid

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☒ Yes ☐ No

36) Physical State ☐ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) 1.2

38) DOT Hazard Class Strong Acid CORR 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 4 43) Reactivity 1

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBoy Stg.	G	1	1	400	200	400		365
32	HCL Tank								
Tradename Totals					400	200	400		

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Propionic Acid

28) Manufacturer Union Carbide Phone (304) 744-3487

29)

Constituent 1 30) CAS # 79-09-4 31) Percent (%) by wt 100%
Constituent Name Propionic Acid
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Mild Acid / Electroless Nickel Additive

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) 0.99

38) DOT Hazard Class CORR 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 1

44) Flammability 2 45) Special Hazards Acid microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
31	EN STO.	E	1	1	100	50	55		365
Tradename Totals					100	50	55		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Conetch

28) Manufacturer Conal Chemical Phone (310) 531-6563

29)

Constituent 1 30) CAS # 1310-73-2 31) Percent (%) by wt 90%
Constituent Name Sodium Hydroxide

Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Caustic Soda / Cleaner

33) MSDS Ref #/ ID Code _____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class CORR 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards ALK microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
35	Ano. Sto.	T	1	1	500	300	500		365
17	Trailer								
Tradename Totals					500	300	500		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Aluminetch LF

28) Manufacturer Chemco Products Phone (213) 537-5536

29)

Constituent 1 30) CAS # 1310732 31) Percent (%) by wt 85%
Constituent Name Sodium Hydroxide
Constituent 2 CAS # _____ Percent (%) by wt 15%
Constituent Name Alkaline
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Caustic Soda / Cleaner

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class CORR 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards ALK microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
35	Ano. Sto.	T	T	T	500	200	500		365
17	Trailer								
Tradename Totals					500	200	500		

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00981

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Acetone

28) Manufacturer Union Chemical Phone (312) 885-5150

29)
Constituent 1 30) CAS # 67641 31) Percent (%) by wt 100
Constituent Name
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name

32) Generic Name/Use (optional) Volatile Solvents / Cleaner

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) .79

38) DOT Hazard Class FL 39) UNNA# 1090 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 0

44) Flammability 3 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	E	1	1	100	55	55		365
Tradename Totals					100	55	55		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Alodine

28) Manufacturer Amchem Phone (215) 628-1000

29)

Constituent 1	30) CAS # 1333820	31) Percent (%) by wt	25
Constituent Name	Chromic Acid		
Constituent 2	CAS # 7681494	Percent (%) by wt	8
Constituent Name	Sodium Fluoride		
Constituent 3	CAS # 16923958	Percent (%) by wt	8
Constituent Name	Potassium Fluozirconate		
Constituent 4	CAS # 14075537	Percent (%) by wt	25
Constituent Name	Potassium Fluoborate		
Constituent 5	CAS # 13746662	Percent (%) by wt	12
Constituent Name	Potassium Ferricyanide		

32) Generic Name/Use (optional) Chromic Acid Mixture / Aluminum Protector

33) MSDS Ref # / ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class Oxy 39) UNNA # 1463 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 1

44) Flammability 0 45) Special Hazards Oxidizer microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
35	Ano. Sto.	D	1	1	100	50	50		365
16	Trailer								
Tradename Totals					100	50	50		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Cadmium

28) Manufacturer Talco American Phone (215) 333-6800

29)

Constituent 1 30) CAS # 7440439 31) Percent (%) by wt 99.9%
Constituent Name Cadmium Metal
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Heavy Metal / Cadmium Source

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class POIS B 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailers	K	1	1	200	50	50		365
20	Cad/ Tank								
Tradename Totals					200	50	50		

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Sodium Cyanide

28) Manufacturer Great Western chemical Phone (503) 228-2600

29)
- Constituent 1 30) CAS # 143339 31) Percent (%) by wt 98%
- Constituent Name Sodium Cyanide
- Constituent 2 CAS # _____ Percent (%) by wt _____
- Constituent Name _____
- Constituent 3 CAS # _____ Percent (%) by wt _____
- Constituent Name _____
- Constituent 4 CAS # _____ Percent (%) by wt _____
- Constituent Name _____
- Constituent 5 CAS # _____ Percent (%) by wt _____
- Constituent Name _____

32) Generic Name/Use (optional) Cyanide/Cadmium/ Zinc/Copper Plating

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☒ Yes ☐ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class POIS B 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 4 43) Reactivity 0

44) Flammability 0 45) Special Hazards Poison microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	200	50	200		365
Tradename Totals					200	50	200		

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Nitric Acid

28) Manufacturer E.I. Dupont Phone (302) 774-2421

29)

Constituent 1 30) CAS # 7967372 31) Percent (%) by wt 47/60

Constituent Name Nitric Acid

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name Water

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Inorganic Acid / Passivation Stripping

33) MSDS Ref # / ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) 1.5

38) DOT Hazard Class CORR/OXY 39) UNNA# 2031 40) Pressure? ____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBoy Sto.	D	1	1	150	100	150		365
7	Sto. Tank	A	1	1	4000	4000	4000		365
23	Strip Tank								
Tradename Totals					4150	4100	4150		

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Hydroxyacetic Acid

28) Manufacturer E.I. Dupont Phone (302) 774-2421

29)

Constituent 1 30) CAS # 79141 31) Percent (%) by wt 70%
Constituent Name Acetic Acid-Hydroxy
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name Water
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Organic Acid / Electroless Nickel Additive

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) 1.03

38) DOT Hazard Class Acid 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51)	Avg Daily Amt 52)	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
					Gal.	Gal.	Gal.		
31	EN Sto.	E	1	1	100	50	55		365
Tradename Totals					100	50	55		

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Metex M-629

28) Manufacturer Macdermid Phone ~~(313)644-5362~~

29)

Constituent 1 30) CAS # 7681381 31) Percent (%) by wt 90%

Constituent Name Sodium Bisulfate

Constituent 2 CAS # 7681494 Percent (%) by wt 10%

Constituent Name Inorganic Florides

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Acid Salts / Cleaner

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class ORM-B 39) UNNA# 1827 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 1

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	Trailer	1	1	1	500	400	500		365
27	Act. Tank								
Tradename Totals					500	400	500		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name MIBK Methyl-Isobutyl Ketone

28) Manufacturer Union Carbide Phone (304)744-5487

29)

Constituent 1 30) CAS # 108101 31) Percent (%) by wt 100%
Constituent Name Methyl Isobutyl Ketone

Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Ketones / Cleaner

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) .80

38) DOT Hazard Class FL 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 3 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	55	30	55		365
Tradename Totals					55	30	55		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Methyl Ethyl Ketone

28) Manufacturer East Bay Oil Phone (415) 782-2040

29)

Constituent 1 30) CAS # 78933 31) Percent (%) by wt 99%
Constituent Name Methyl Ethyl Ketone
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Ketone / Cleaner

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) .80

38) DOT Hazard Class FL 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 3 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	55	30	55		365
Tradename Totals					55	30	55		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Potassium Carbonate

28) Manufacturer Chemicals & Plastics Phone (315)487-4700

29)

Constituent 1 30) CAS # 584087 31) Percent (%) by wt 99%
Constituent Name Potassium Carbonate
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Pot ASH

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class N/A 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs	Waste Generated (yr) 54)	# Days/yr on site 55)
11	Dry Chem. Sto.	J	1	1	2000	1000	50		365
Tradename Totals					2000	1000	50		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID EBMUD *033-00921*

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name *Nickel Sulfate*

28) Manufacturer *Harshaw* Phone *(215) 292-9200*

29)

Constituent 1 30) CAS # *7786814* 31) Percent (%) by wt *99%*

Constituent Name *Nickel Sulfate*

Constituent 2 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____

Constituent Name _____

32) Generic Name/Use (optional) *Inorganic Metallic Salt / Nickel Source*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class *ORM - E* 39) UNNA # *9188* 40) Pressure? _____

41) Health Hazard *2* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *N/A* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
11	Dry Chem. Sto.	J	1	1	2400	1200	50		365
Tradename Totals					2400	1200	50		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Sodium Metabisulfite

28) Manufacturer Great Western Chemical Phone (570) 235-4810

29)

Constituent 1 30) CAS # 7681574 31) Percent (%) by wt 100%
Constituent Name Sodium Metabisulfite

Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Sodium Hydrogen Sulfite / Waste Treatment

33) MSDS Ref # / ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class ORM-B 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs	Waste Generated (yr) 54)	# Days/yr on site 55)
18	Waste Trmt. East Yard	J	1	1	2400	1200	50		365
Tradename Totals					2400	1200	50		

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Sodium Hypophosphite

28) Manufacturer Atochem Phone (215) 587-7095

29)

Constituent 1 30) CAS # 7681530 31) Percent (%) by wt 100%
Constituent Name Sodium Hypophosphite
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Salt of Phosphoric Acid/ Electroless Nickel Additives

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class 1RR 39) UNNA # ____ 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
31	EN Sto.	I	1	1	4000	2000	500		365
17	Trailers								
Tradename Totals					4000	2000	500		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID EBMUD *033-00921*

Trade Name Information

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code _____ State 26a Waste Code _____ Federal

27) Common/Trade Name *NSA Cleaner*

28) Manufacturer *Chemco Products* Phone *(213) 537-553*

29)

Constituent 1 30) CAS # *1303964* 31) Percent (%) by wt *85%*
Constituent Name *Borates, Tetra, Sodium Salts-decahydrate*

Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) *Cleaner*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☒ Yes ☐ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class *IRR* 39) UNNA # _____ 40) Pressure? _____

41) Health Hazard *0* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *ALK* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	*Trailer*	*I*	*1*	*1*	*500*	*400*	*500*		*365*
26	*Soak Tank*								
Tradename Totals					*500*	*400*	*500*		

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Acetylene

28) Manufacturer Airco Phone (800) 772-3852

29)

Constituent 1 30) CAS # 74862 31) Percent (%) by wt 100%
Constituent Name Acetylene, Ethyne
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Alkyne / Welding

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☐ No

36) Physical State ☐ Solid ☒ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class FG 39) UNNA# 1001 40) Pressure? _____

41) Health Hazard 0 43) Reactivity 3

44) Flammability 4 45) Special Hazards N/A microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Cu. Ft.	Avg Daily Amt 52) Cu. Ft.	Max in One Vessel 53) Cu. Ft.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	Trailer	L	2	1	1000	800	1000		365
Tradename Totals					1000	800	1000		

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Oxygen

28) Manufacturer Pacific Oxygen Phone (510) 444-8081

29)

Constituent 1 30) CAS # 7782447 31) Percent (%) by wt 100%
Constituent Name Oxygen
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Oxidizer

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [ ] No

36) Physical State [ ] Solid [X] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class Oxy 39) UNNA# 1072 40) Pressure? ____

41) Health Hazard 0 43) Reactivity 0

44) Flammability 0 45) Special Hazards Oxy microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Cu. Ft.	Avg Daily Amt 52) Cu. Ft.	Max in One Vessel 53) Cu. Ft.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	Trailer	L	2	1	1500	1000	1500		365
Tradename Totals					1500	1000	1500		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID EBMUD *033-00921*

Trade Name Information

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) State Waste Code *181* Federal 26a Waste Code

27) Common/Trade Name *Metal Finishing Waste Treatment Sludge*

28) Manufacturer *Francis Plating* Phone *(510)444-5555*

29)

Constituent 1	30) CAS # *12054487*	31) Percent (%) by wt	*12*
Constituent Name	*Nickel Hydroxide*		
Constituent 2	CAS # *204*	Percent (%) by wt	*12*
Constituent Name	*Trivalent Chromium*		
Constituent 3	CAS # *128040*	Percent (%) by wt	*10*
Constituent Name	*Sodium Diethyldithiocarbamate*		
Constituent 4	CAS # *1309484*	Percent (%) by wt	*15*
Constituent Name	*Magnesium Oxide*		
Constituent 5	CAS #	Percent (%) by wt	
Constituent Name	*Water*		

32) Generic Name/Use (optional) *Hazardous Waste / Waste Recyclable*

33) MSDS Ref #/ ID Code

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid)

38) DOT Hazard Class *ORM-E* 39) UNNA# *9188* 40) Pressure?

41) Health Hazard *2* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *N/A* microcuries (if appl)

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Cu. Yd.	Avg Daily Amt 52) Cu. Yd.	Max in One Vessel 53) Cu. Yd.	Waste Generated (yr) 54)	# Days/yr on site 55)
4	East Yd.	J	1	1	25	17	1	50	365
18	Waste Treat A &Temp. Waste Treat	1	1		10	8	10		365
Tradename Totals					35	25	11	50	

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) State Waste Code _____ 26a Federal Waste Code _____

27) Common/Trade Name Aluminum Clene 75

28) Manufacturer _____ Phone _____

29)

Constituent 1 30) CAS # 112345 31) Percent (%) by wt 1
Constituent Name Diethylene Glycol Monobutyl Ether
Constituent 2 CAS # 25155300 Percent (%) by wt 99
Constituent Name Sodium Dodecylbenzene Sulfamate
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Alkaline / Cleaner
33) MSDS Ref #/ ID Code _____
34) Trade Secret? ☒ Yes ☐ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No
36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____
38) DOT Hazard Class ORM - E 39) UNNA # _____ 40) Pressure? _____
41) Health Hazard 2 43) Reactivity 0
44) Flammability 0 45) Special Hazards ALK microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	I	1	1	500	250	500		365
47	Tank.								
Tradename Totals					500	250	500		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Bonderite

28) Manufacturer Parker Chemical Phone (313) 583-9300

29)

Constituent 1 30) CAS # 766393 31) Percent (%) by wt .75
Constituent Name Hydroflouric Acid
Constituent 2 CAS # 7697372 Percent (%) by wt 2
Constituent Name Nitric Acid
Constituent 3 CAS # 1333820 Percent (%) by wt 5
Constituent Name Chromic Acid
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Chrome Compound / Aluminum Treatment

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☐ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☐ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) 1.1

38) DOT Hazard Class 1RR 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	55	30	55		365
46	Tank								
Tradename Totals					55	30	55		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Magnesium Oxide

28) Manufacturer Dow Chemical Phone (517) 636-4400

29)

Constituent 1 30) CAS # 1309428 31) Percent (%) by wt 90%
Constituent Name Magnesium Oxide
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Metal Oxide / Waste treatment supply

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class 1RR 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 0 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs	Waste Generated (yr) 54)	# Days/yr on site 55)
18	Waste Trmt. J		1	1	5000	2400	50		365
39	EN Supp.								
Tradename Totals					5000	2400	50		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Electroless Nickel

28) Manufacturer Fidelity Chemical Products Phone (201) 242-4110

29)

Constituent 1 30) CAS # 7786814 31) Percent (%) by wt 5
Constituent Name Nickel Sulfate
Constituent 2 CAS # 7681530 Percent (%) by wt 4
Constituent Name Sodium Hypophosphite
Constituent 3 CAS # 001310732 Percent (%) by wt 2
Constituent Name Sodium Hydroxide
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Heavy Metal Liquid / Electroless Nickel So
33) MSDS Ref #/ ID Code ____
34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No
36) Physical State ☐ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) 1.5
38) DOT Hazard Class Not regulated 39) UNNA # ____ 40) Pressure? ____
41) Health Hazard 3 43) Reactivity 2
44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51)	Avg Daily Amt 52)	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
5	Storage	A	1	1	5000	5000	5000		365
6	Plating	A	1	1	5000	5000	5000		365
30	Tanks	A	1	1	2000	2000	2000		365
Tradename Totals					12000	12000	12000		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID EBMUD *033-00921*

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name *Sodium Dichromate*

28) Manufacturer *Pacific Coast Chemicals* Phone *(510) 549-3535*

29)

Constituent 1 30) CAS # *7789120* 31) Percent (%) by wt *100%*

Constituent Name *Sodium Dichromate Dihydrate*

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) *Chromic Compound*

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class *Oxy* 39) UNNA# *1479* 40) Pressure? ____

41) Health Hazard *3* 43) Reactivity *1*

44) Flammability *0* 45) Special Hazards *Oxidizer* microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	*Trailer*	*E*	*1*	*1*	*500*	*250*	*500*		*365*
Tradename Totals					*500*	*250*	*500*		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating Of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Zinc

28) Manufacturer Talco Metals Phone (215) 333-6800

29)

Constituent 1 30) CAS # 1314132 31) Percent (%) by wt 99%.

Constituent Name Zinc

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Heavy Metal Zinc / Zinc Source

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class Not regulated 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	E	1	1	300	200	300		365
Tradename Totals					300	200	300		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating Of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) State Waste Code ____ 26a Federal Waste Code ____

27) Common/Trade Name Zinc Cyanide

28) Manufacturer Great Western Chemical Phone (510) 228-2600

29)

Constituent 1 30) CAS # 542621 31) Percent (%) by wt 95

Constituent Name Zinc Cyanide

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Cyanide / Zinc Source

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [X] Yes [ ] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class Poison 39) UNNA # 1713 40) Pressure? ____

41) Health Hazard 3 43) Reactivity 2

44) Flammability 0 45) Special Hazards Poison microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	1	1	1	300	150	300		365
Tradename Totals					300	150	300		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating Of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) State Waste Code _____ 26a Federal Waste Code _____

27) Common/Trade Name Acetic Acid, Glacial

28) Manufacturer Van Waters & Roger Phone (408) 456-9196

29)

Constituent 1 30) CAS # 64197 31) Percent (%) by wt 100

Constituent Name Acetic Acid

Constituent 2 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____

Constituent Name _____

32) Generic Name/Use (optional) Acid

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) 1.05

38) DOT Hazard Class CORR/FL 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 2 45) Special Hazards N/A microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBoySto	E	1	1	100	50	55		365
Tradename Totals					100	50	55		

GIP6590

Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Hazardous Materials Management Plan

(Part II)

Francis Plating of Oakland, Inc.
(Facility Name and ID)

785 7th. Street
(Facility Address)

Oakland, California 94607
(Facility City)

NOTE: This plan is temporary until construction of damaged building is complete. Additinal data or revised plan will be completed at that time, approximately (June or July).

Certification

I hereby certify, under penalty of perjury, that the information contained in this Hazardous Materials Management Plan is, to the best of my knowledge, true and correct. I understand that I may be required to show proof of compliance during any facility inspection conducted by local, County, State, or Federal authorities.

Authorized Signature

Randall E. Lewis
Print Name

June 1, 1995
Date

General Manager for Francis Plating of Oakland, Inc.
Title

rev 92790

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Aluminetch LF

28) Manufacturer Chemca Products Phone (213) 537-5536

29)

Constituent 1 30) CAS # 1310732 31) Percent (%) by wt 85%
Constituent Name Sodium Hydroxide
Constituent 2 CAS # ____ Percent (%) by wt 15%
Constituent Name Alkaline
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Caustic Soda / Cleaner

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class CORR 39) UNNA # ____ 40) Pressure? ____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards ALK microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
35	Ano. Sto.	1	1	1	500	200	500		365
17	Trailer								
Tradename Totals					500	200	500		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00981

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Acetone

28) Manufacturer Union Chemical Phone (312) 885-5150

29)

Constituent 1 30) CAS # 67641 31) Percent (%) by wt 100
Constituent Name _____

Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Volatile Solvents / Cleaner

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) .79

38) DOT Hazard Class FL 39) UNNA# 1090 40) Pressure? _____

41) Health Hazard 1 43) Reactivity 0

44) Flammability 3 45) Special Hazards N/A microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	E	1	1	100	55	55		365
Tradename Totals					100	55	55		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Alodine

28) Manufacturer Amchem Phone (215) 628-1000

29)

Constituent 1 30) CAS # 1333820 31) Percent (%) by wt 25
Constituent Name Chromic Acid

Constituent 2 CAS # 7681494 Percent (%) by wt 8
Constituent Name Sodium Fluoride

Constituent 3 CAS # 16923958 Percent (%) by wt 8
Constituent Name Potassium Fluozirconate

Constituent 4 CAS # 14075537 Percent (%) by wt 25
Constituent Name Potassium Fluoborate

Constituent 5 CAS # 13746662 Percent (%) by wt 12
Constituent Name Potassium Ferricyanide

32) Generic Name/Use (optional) Chromic Acid Mixture / Aluminum Protector

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class Oxy 39) UNNA # 1463 40) Pressure? ____

41) Health Hazard 3 43) Reactivity 1

44) Flammability 0 45) Special Hazards Oxidizer microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
35	Ano. Sto.	D	1	1	100	50	50		365
16	Trailer								
Tradename Totals					100	50	50		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Cadmium

28) Manufacturer Talco American Phone (215) 333-6800

29)

Constituent 1 30) CAS # 7440439 31) Percent (%) by wt 99.9%
Constituent Name Cadmium Metal
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Heavy Metal / Cadmium Source

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class POIS B 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailers	K	1	1	200	50	50		365
20	Cad/ Tank								
Tradename Totals					200	50	50		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

EBMUD

Facility Name Francis Plating of Oakland, Inc. Facility ID 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Sodium Cyanide

28) Manufacturer Great Western chemical Phone (503) 228-2600

29)

Constituent 1 30) CAS # 143339 31) Percent (%) by wt 98%
Constituent Name Sodium Cyanide
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Cyanide/Cadmium/ Zinc/Copper Plating

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☒ Yes ☐ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class POIS B 39) UNNA # _____ 40) Pressure? _____

41) Health Hazard 4 43) Reactivity 0

44) Flammability 0 45) Special Hazards Poison microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	200	50	200		365
Tradename Totals					200	50	200		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Nitric Acid

28) Manufacturer E.I. Dupont Phone (302) 774-2421

29)

Constituent 1 30) CAS # 7967372 31) Percent (%) by wt 47/60

Constituent Name Nitric Acid

Constituent 2 CAS # _____ Percent (%) by wt _____

Constituent Name Water

Constituent 3 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____

Constituent Name _____

32) Generic Name/Use (optional) Inorganic Acid / Passivation Stripping

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) 1.5

38) DOT Hazard Class CORR/OXY 39) UNNA# 2031 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBoy Sto.	D	1	1	150	100	150		365
7	Sto. Tank	A	1	1	4000	4000	4000		365
23	Strip Tank								
Tradename Totals					4150	4100	4150		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Hydroxyacetic Acid

28) Manufacturer E.I. Dupont Phone (302) 774-2421

29)

Constituent 1 30) CAS # 79141 31) Percent (%) by wt 70%
Constituent Name Acetic Acid-Hydroxy

Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name Water

Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Organic Acid / Electroless Nickel Additive

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) 1.03

38) DOT Hazard Class Acid 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal	Waste Generated (yr) 54)	# Days/yr on site 55)
31	EN Sto.	E	1	1	100	50	55		365
Tradename Totals					100	50	55		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Metex M-629

28) Manufacturer Macdermid Phone ~~(313)644-6362~~

29)

Constituent 1 30) CAS # 7681381 31) Percent (%) by wt 90%

Constituent Name Sodium Bisulfate

Constituent 2 CAS # 7681494 Percent (%) by wt 10%

Constituent Name Inorganic Florides

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Acid Salts / Cleaner

33) MSDS Ref # / ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class ORM-B 39) UNNA# 1827 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 1

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	Trailer	1	1	1	500	400	500		365
27	Act. Tank								
Tradename Totals					500	400	500		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Methyl Ethyl Ketone

28) Manufacturer East Bay Oil Phone (415)782-204?

29)

Constituent 1 30) CAS # 78933 31) Percent (%) by wt 99%

Constituent Name Methyl Ethyl Ketone

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Ketone / Cleaner

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) .80

38) DOT Hazard Class FL 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 3 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	55	30	55		365
Tradename Totals					55	30	55		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition: [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Potassium Carbonate

28) Manufacturer Chemicals & Plastics Phone (315) 487-4709

29)

Constituent 1 30) CAS # 584087 31) Percent (%) by wt 99%

Constituent Name Potassium Carbonate

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Pot ASH

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class N/A 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs	Waste Generated (yr) 54)	# Days/yr on site 55)
11	Dry Chem. Sto.	J	1	1	2000	1000	50		365
Tradename Totals					2000	1000	50		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Nickel Sulfate

28) Manufacturer Harshaw Phone (215) 292-9290

29)

Constituent 1 30) CAS # 7786814 31) Percent (%) by wt 99%

Constituent Name Nickel Sulfate

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Inorganic Metallic Salt / Nickel Source

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class ORM - E 39) UNNA# 9188 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
11	Dry Chem. Sto.	J	1	1	2400	1200	50		365
Tradename Totals					2400	1200	50		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Sodium Metabisulfite

28) Manufacturer Great Western Chemical Phone (570) 235-481

29)

Constituent 1 30) CAS # 7681574 31) Percent (%) by wt 100%
Constituent Name Sodium Metabisulfite

Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Sodium Hydrogen Sulfite / Waste Treatment

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class ORM-B 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs	Waste Generated (yr) 54)	# Days/yr on site 55)
18	Waste Trmt. East Yard	D	1	1	2400	1200	50		365
Tradename Totals					2400	1200	50		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Sodium Hypophosphite

28) Manufacturer Atochem Phone (215) 587-7895

29)

Constituent 1 30) CAS # 7681530 31) Percent (%) by wt 100%

Constituent Name Sodium Hypophosphite

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Salt of Phosphoric Acid/ Electroless Nickel Additives

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class 1RR 39) UNNA # ____ 40) Pressure? ____

41) Health Hazard 1 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
31	EN Sto.	I	1	1	4000	2000	500		365
17	Trailers								
Tradename Totals					4000	2000	500		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID EBMUD *033-00921*

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name *NSA Cleaner*

28) Manufacturer *Chemco Products* Phone *(213) 537-555*

29)

Constituent 1 30) CAS # *1303964* 31) Percent (%) by wt *85%*

Constituent Name *Borates, Tetra, Sodium Salts-decahydrate*

Constituent 2 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____

Constituent Name _____

32) Generic Name/Use (optional) *Cleaner*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☒ Yes ☐ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class *IRR* 39) UNNA # _____ 40) Pressure? _____

41) Health Hazard *0* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *ALK* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	*Trailer*	*I*	*1*	*1*	*500*	*400*	*500*		*365*
26	*Soak Tank*								
Tradename Totals					*500*	*400*	*500*		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Acetylene

28) Manufacturer Airco Phone (800) 772-3855

29)

Constituent 1 30) CAS # 74862 31) Percent (%) by wt 100%
Constituent Name Acetylene, Ethyne
Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____
Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Alkyne / Welding

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [ ] No

36) Physical State [ ] Solid [X] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class FG 39) UNNA # 1001 40) Pressure? ____

41) Health Hazard 0 43) Reactivity 3

44) Flammability 4 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Cu. Ft.	Avg Daily Amt 52) Cu. Ft.	Max in One Vessel 53) Cu. Ft.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	Trailer	L	2	1	1000	800	1000		365
Tradename Totals					1000	800	1000		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID *EBMUD 033-00921*

Trade Name Information

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) State Waste Code _____ 26a) Federal Waste Code _____

27) Common/Trade Name *Oxygen*

28) Manufacturer *Pacific Oxygen* Phone *(510)444-808-*

29)

Constituent 1 30) CAS # *7782447* 31) Percent (%) by wt *100%*
Constituent Name *Oxygen*
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) *Oxidizer*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [ ] No

36) Physical State [ ] Solid [X] Gas [ ] Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class *Oxy* 39) UNNA# *1072* 40) Pressure? _____

41) Health Hazard *0* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *Oxy* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Cu. Ft.	Avg Daily Amt 52) Cu. Ft.	Max in One Vessel 53) Cu. Ft.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	Trailer	L	2	1	1500	1000	1500		365
Tradename Totals					1500	1000	1500		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code 181 26a) Waste Code

27) Common/Trade Name Metal Finishing Waste Treatment Sludge

28) Manufacturer Francis Plating Phone (510) 444-5555

29)

Constituent 1 30) CAS # 12054487 31) Percent (%) by wt 12
Constituent Name Nickel Hydroxide
Constituent 2 CAS # 204 Percent (%) by wt 12
Constituent Name Trivalent Chromium
Constituent 3 CAS # 128040 Percent (%) by wt 10
Constituent Name Sodium Diethyldithiocarbamate
Constituent 4 CAS # 1309484 Percent (%) by wt 15
Constituent Name Magnesium Oxide
Constituent 5 CAS # Percent (%) by wt
Constituent Name Water

32) Generic Name/Use (optional) Hazardous Waste / Waste Recyclable

33) MSDS Ref #/ ID Code

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid)

38) DOT Hazard Class ORM-E 39) UNNA# 9188 40) Pressure?

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl)

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Cu. Yd.	Avg Daily Amt 52) Cu. Yd.	Max in One Vessel 53) Cu. Yd.	Waste Generated (yr) 54)	# Days/yr on site 55)
4	East Yd.	J	1	1	25	17	1	50	365
18	Waste Treat A &Temp. Waste Treat	1	1	1	10	8	10		365
Tradename Totals					35	25	11	50	

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Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Bonderite

28) Manufacturer Parker Chemical Phone (313) 583-9300

29)

Constituent 1 30) CAS #766393 31) Percent (%) by wt .75
Constituent Name Hydroflouric Acid

Constituent 2 CAS #7697372 Percent (%) by wt 2
Constituent Name Nitric Acid

Constituent 3 CAS #1333820 Percent (%) by wt 5
Constituent Name Chromic Acid

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Chrome Compound / Aluminum Treatment

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☐ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☐ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) 1.1

38) DOT Hazard Class 1RR 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	D	1	1	55	30	55		365
46	Tank								
Tradename Totals					55	30	55		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID EBMUD *033-00921*

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name *Magnesium Oxide*

28) Manufacturer *Dow Chemical* Phone *(517) 636-4400*

29)

Constituent 1 30) CAS # *1309428* 31) Percent (%) by wt *90%*
Constituent Name *Magnesium Oxide*

Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) *Metal Oxide / Waste treatment supply*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class *1RR* 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard *0* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *N/A* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs	Waste Generated (yr) 54)	# Days/yr on site 55)
18	*Waste Trmt.*	*J*	*1*	*1*	*5000*	*2400*	*50*		*365*
39	*EN Supp.*								
Tradename Totals					*5000*	*2400*	*50*		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) State Waste Code ____ 26a) Federal Waste Code ____

27) Common/Trade Name Electroless Nickel

28) Manufacturer Fidelity Chemical Products Phone (201) 242-4111

29)

Constituent 1 30) CAS # 7786814 31) Percent (%) by wt 5
Constituent Name Nickel Sulfate

Constituent 2 CAS # 7681530 Percent (%) by wt 4
Constituent Name Sodium Hypophosphite

Constituent 3 CAS # 001310732 Percent (%) by wt 2
Constituent Name Sodium Hydroxide

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Heavy Metal Liquid / Electroless Nickel Sc

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) 1.5

38) DOT Hazard Class Not regulated 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 3 43) Reactivity 2

44) Flammability 0 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51)	Avg Daily Amt 52)	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
5	Storage	A	1	1	5000	5000	5000		365
6	Plating	A	1	1	5000	5000	5000		365
30	Tanks	A	1	1	2000	2000	2000		365
Tradename Totals					12000	12000	12000		

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Sodium Dichromate

28) Manufacturer Pacific Coast Chemicals Phone 510) 549-3535

29)

Constituent 1 30) CAS # 7789120 31) Percent (%) by wt 100%
Constituent Name Sodium Dichromate Dihydrate
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) Chromic Compound

33) MSDS Ref #/ ID Code _____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class Oxy 39) UNNA# 1479 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 1

44) Flammability 0 45) Special Hazards Oxidizer microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
16	Trailer	E	1	1	500	250	500		365
Tradename Totals					500	250	500		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating Of Oakland, Inc.* Facility ID EBMUD *033-00921*

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name *Zinc*

28) Manufacturer *Talco Metals* Phone *(215) 333-6800*

29)

Constituent 1 30) CAS # *1314132* 31) Percent (%) by wt *99%.*
Constituent Name *Zinc*

Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) *Heavy Metal Zinc / Zinc Source*

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class *Not regulated* 39) UNNA # ____ 40) Pressure? ____

41) Health Hazard *1* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *N/A* microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max In One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	*Trailer*	*E*	*1*	*1*	*300*	*200*	*300*		*365*
Tradename Totals					*300*	*200*	*300*		

CIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID [illegible]

Trade Name Information State Federal

25) Composition ☐ Pure ☐ Mixture ☐ Waste 26) Waste Code _____ 26a Waste Code _____

27) Common/Trade Name Zinc Cyanide

28) Manufacturer Great Western Chemical Phone [illegible]

29)

Constituent 1 30) CAS # 542621 31) Percent (%) by wt 35

Constituent Name Zinc Cyanide

Constituent 2 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 3 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 4 CAS # _____ Percent (%) by wt _____

Constituent Name _____

Constituent 5 CAS # _____ Percent (%) by wt _____

Constituent Name _____

32) Generic Name/Use (optional) Cyanide / Zinc Source

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☒ Yes ☐ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☐ No

36) Physical State ☒ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) _____

38) DOT Hazard Class Poison 39) UNNA # 1713 40) Pressure? _____

41) Health Hazard 3 43) Reactivity 2

44) Flammability 0 45) Special Hazards Poison microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
17	Trailer	1	1	1	300	150	300		365
Tradename Totals					300	150	300		

CIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating Of Oakland, Inc. Facility ID EBMUD [illegible]

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Acetic Acid, Glacial

28) Manufacturer Van Waters & Roger Phone (408) 456-3131

29)

Constituent 1 30) CAS # 64197 31) Percent (%) by wt 100

Constituent Name Acetic Acid

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Acid

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [X] Liquid 37) Specific Gravity (if liquid) 1.05

38) DOT Hazard Class CORR/FL 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 2 43) Reactivity 0

44) Flammability 2 45) Special Hazards N/A microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBouSto	E	1	1	100	50	55		365
Tradename Totals					100	50	55		

CIP6390

Alameda County Department of Environmental Health

HAZARDOUS MATERIALS MANAGEMENT PLAN

Facility Information

General Information

1) Facility Name: Francis Plating of Oakland, Inc. 2) Facility ID: 033-00921
3) Street Address: 785 7th. Street City: Oakland Zip: 94607
4) Principle Business Activity: Metal Finshing 5) D&B#: N/A 6) SIC Code: 3470
7) EPA ID #: CAD009206160 8) Uniform Building Code Class:
9) Mailing Address: Same City: Zip:
10) Billing Address: Same City: Zip:
11) # of Shifts: 2 or 3 12) # Empl: 9 # Employees: 2 or 3 # Empl: 2 or 3
Shift 1 Start: 7:30a.m Shift 2 Start: 4:00P Shift 3 Start: 12:00a.m
Shift 1 End: 4:00p.m Shift 2 End: 12:00A M Shift 3 End: 7:30a.m.

13a) Area of Facility: 27,500 Sq.Ft. 13b) Hazardous Materials Storage Area: 26,000 Sq.Ft

Facility Contacts

14) Primary Contact	Sean MacDougall	Work Phone #	(916) 368-0100
Title	President/Owner	Home Phone #	011-63-2-635-5225
15) Secondary Contact	Randall E. Lewis	Work Phone #	(510) 444-5535
Title	General Manager	Home Phone #	(510) 685-8884
16) Executive Contact	Sean MacDougall	Work Phone #	(916) 368-0100
Title	President/Owner	Home Phone #	011-63-2-635-5225
17) HMMP Contact	Sean MacDougall	Work Phone #	(916) 368-0100
Title	President/Owner	Home Phone #	011-63-2-635-5225
18) Property Owner	Erthco Environmental Svcs	Work Phone #	(916) 368-0100
19) Mailing Address	P.O. Box 276048	Home Phone #	(916) 989-5592
City	Sacramento, CA	Zip	95827

Land Use Information

19a) Direction	20) Adjacent Business Name	Contact	Phone
E	Vacant Lot	CalTrans	(415) 923-4444
N	Shopping Center	City of Oakland	(510) 444-2489
W	Shell Gas Station	Mr. Balt	(510) 465-4961
S	Auto Parts House	Roger Schmidt	(510) 289-0822

Direction	21) Special Land Uses	Contact	Phone
E 2	St. Marys School	Brother Male Anderson	(510) 444-8627
N 2	Lowell Jr. High School	Rosalyn Upshaw	(510) 832-1436
W 1	Apollo Apartments	Barbara Goody	(510) 923-4444
S 2	Gingerbread House Rest.	T.J. Robinson,	(510) 444-7373

22) Flood Zone: No 24) Earthquake Faults: N/A - General Bay Area
23) Water Table: 18 Ft.

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland* Facility ID *033-00921*

785 7th. Street Oakland, CA. 94607

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Southern Water Treatment Co.

28) Manufacturer ____ Phone (900) 973-1755

29)

Constituent 1 30) CAS # ____ 31) Percent (%) by wt *40*

Constituent Name *Sodium Dimethyldithiocarbmate*

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) *Thiocarbamates/Waste Treatment*

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [ ] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) *1.18*

38) DOT Hazard Class *ORMB* 39) UNNA# *1760* 40) Pressure? ____

41) Health Hazard *1* 43) Reactivity *1*

44) Flammability *1* 45) Special Hazards *AUC* microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal	Avg Daily Amt 52) Gal	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
18	*East Yard*	*E*	*1*	*1*	*300*	*200*	*55*		*365*
Tradename Totals					*300*	*200*	*55*		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID *033-00921*

Trade Name Information State Federal

25) Composition ☐ Pure ☒ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name *Zinc Phosphate*

28) Manufacturer *Allied - Kelite* Phone *(312)297-357*

29)

Constituent 1 30) CAS # *13598-37-3* 31) Percent (%) by wt *12*
Constituent Name *Zinc Dihydrogen Phosphate*

Constituent 2 CAS # *7779-88-6* Percent (%) by wt *12*
Constituent Name *Zinc Nitrate*

Constituent 3 CAS # *7664-38-2* Percent (%) by wt *12*
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt *Bal. Water*
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) *Acid phosphate / Rust Preventive*

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) *1.5*

38) DOT Hazard Class *Corrosive Material* 39) UNNA# *1760* 40) Pressure? ____

41) Health Hazard *2* 43) Reactivity *0*

44) Flammability *0* 45) Special Hazards *COR* microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal	Avg Daily Amt 52) Gal	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
16	*Trailer*	*E*	*1*	*1*	*100*	*55*	*55*		*365*
45	*Tank*								
Tradename Totals					*100*	*55*	*55*		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID *EBMUD 033-00921*

Trade Name Information

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code State _____ Federal 26a Waste Code _____

27) Common/Trade Name *Sulfuric Acid*

28) Manufacturer *Stauffer Chemical Co.* Phone *(203) 226-6602*

29)

Constituent 1	30) CAS # *7664939*	31) Percent (%) by wt	*98%*
Constituent Name	*CIN-#705 Sulfuric Acid*		
Constituent 2	CAS # _____	Percent (%) by wt	_____
Constituent Name	*Water*		
Constituent 3	CAS # _____	Percent (%) by wt	_____
Constituent Name			
Constituent 4	CAS # _____	Percent (%) by wt	_____
Constituent Name			
Constituent 5	CAS # _____	Percent (%) by wt	_____
Constituent Name			

32) Generic Name/Use (optional) *Inorganic Acid* *Anodizing PH*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☒ Yes ☐ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) *2.5*

38) DOT Hazard Class *CORR* 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard *4* 43) Reactivity *1*

44) Flammability *0* 45) Special Hazards *Acid* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBoy Sto	G	1	1	400	200	400		365
34	Ano. Tank								
33	Ano. Tank								
Tradename Totals					400	200	400		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. EBMUD Facility ID 033-00921

Trade Name Information State Federal

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Hydrochloric Acid

28) Manufacturer Stauffer Chemical Phone (203) 226-6003

29)

Constituent 1 30) CAS # 7647010 31) Percent (%) by wt 95%

Constituent Name ____

Constituent 2 CAS # ____ Percent (%) by wt ____

Constituent Name Water

Constituent 3 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____

Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____

Constituent Name ____

32) Generic Name/Use (optional) Inorganic Acid

33) MSDS Ref #/ ID Code ____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☒ Yes ☐ No

36) Physical State ☐ Solid ☐ Gas ☐ Liquid 37) Specific Gravity (if liquid) 1.2

38) DOT Hazard Class Strong Acid CORR 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 4 43) Reactivity 1

44) Flammability 0 45) Special Hazards Acid microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53) Gal.	Waste Generated (yr) 54)	# Days/yr on site 55)
9	CarBoy Sto.	G	1	1	400	200	400		365
32	HCL Tank								
Tradename Totals					400	200	400		

GIP6590

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name *Francis Plating of Oakland, Inc.* Facility ID *EBMUD 033-00921*

Trade Name Information

25) Composition ☒ Pure ☐ Mixture ☐ Waste 26) State Waste Code _____ 26a Federal Waste Code _____

27) Common/Trade Name *Propionic Acid*

28) Manufacturer *Union Carbide* Phone *(304) 744-5[illegible]*

29)

Constituent 1 30) CAS # *79-09-4* 31) Percent (%) by wt *100%*
Constituent Name *Propionic Acid*
Constituent 2 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 3 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 4 CAS # _____ Percent (%) by wt _____
Constituent Name _____
Constituent 5 CAS # _____ Percent (%) by wt _____
Constituent Name _____

32) Generic Name/Use (optional) *Mild Acid / Electroless Nickel Additive*

33) MSDS Ref #/ ID Code _____

34) Trade Secret? ☐ Yes ☒ No 35) Extremely (Acutely) Hazardous? ☐ Yes ☒ No

36) Physical State ☐ Solid ☐ Gas ☒ Liquid 37) Specific Gravity (if liquid) *0.99*

38) DOT Hazard Class *CORR* 39) UNNA# _____ 40) Pressure? _____

41) Health Hazard *1* 43) Reactivity *1*

44) Flammability *2* 45) Special Hazards *Acid* microcuries (if appl) _____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Gal.	Avg Daily Amt 52) Gal.	Max in One Vessel 53)	Waste Generated (yr) 54)	# Days/yr on site 55)
31	EN STO.	E	1	1	100	50.	55		365
Tradename Totals					100	50	55		

GIP6390

Alameda County Department of Environmental Health

Hazardous Materials Management Plan

Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. Facility ID EBMUD 033-00921

Trade Name Information State Federal

25) Composition [X] Pure [ ] Mixture [ ] Waste 26) Waste Code ____ 26a Waste Code ____

27) Common/Trade Name Conetch

28) Manufacturer Canal Chemical Phone (310) 537-6363

29)

Constituent 1 30) CAS # 1310-73-2 31) Percent (%) by wt 90%
Constituent Name Sodium Hydroxide

Constituent 2 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 3 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 4 CAS # ____ Percent (%) by wt ____
Constituent Name ____

Constituent 5 CAS # ____ Percent (%) by wt ____
Constituent Name ____

32) Generic Name/Use (optional) Caustic Soda / Cleaner

33) MSDS Ref #/ ID Code ____

34) Trade Secret? [ ] Yes [X] No 35) Extremely (Acutely) Hazardous? [ ] Yes [X] No

36) Physical State [X] Solid [ ] Gas [ ] Liquid 37) Specific Gravity (if liquid) ____

38) DOT Hazard Class CORR 39) UNNA# ____ 40) Pressure? ____

41) Health Hazard 3 43) Reactivity 0

44) Flammability 0 45) Special Hazards ALK microcuries (if appl) ____

Storage Detail

Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51) Lbs.	Avg Daily Amt 52) Lbs.	Max in One Vessel 53) Lbs.	Waste Generated (yr) 54)	# Days/yr on site 55)
35	Ano. Sto.	T	1	1	500	300	500		365
17	Trailer								
Tradename Totals					500	300	500		

GIP6390

APPENDIX B
CURTIS & TOMPKINS TO-15 ANALYTE LIST AND REPORTING LIMITS

VOLATILE ORGANICS
STANDARD REPORTING LIMITS

Curtis & Tompkins, Ltd.

Volatile Organics in Air
TO-15

CAS #	Compound	RL ppv	RL ug/m^3
71-55-6	1,1,1-Trichloroethane	0.5	2.7
79-34-5	1,1,2,2-Tetrachloroethane	0.5	3.4
79-00-5	1,1,2-Trichloroethane	0.5	2.7
75-34-3	1,1-Dichloroethane	0.5	2
75-35-4	1,1-Dichloroethene	0.5	2
120-82-1	1,2,4-Trichlorobenzene	0.5	3.4
95-63-6	1,2,4-Trimethylbenzene	0.5	2.5
106-93-4	1,2-Dibromoethane	0.5	3.8
95-50-1	1,2-Dichlorobenzene	0.5	3
107-06-2	1,2-Dichloroethane	0.5	2
78-87-5	1,2-Dichloropropane	0.5	2.3
108-67-8	1,3,5-Trimethylbenzene	0.5	2.5
106-99-0	1,3-Butadiene	0.5	1.1
541-73-1	1,3-Dichlorobenzene	0.5	3
106-46-7	1,4-Dichlorobenzene	0.5	3
78-93-3	2-Butanone	0.5	1.5
591-78-6	2-Hexanone	0.5	2
622-96-8	4-Ethyltoluene	0.5	2.5
108-10-1	4-Methyl-2-Pentanone	0.5	2
67-64-1	Acetone	2	4
107-02-8	Acrolein	0.5	1.1
71-43-2	Benzene	0.5	1.6
100-44-7	Benzyl chloride	0.5	2.6
75-27-4	Bromodichloromethane	0.5	3.4
75-25-2	Bromoform	0.5	5.2
74-83-9	Bromomethane	0.5	1.9
75-15-0	Carbon Disulfide	0.5	1.6
56-23-5	Carbon Tetrachloride	0.5	3.1
108-90-7	Chlorobenzene	0.5	2.3
75-00-3	Chloroethane	0.5	1.3
67-66-3	Chloroform	0.5	2.4
74-87-3	Chloromethane	0.5	1
110-82-7	Cyclohexane	0.5	1.7
124-48-1	Dibromochloromethane	0.5	4.3
141-78-6	Ethyl Acetate	0.5	1.8
100-41-4	Ethylbenzene	0.5	2.2
76-13-1	Freon 113	0.5	3.8
76-14-2	Freon 114	0.5	3.5
75-71-8	Freon 12	0.5	2.5
87-68-3	Hexachlorobutadiene	0.5	5.3
1634-04-4	MTBE	0.5	1.8
75-09-2	Methylene Chloride	0.5	1.7
115-07-1	Propylene	0.5	0.86
100-42-5	Styrene	0.5	2.1
127-18-4	Tetrachloroethene	0.5	3.4
109-99-9	Tetrahydrofuran	0.5	1.5
108-88-3	Toluene	0.5	1.9
79-01-6	Trichloroethene	0.5	2.7
75-69-4	Trichlorofluoromethane	0.5	2.8
108-05-4	Vinyl Acetate	0.5	1.8
75-01-4	Vinyl Chloride	0.5	1.3
156-59-2	cis-1,2-Dichloroethene	0.5	2

10061-01-5	cis-1,3-Dichloropropene	0.5	2.3
1330-20-7	m,p-Xylenes	0.5	2.2
142-82-5	n-Heptane	0.5	2
110-54-3	n-Hexane	0.5	1.8
95-47-6	o-Xylene	0.5	2.2
156-60-5	trans-1,2-Dichloroethene	0.5	2
10061-02-6	trans-1,3-Dichloropropene	0.5	2.3