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

RECEIVED

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 11:05 am, Jun 19, 2012

Alameda County Environmental Health

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

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,

Man ann

James McCarty, P.E. Project Engineer

JGM:km

Enclosure

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

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

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PROFESSIONAL CERTIFICATION

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

C

James McCarty P. E. No. C 62618



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CONCEPTUAL SITE MODEL AND WORK PLAN SUB-SLAB VAPOR INVESTIGATION

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 x 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 waterbearing 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 subslab 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 $150 \,\mu$ g/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 offsite 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 (μ g/L), from groundwater monitoring well MW-FP4A located downgradient of the Frog Pond. TCE was reported in MW-FP3 at 0.9 μ g/L and MW-FP5 at 1.2 μ g/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 6^{th} 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 μ g/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 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 μ g/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 μ g/m³ and 1,1,1-TCA was reported at 19 and 18 μ g/m³. 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 crosssections 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 μ g/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 μ g/L; B-FP18 at 600 μ g/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 μ g/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 μ g/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 μ g/m³, trans-1,2-DCE at 110 μ g/m³, cis-1,2-DCE at 1,900 μ g/m³, and trichlorofluoromethane at 160 μ g/m³. The deeper sample, collected with the probe pulled back from 10 to 8 feet bgs, was reported to contain TCE at 160,000 μ g/m³, 1,1-DCE at 3,300 μ g/m³, trans-1,2-dichloroethene, at 12,000 μ g/m³, cis-1,2-DCE at 150,000 μ g/m³, and vinyl chloride at 3,000 μ g/m³.

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 μ g/L, 1,1,1-TCA at 9.8 μ g/L, and 1.1-DCE at 4.1 μ g/L (Table 9). The grab groundwater sample from B-FP11 was reported to contain TCE at 1.2 μ g/L, 1,1,1-TCA at 1.2 μ g/L and 1,1-DCE at 0.5 μ g/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 μ g/m³, 1,1-DCE at 270 μ g/m³, and 1,1,1-TCA at 510 μ g/m³. The deeper sample, collected with the probe pulled back from 10 to 8 feet bgs, was reported to contain TCE at 320 μ g/m³, 1,1,1-TCA at 270 μ g/m³, and benzene at 120 μ g/m³. 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 μ g/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 μ g/m³ and 1,1,1-TCA at 780 μ g/m³. The deeper sample, collected with the probe pulled back from 10 to 8 feet bgs, was reported to contain TCE at 1,000 μ g/m³, 1,1,1-TCA at 130 μ g/m³, and benzene at 100 μ g/m³. 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 μ g/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 μ g/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 μ g/m³, 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:

 $DF = [Concentration of Helium in Sample (\%)] \div [Concentration of Helium in the Shroud (\%)]$

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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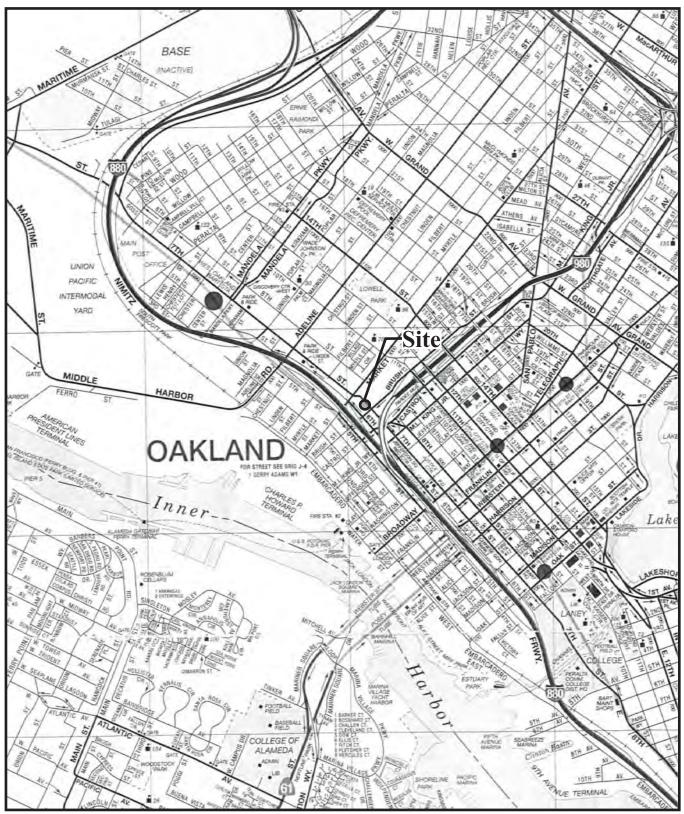
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FIGURES

REGIONAL LOCATION

Figure 1



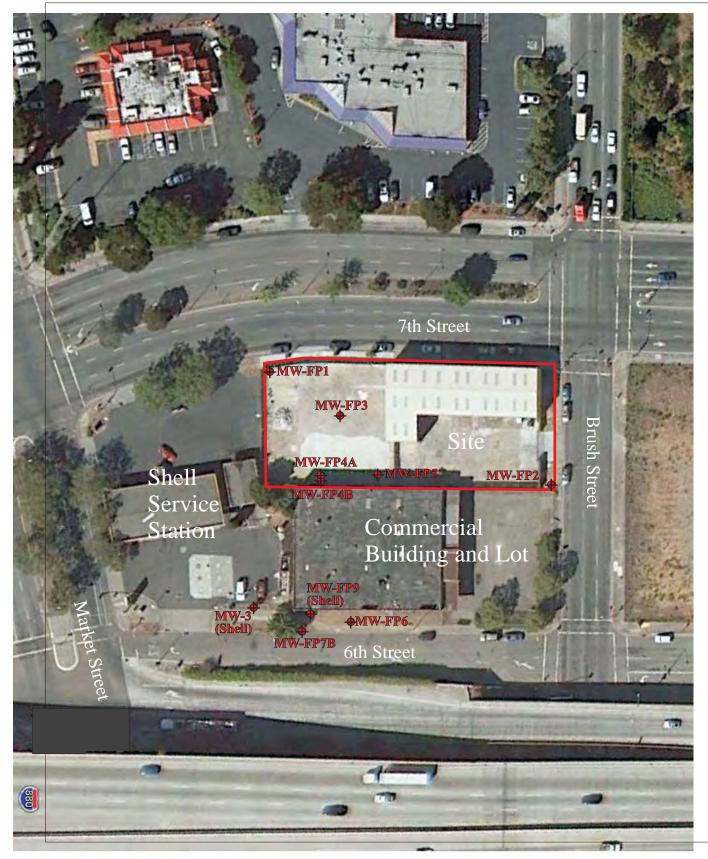
751-785 Seventh Street Oakland, California



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



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

AERIAL MAP - 1965



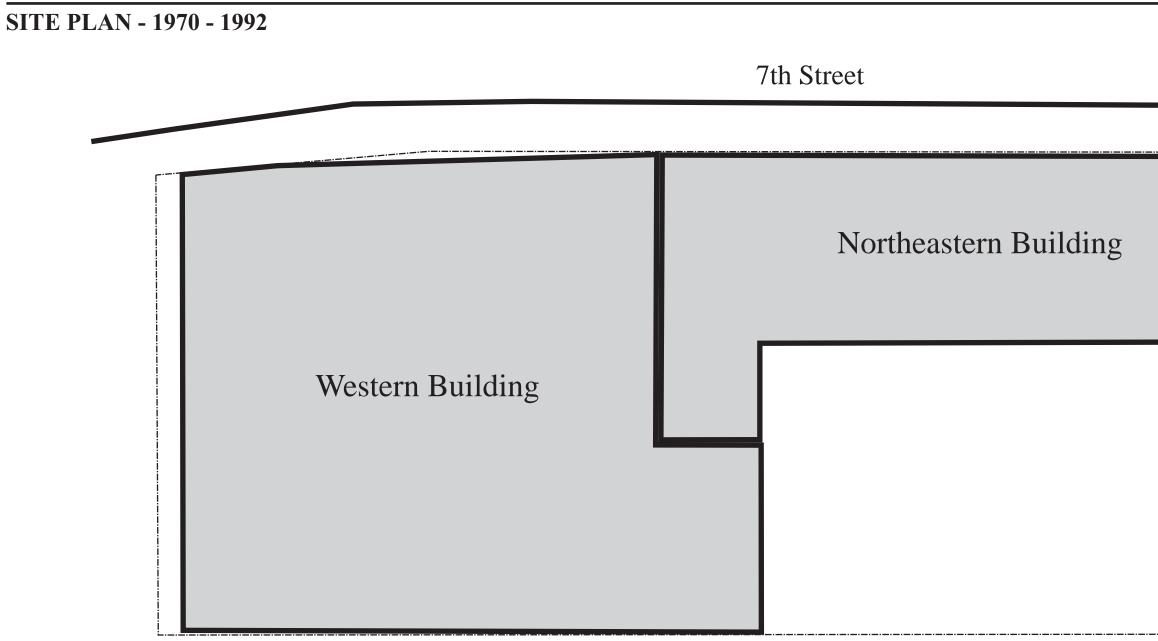
751-785 Seventh Street Oakland, California

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

Figure 3

B<u>ASELIN</u>**E**

R



LEGEND

Present Day Property Boundary

751-785 Brush Street Oakland, California

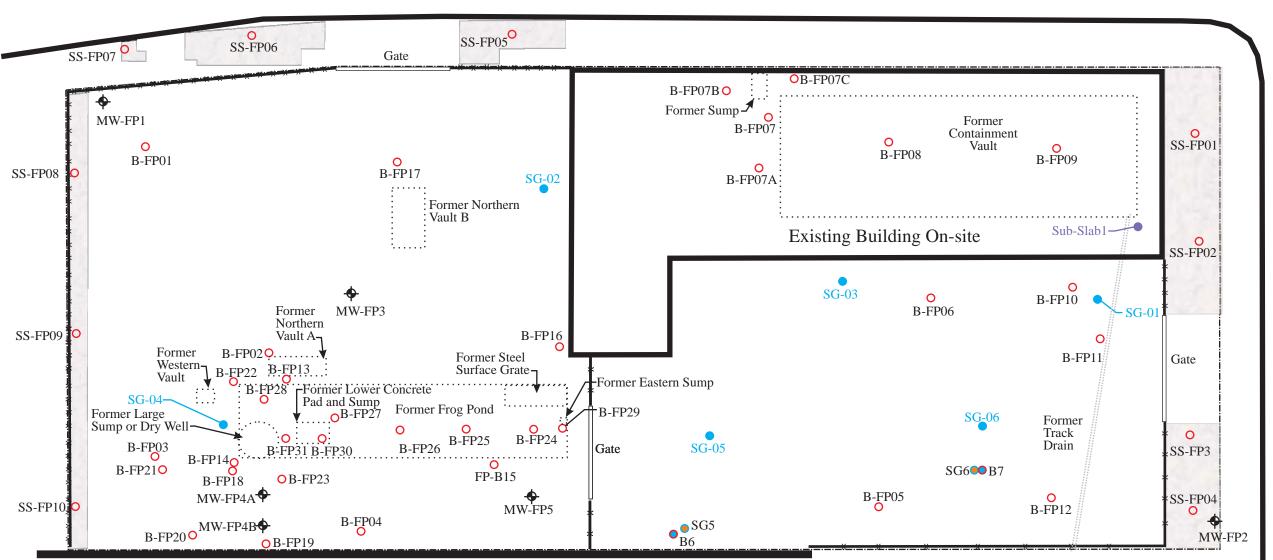
Y0323-05.01875.Fig4-10.cdr 06/12/12

Brush Street



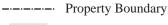
Figure 4

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



7th Street

LEGEND



- Exposed Soil Areas
- O 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

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

Figure 5

Brush Street

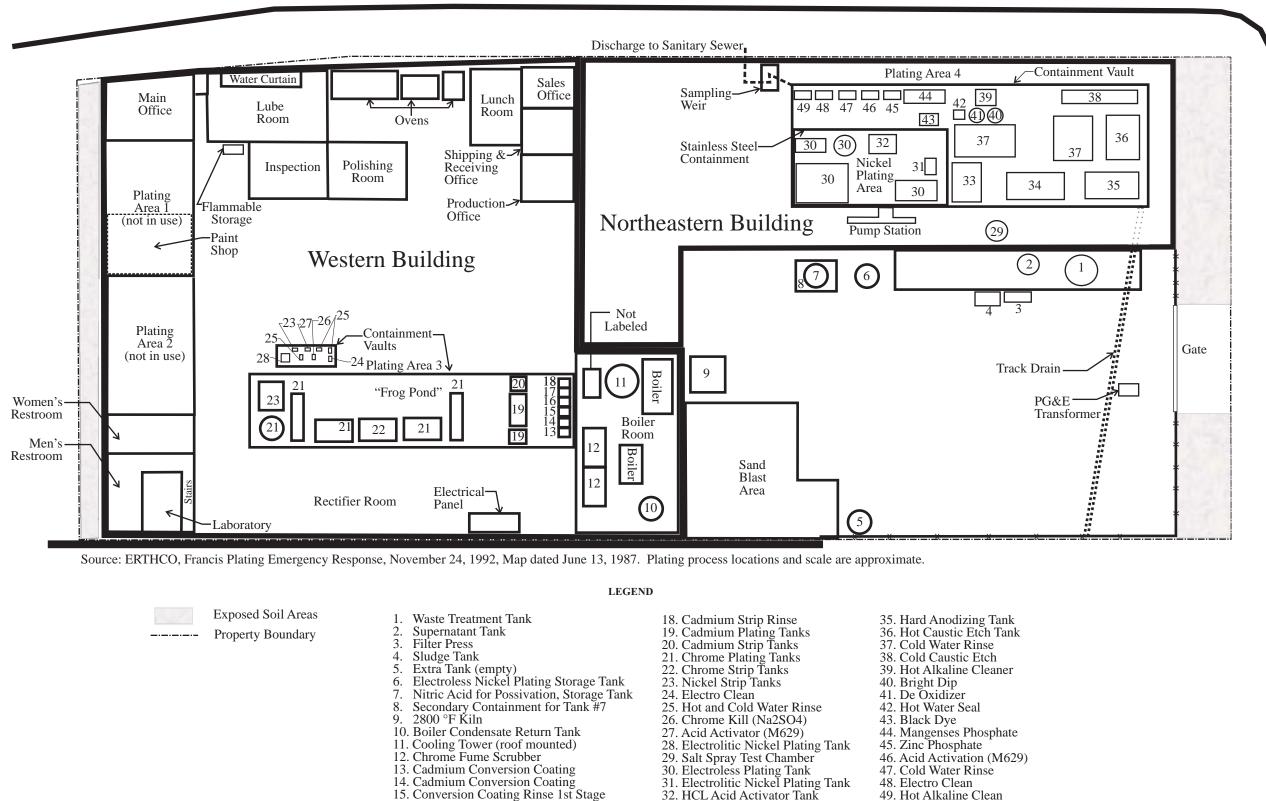


FRANCIS PLATING SITE PLAN - 1987

7th Street

33. Clear Anodizing Tank

34. Hard Anodizing Tank



16. Conversion Coating Rinse 2nd Stage

17. Hot Water Rinse

751-785 Brush Street Oakland, California

Figure 6

Brush Street



FRANCIS PLATING SITE PLAN - 1996

7th Street

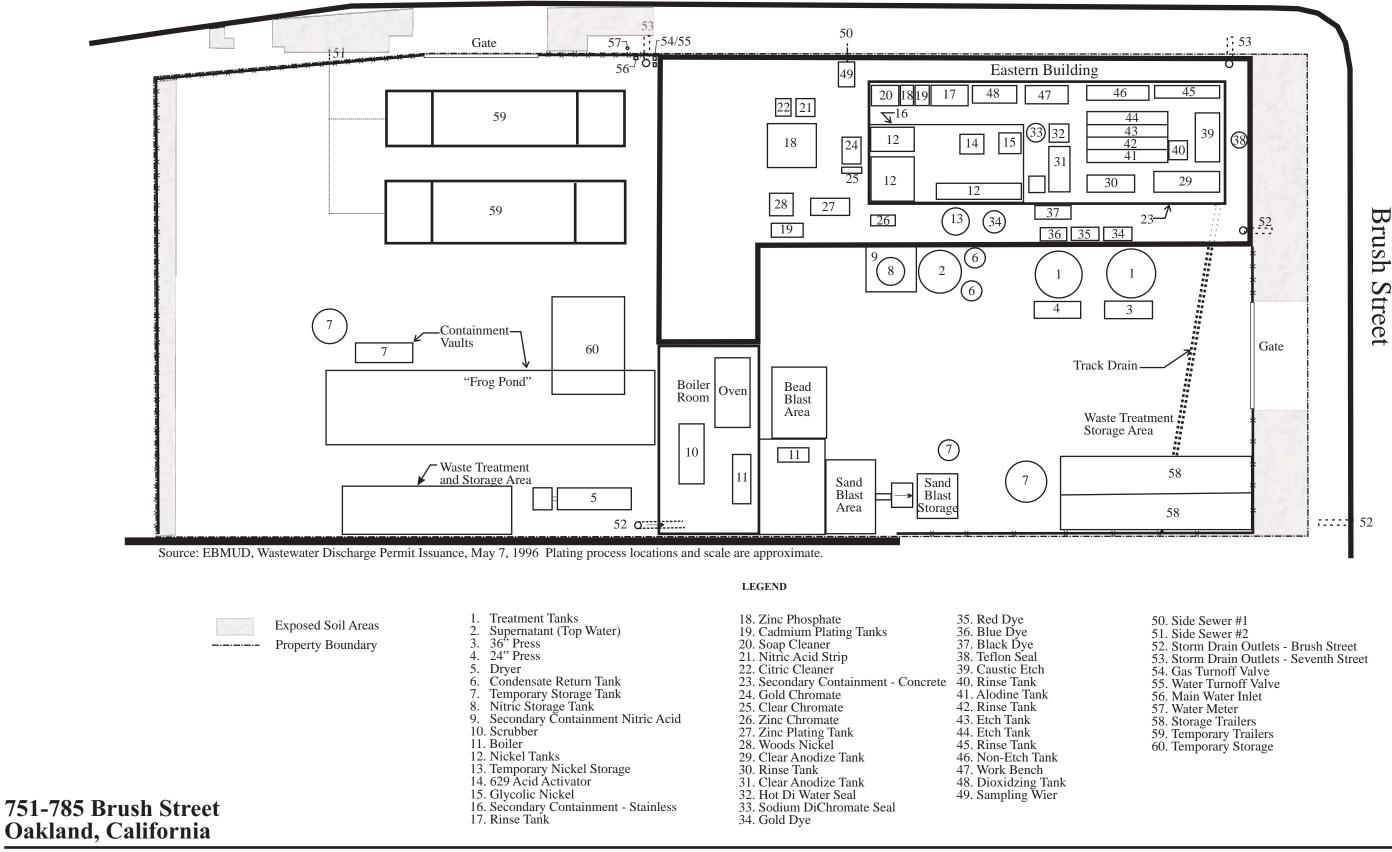
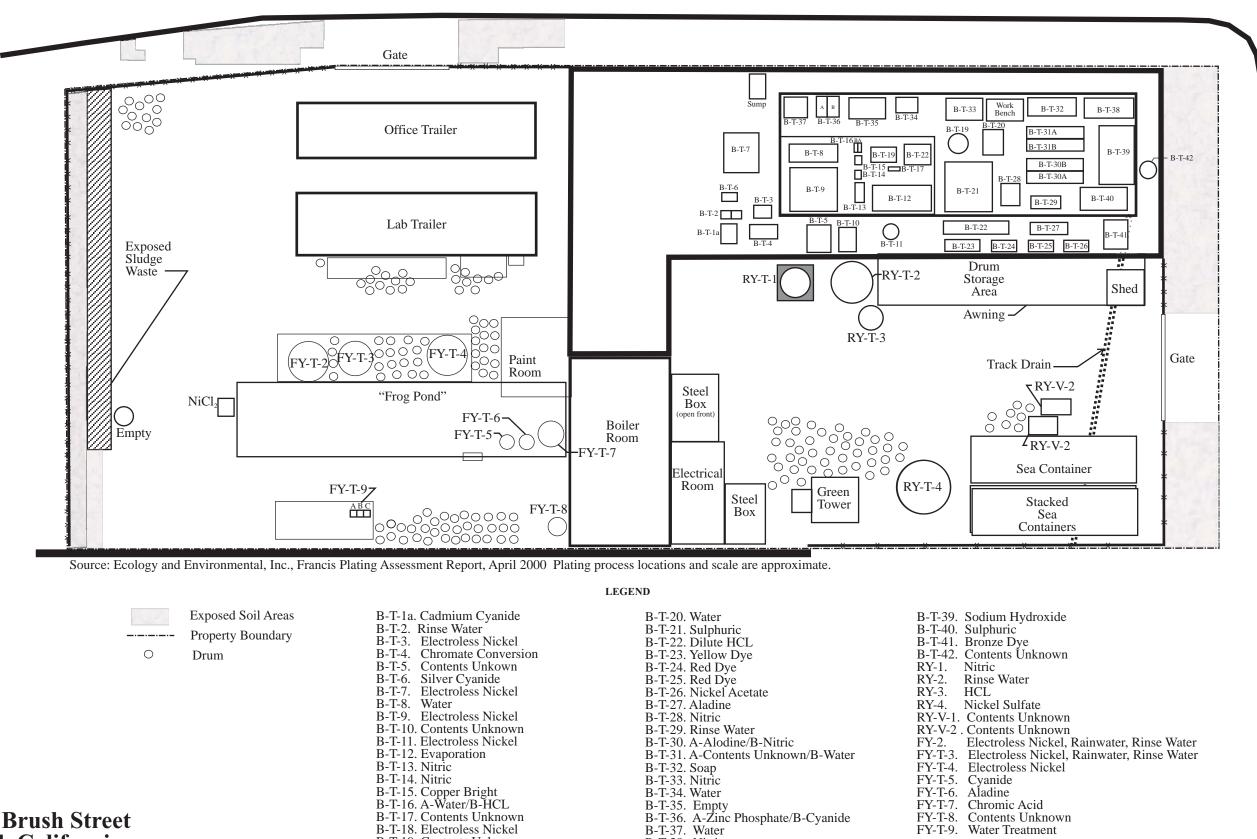


Figure 7



FRANCIS PLATING SITE PLAN - 1998

7th Street



B-T-38. Nitric

B-T-18. Electroless Nickel

B-T-19. Contents Unknown

751-785 Brush Street **Oakland**, California

Figure 8

Brush

Street

20 Feet B<u>aselin</u>F.

FY-T-9. Water Treatment

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

7th Street

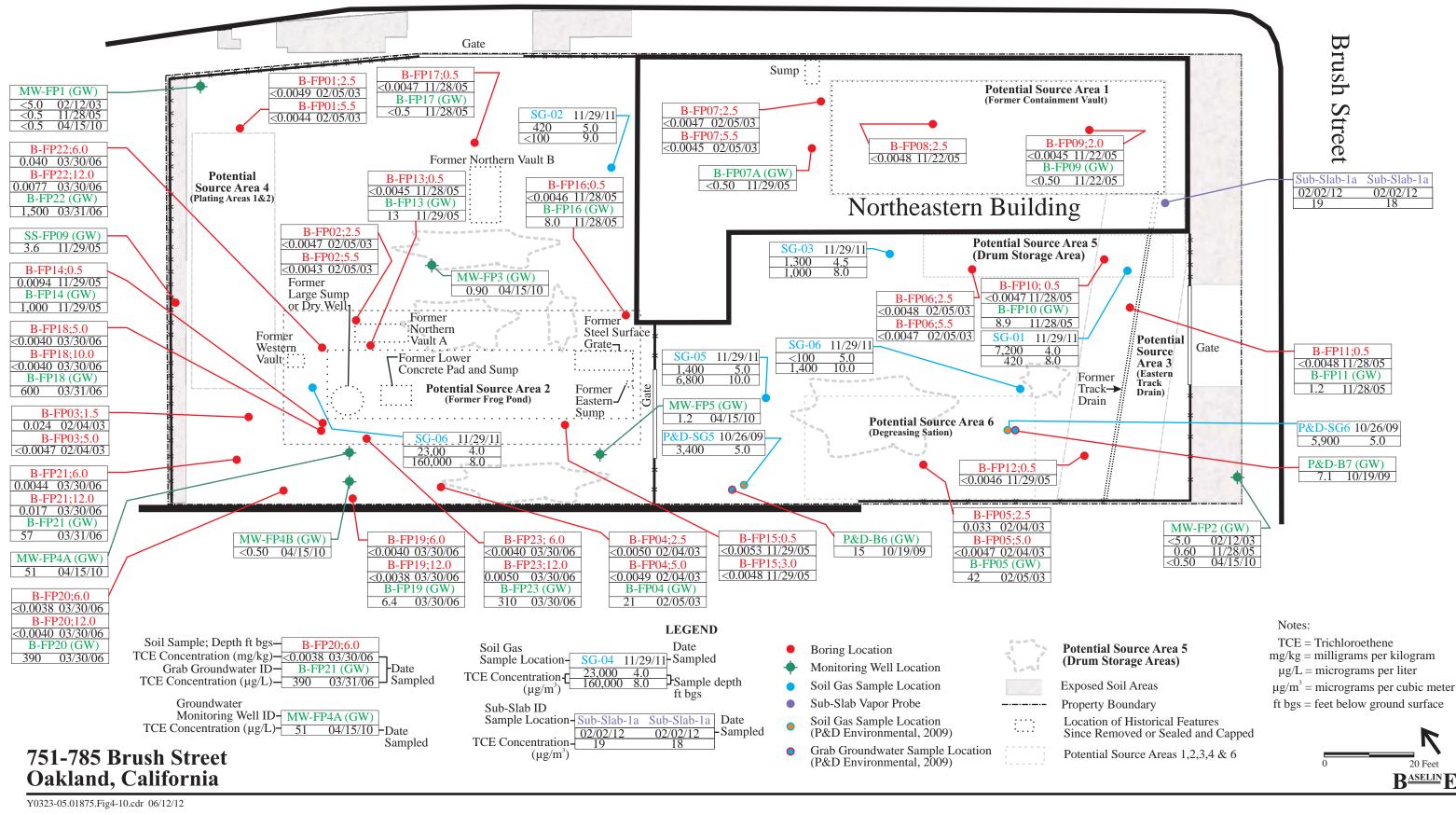
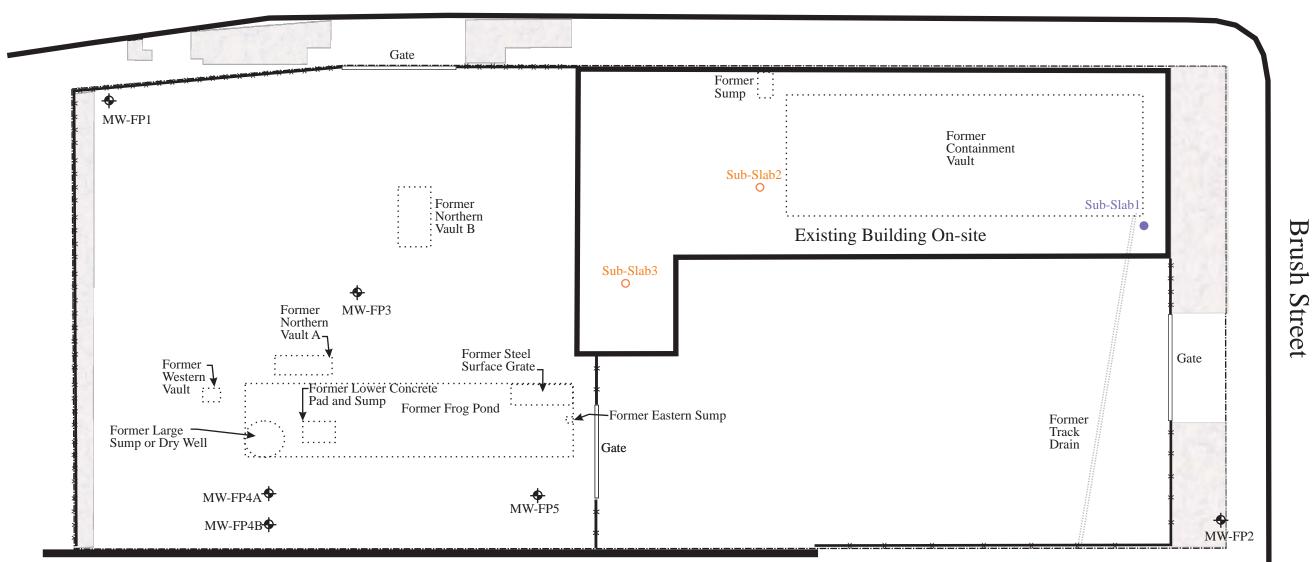


Figure 9

PROPOSED SUB-SLAB VAPOR PROBE LOCATIONS



7th Street

LEGEND

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

751-785 Brush Street Oakland, California

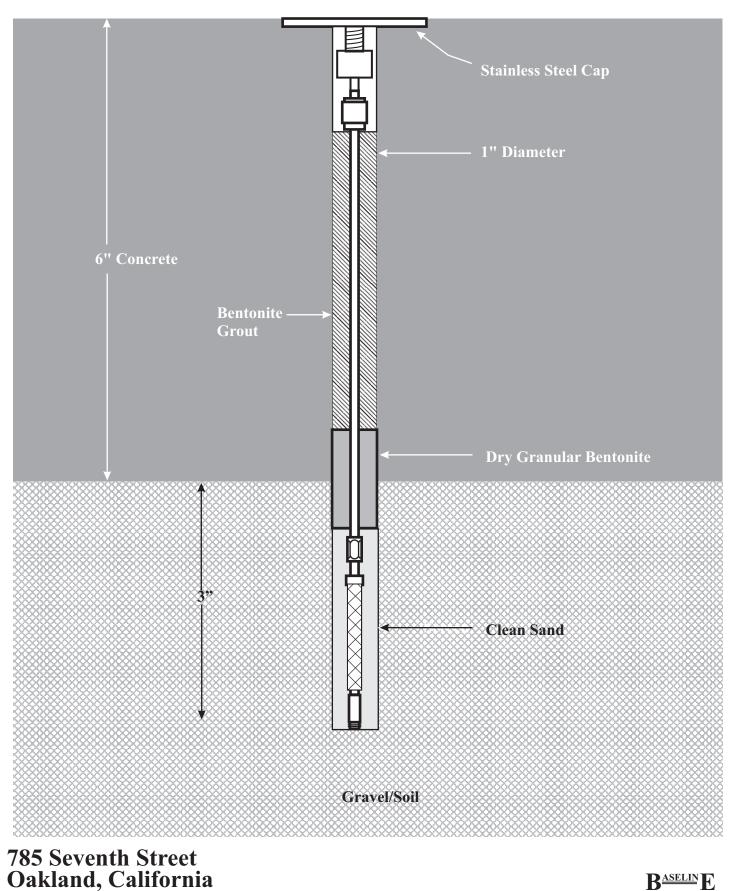
Y0323-05.01875.Fig4-10.cdr 06/12/12

Figure 10

20 Feet BASELINE

VAPOR PROBE CONSTRUCTION DIAGRAM

Figure 11



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

B<u>ASELIN</u>E

TABLES

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 Groundwa	nter Monitoring Wells				
MW-FP1	02/12/03	25.77	13.91	11.86	
MW-FP1	11/25/05	25.77	15.50	10.27	12-25
MW-FP1	04/15/10	25.77	14.82	10.95	
MW-FP2	02/12/03	23.81	12.30	11.51	
MW-FP2	11/25/05	23.81	13.84	9.97	12-25
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 Groundwa	ater 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

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.

	Top of Sample																			
Sample	Interval																			
Location	(feet bgs)	SampleDate	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium VI	Chromium, Total	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Residential ESL	$s \leq 3$ 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 ESL	s > 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 ESI	Ls ≤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 ESI		,	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			10			110	010		120		00		0112					10	20	
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	<u>995</u>	<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 B-FP05	2.0 5.0	02/04/03	<0.75 <0.75	0.79 0.76	<u>56</u> 28	<0.25	<0.50 <0.50	<u>0.090</u> 1.9	<u> </u>	<u>3.9</u> 2.6	4.8 4.6	2.8 2.1	<0.084	<0.25	<u>17</u> 19	<0.75 <0.75	<0.25 <0.25	<0.75	<u>20</u> 22	14 11
B-FP06	2.0	02/04/03	<0.75	3.4	134	<0.23	0.69	<0.050	220	5.2	20	<u>1,260</u>	0.034	2.0	<u>368</u>	<0.75	<0.25	<0.75	19	<u>1,260</u>
B-FP06	5.0	02/05/03	<0.75	<u> </u>	49	0.23	<0.50	<0.050	49	11	7.8	4.0	<0.084	<0.25	<u>300</u> 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	<u>320</u> 39	<0.75	<0.25	<0.75	22	<u>94</u>
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	0.20	<0.50	<0.050	48	6.9	7.8	2.8	<0.084	<0.25	55	<0.75	<0.25	<0.75	31	23
Phase II	7.0	02/05/05	<0.75	<0.75	00	0.27	<0.50	<0.050	40	0.7	7.0	2.0	<0.004	<0.25	55	<0.75	<0.25	<0.75	51	
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	<u>9.0</u>	< 0.050	<u>1,800</u>	3.0	56	72	0.031	<0.83	<u>660</u>	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	<u>410</u>	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	<u>1,100</u>	< 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	<u>19</u>	<u>1,000</u>	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	<u>22</u>	<u>5,500</u> 32	5.2	170	3.2	0.088	1.9	<u>520</u>	<0.26	<0.26	<0.26	28	33
B-FP15 B-FP15	0.5 3.0	11/29/05 11/29/05	<2.9 <2.1	2.1 2.3	71 44	0.17	0.36	<0.050	<u>32</u> 140	3.5 3.2	5.5 16	2.6 2.3	<0.020 0.020	<0.98	<u>17</u> 22	<0.25	<0.25 <0.17	<0.25 0.22	23 23	18 16
B-FP15 B-FP16	0.5	11/29/05	<2.1	2.3	<u>44</u> 52	0.17	0.40	<0.050 0.060	140	3.2	4.9	2.3	0.020	<0.08	<u> </u>	<0.17	<0.17	<0.24	<u>23</u> 21	16
B-FP16	3.5	11/28/05	<2.9	3.7	43	0.15	0.45	0.000	77	<u> </u>	7.2	<u> </u>	<0.021	<0.96 1.6	36	<0.24	<0.24	<0.24	44	20
B-FP17	0.5	11/28/05	<2.0	<u> </u>	<u>43</u> 60	0.30	0.73	<0.050	39	3.1	7.2	2.7	<0.021	<0.93	20	<0.22	<0.22	<0.22	22	18
B-FP17	3.5	11/28/05	<2.9	2.1	29	0.10	0.33	<0.050	31	2.5	4.6	2.1	<0.020	1.3	16	<0.23	<0.23	0.25	22	10
וווע	5.5	11/20/03	N2.9	<i>2</i> .1	49	0.15	0.00	~0.050	51	4.3	U.F	<i>4</i> .1	N0.025	1.5	10	NU.24	<u><u></u>\0.24</u>	0.43	43	14

	Top of Sample																			
Sample	Interval																			
Location	(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	$s \leq 3$ 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	s >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 ESL	Ls ≤3 meters (9	0.8 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 ESL	Ls >3 meters (9	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						<u>30</u>												
Frog Pond Rem	oval																			
B-FP24	4.5	05/31/07	< 0.25	2.0	51	< 0.25	< 0.25	<u>33</u>	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	<u>67</u>	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	<u>10</u>	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	<u>580</u>	< 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	<u>1,400</u>	7.7	220	1.6	< 0.020	0.30	<u>1,800</u>	< 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	<u>3.9</u>	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	<u>92</u>	<u>1,400</u>	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	<u>310</u>	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	<u>19</u>	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	<u>460</u>	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	<u>5.3</u>	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	<u>11</u>	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	<u>21</u>	62	4.5	7.4	1.2	< 0.020	< 0.25	28	< 0.50	< 0.25	< 0.50	24	18

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, ($\leq 3 \text{ m bgs}$), 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.

¹⁴Results 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.

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						<u>31</u>	
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						<u>26</u>	
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				

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.

Sample Location	Top of Sample Interval (ft bgs)	Sample Date	Acetone	Carbon Disulfide	Methylene Chloride	cis-1,2-Dichloroethene	trans-1,2-Dichloroethen	1,1,1-Trichloroethane	Trichloroethene
Residential ESI	Ls ≤3 meters (9.	.8 feet) ¹	0.50	NE	7.2	6.5	10	7.8	1.9
Residential ESI	Ls >3 meters (9.	.8 feet) ²	0.50	NE	34	18	39	7.8	33
	SLs ≤3 meters (9		0.50	NE	17	18	34	7.8	4.1
	SLs >3 meters (9		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

Sample Location	Top of Sample Interval (ft bgs)	Sample Date	Acetone	Carbon Disulfide	Methylene Chloride	cis-1,2-Dichloroethene	trans-1,2-Dichloroethen	1,1,1-Trichloroethane	Trichloroethene
Residential ESI	Ls ≤3 meters (9.	.8 feet) 1	0.50	NE	7.2	6.5	10	7.8	1.9
Residential ESI	Ls > 3 meters (9.	.8 feet) 2	0.50	NE	34	18	39	7.8	33
Commercial ES	SLs ≤3 meters (9	9.8 feet) ¹	0.50	NE	17	18	34	7.8	4.1
Commercial ES	SLs >3 meters (9	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

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, (\leq 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.

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 ≤		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		00.00	0.05	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.07	0.05	0.07	0.07	0.07	0.05	0.05	0.07
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	<u>1.5</u>	<u>3.9</u>	<u>2.0</u>	3.4	0.85	2.2	<u>2.6</u>	3.0	0.091	<u>2.4</u>	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										1								
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

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, ($\leq 3 \text{ m bgs}$), 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.

Sample Location	Top of Sample Interval (feet bgs)	Sample Date	Total Cyanide (mg/kg)	pН
Residential ESLs ≤3	8 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	<u>11</u>	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

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, ($\leq 3 \text{ m bgs}$), 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/Commen	rcial 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.

 $\mu g/L = micrograms \ per \ liter$

<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/Com	mercial 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

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

TPH = total petroluem hydrocarbons

 $\mu g/L = micrograms \ per \ liter$

<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, ($\leq 3 \text{ m bgs}$),

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/Comm	nercial 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												1	
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/Comm	nercial 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

 $\mu g/L = microgram per liter$

<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, (\leq 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.

													Soil Gas	Soil Gas
													Residential ESL	Commercial/
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	1	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	<u>7,200</u>	320	420	<100	1,300	1,000	<u>23,000</u>	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

Soil gas samples collected on 29 November 2011.

 $\mu g/m^3 =$ 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

¹California Regional Water Quality Control Board, San Francisco Bay Region, 2008, Screening for Environmental Concerns at Sites with Contaminated Soil

	Sub-Slab Sample Results	Sub-Slab Sample Results	Estimated Indoor Air Concentration	Estimated Indoor Air Concentration	Residential Ambient	Commercial/ Industrial Ambient and
Analyte	Sub-slab-1a	Sub-slab-1b	Sub-Slab-1a ¹	Sub-Slab-1b ¹	and Indoor Air ESL ²	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

 $\mu g/m^3 = micrograms$ 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 ($\mu g/m^3$) 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:

 $\mu g/m^3 = micrograms$ 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

PLATING & CERTIFICATION TO MILITARY SPECIFICATION

NCIS

.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. Lewi

'85 - Seventh Street

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(415)444-5535

Oakland, CA 94607

HAZARDOL				
·	IDENTIFIC	ATION		
Trademark Bulfoc 528	}	Other Name	•	
Chemical Category	Alkaline			
Use Waste Treatm	ient Trac	le Secret: Yes []	No [X]	
Maximum Amount	200	Units	gal	
Manufacturer's Name, Ad Buckman Labs; Memphis,		none No. (901) 278-0330	•	
Buckman Labs; Memphis,				- :
· · · · · · · · · · · · · · · · · · ·				<u> </u>
Storage Types <u>E</u>	Floor <u>1</u> s _ Temperatur — INGREDIEN	re/Pressure Conditio	N/A ons1/4	- · · · ·
Chemical Name	_ Temperatur	re/Pressure Condition TS No. CAS No. [1)	DOT NO. Perce	 ent
	INGREDIEN	re/Pressure Condition	ons_1/4	ent
Chemical Name Sodium Diethyldithio Carbawate	INGREDIEN	re/Pressure Condition TS No. CAS No. [1)	DOT NO. Perce	ent -
Chemical Name	INGREDIEN	No. CAS No. [DOT NO. Perce	ent
Chemical Name Sodium Diethyldithio Carbawate	INGREDIEN	No. CAS No. [DOT NO. Perce	ent
Chemical Name Sodium Diethyldithio Carbawate	INGREDIEN	No. CAS No. [DOT NO. Perce	 ent
Chemical Name Sodium Diethyldithio Carbawate	INGREDIEN	No. CAS No. [DOT NO. Perce	
Chemical Name Sodium Diethyldithio Carbawate	INGREDIEN	No. CAS No. [DOT NO. Perce	 ent
Chemical Name Sodium Diethyldithio Carbamate	Temperatur — INGREDIEN CIN N (Table	No. CAS No. [DOT NO. Perce	

(H - 1)

HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION -

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4- <u>1</u>.

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

N

Location: Bldg _____ Floor ____st Room N/A

Storage Types____E Temperature/Pressure Conditions_1/4

Chemical NameCIN No.
(Table 1)CAS No. DOT No. PercentZinc Dihydrogen Phosphate13598-37-312Zinc Nitrate7779-88-612Phosphoric Acid7664-38-212Image: Constraint of the second sec

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HAZARDOUS MATERIAL INFORMATION

	IDENTIF	ICATIC	N		
Trademark <u>Sulfuric Ac</u>	ld	0t	her Name	-	
Chemical Category Acid			•		
Use Anodizing	Tr	ade Se	cret: Yes [] No [₂	(]
Maximum Amount	20	0.	Units	5 gal	
Manufacturer's Name, Addr Stauffer Chemical Co.; Wes	-			-6602	
•		:			
Location: Bidg yd	Floor	1 st	Room	N/A	
Storage Types <u>E</u>	Tempera INGREDI	ture/Pre ENTS -	essure Cond	itions <u>1</u>	/4
		·		· . ·	<u>∼</u> .
Chemical Name	CII (Tat	N NO. Die 1)	CAS No	. DOT N	o. Percent
Sulfuric Acid	705	•			98

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HAZARDOUS MATERIAL INFORMATION

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	IDE	NTIFICA	TION		
Trademark Hydrochlo	ric Acid		Other Name	Muriat	ic Acid
Chemical Category	Acid		•		
Use Metal Pie	ckel	Trade	Secret: Yes	[] No [x]
Maximum Amount		- · 100	· Unit	ts gai	1
Manufacturer's Name, Stauffer Chemical Co.				26-6602	
ocation: Bldg <u>ya</u> Storage Types <u>E</u>	Tem		/Pressure Con		1/4
Chemical Name		CIN No (Table 1)	. CAS N	IO. DOT N	No. Perce
Hydrochloric Acid	f .	, ³⁸¹			95
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HAZARDOUS MATERIAL INFORMATION

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	IDENT	TIFICAT	ION	
Trademark Propioni	ic Acid		Other Name	N/A
Chemical Category	Acid		•	
UseMetal Plating		Trade S	Secret: Yes[] No [x]
Maximum Amount	· · ·	50	Units	gal
Manufacturer's Name, A Union Carbide; Danbury,				
		,		· · · · · · · · · · · · · · · · · · ·
.ocation: Bldg va	Floor	1 e+	Poom	N / A
Storage Types <u>E</u>	_ Тетре	erature/	Pressure Condi	
	INGRE	DIENTS	<u> </u>	
	: '	•		
	•		•	
Chemical Name	•	CIN No. (Table 1)	CAS No.	DOT No. Perce
Chemical Name Propionic Acid		CIN No. (Table 1)	CAS No. 79-09-4	DOT No. Perce
· · · · ·		CIN NO. (Table 1)		· · · · · · · · · · · · · · · · · · ·
· · · · ·		CIN No. (Table 1)		· · · · · · · · · · · · · · · · · · ·
· · · · ·		CIN NO. (Table 1)		· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·		CIN NO. (Table 1)		· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·		CIN No. (Table 1)		· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·		CIN NO. (Table 1)		· · · · · · · · · · · · · · · · · · ·
Propionic Acid		CIN No. (Table 1)		· · · · · · · · · · · · · · · · · · ·
· · · · ·		CIN No. (Table 1)		· · · · · · · · · · · · · · · · · · ·

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HAZARDOUS MATERIAL INFORMATION

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	IDE	NTIFICAT	10N		
Trademark Everlube	· · · · · · · · · · · · · · · · · · ·		Other Name	Solid 1	Film Lubri
Chemical Category	Graphite	,	•	•	
Use Lubrication	·.	Trade	Secret: Yes	[] No	[X]
Maximum Amount	1()	Unit	Sg	a1
Manufacturer's Name, E/M Corp; West Lafa				511	
	-	•			
Location: Bldg <u>M</u> Storage TypesD	Floor	perature/	Roon Pressure Cond		≥ room 1/4
	INGF	REDIENTS			
Chemical Name	INGF	•	• •		No Derce
Chemical Name	INGF	CIN No.	CAS NO	D. DOT	No. Perce
Molybdenum Disulfide	INGF	CIN No.	CAS No 1317-33-5	DOT	5
	INGF	CIN No.	CAS NO	DOT	
Molybdenum Disulfide	INGF	CIN No.	CAS No 1317-33-5	DOT	5
Molybdenum Disulfide Graphite	INGF	CIN No.	CAS No 1317-33-5 7782-42-5	DOT	5
Molybdenum Disulfide Graphite Solvent		CIN No.	CAS No 1317-33-5 7782-42-5 108-88-3	DOT	5 2 20
Molybdenum Disulfide Graphite Solvent		CIN No.	CAS No 1317-33-5 7782-42-5 108-88-3	D. DOT	5 2 20
Molybdenum Disulfide Graphite Solvent		CIN No.	CAS No 1317-33-5 7782-42-5 108-88-3	DOT	5 2 20
Molybdenum Disulfide Graphite Solvent		CIN No.	CAS No 1317-33-5 7782-42-5 108-88-3	DOT	5 2 20

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HAZARDOUS MATERIAL INFORMATION

		IDE	NTIFICAT	10N		
Tradem	ark Braycot	ie 154		Other Name	011	
Chemica	al Category	Petrol	eum	• • • • • • • • • • • • • • • • • • • •		
Use	Corrosion Pr	cevention	Trade	Secret: Yes[] No [x	c]
Maximu	um Amount		50	Units	gal	
	Castrol Inc.				414	
·				<u>.</u>		
		—— INGI	REDIENTS			
Chemica	1 Name	• •	ÇIN No	CAS No	. DOT N	o. Pe
_	· · · ·	· ·	CIN NO (Table 1)	CAS No 8052-41-3	. DOT N	1
_	l Name d solvent		CIN No. (Table 1)		. DOT N	1
_	· · · ·		CIN No. (Table 1)		. DOT N	1
_	· · · ·		CIN No. (Table 1)		. DOT N	1
_	· · · ·		CIN No. (Table 1)		. DOT N	1
_	· · · ·		CIN No. (Table 1)		. DOT N	1
_	· · · ·		CIN No. (Table 1)		. DOT N	1
_	· · · ·		CIN No. (Table 1)		. DOT N	1
Stoddar	· · · ·		CIN No. (Table 1)		. DOT N	0. Pe

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HAZARDOUS MATERIAL INFORMATION

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		IDE	ENTIFICA	TION		<u>- · . · </u>	
Trademark	Coretch		<u> </u>	Other Na	ame	-	
Chemical Categ	jory _	Alkaline		· .			
Use Clear	ner	•	Trade	Secret:	Yes [] No [x]
Maximum Amou	unt		400		Units_	1b:	S
Manufacturer's Coral Chemica		-			531-6	363	
Location: Bldg Storage Types	M I	Floo _ Tei ING	nr <u>1 st</u> mperature, REDIENTS	/Pressure	Room_ Condit	N/A ions <u>1</u>	/4
Chemical Name			CIN NO (Table 1)	. CA	S No.	DOT N	o. Perce
Caustic Soda				1310-73	-2		90
	<i>.</i>						
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······································	IDENTIFICA	TION		
Trademark Aluminetch Li	Ē	Other Name	- Caustic	
Chemical Category Alka	line		<u> </u>	<u> </u>
Use Etch alum	Trade	Secret: Yes[]	No [X]	
Maximum Amount	400	Units	lbs	-
Manufacturer's Name, Addr				
Chemco Products Co. Rancho	Dominguez	JA 90221 (213) 5	37-5530	- ·
Storage Types	Floor <u>1 st</u> Temperature INGREDIENT	Room N e/Pressure Condition S		_
Storage Types <u>I</u>	Temperature	o. CAS No. [DOT No. Perce	- - nt]
Storage Types	Temperature INGREDIENT	e/Pressure Condition	ons <u>1/4</u>	 nt]
Storage Types <u>I</u> Chemical Name Sodium Hydroxide	Temperature INGREDIENT	e/Pressure Condition S O. CAS No. [1310732	DOT No. Perce	 nt
Storage Types <u>I</u> Chemical Name Sodium Hydroxide	Temperature INGREDIENT	e/Pressure Condition S O. CAS No. [1310732	DOT No. Perce	nt
Storage Types Chemical Name Sodium Hydroxide Alkaline	Temperature INGREDIENT	e/Pressure Condition S O. CAS No. [1310732	DOT No. Perce	 nt
Storage Types Chemical Name Sodium Hydroxide Alkaline	Temperature INGREDIENT CIN N (Table 1	e/Pressure Condition S O. CAS No. [1310732	DOT No. Perce	nt
Storage Types Chemical Name Sodium Hydroxide Alkaline	Temperature INGREDIENT CIN N (Table 1	e/Pressure Condition S O. CAS No. [1310732	DOT No. Perce	 nt
Storage Types Chemical Name Sodium Hydroxide Alkaline	Temperature INGREDIENT CIN N (Table 1	e/Pressure Condition S O. CAS No. [1310732	DOT No. Perce	nt

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	IDENTIF	ICATION	
Trademark <u>Aceton</u>	e	Other Name	- N/A
Chemical Category	Ketones	•	·····
Use Solvent	Tr	ade Secret: Yes [] No [x]
Maximum Amount	55	Units	gal
Manufacturer's Name			ia; 1342 North Mea
Schaumburg, I1 ;	(312) 885-5450		
.ocation: Bidg M	Floor	1 st Room	N/A
Storage Types	Tempera INGREDI	ture/Pressure Cond	itions <u>1/4</u>
Chemical Name		N NO. CAS NO	. DOT No. Percen
Chemical Name Dimethyl Ketone	ÇII	N NO. CAS NO	. DOT No. Percen
······	ÇII	N NO. CAS NO	
······	ÇII	N NO. CAS NO	
	ÇII	N NO. CAS NO	
	ÇII	N NO. CAS NO	
	ÇII	N NO. CAS NO	
	ÇII	N NO. CAS NO	

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HAZARDOUS MATERIAL INFORMATION

<u></u>	- IDENTIFIC	CATION	
Trademark Alodine		Other Name	version Coating
Chemical Category Chr	comic-acid Mi	xture	
Use Protect_alum	Tra	de Secret: Yes []	No [x]
Maximum Amount	100	Units	lbs
Manufacturer's Name, Ad Amchem, Ambler, PA 19002			
Location: Bldg <u>M</u> Storage Types E	Temperatu - INGREDIEN CIN	NO. CAS NO. D	
Chromic Acid	(Table	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
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HAZARDOUS MATERIAL INFORMATION

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	- IDEN	TIFICA		·	
Trademark Chromium Tri	oxide		Other Name	•	
Chemical Category Meta	l Oxide		· .		
Use <u>chrome</u> Plating	•	Trade	Secret: Yes [] No [x]
Maximum Amount		00	Units	5 lbs	
Manufacturer's Name, Add American Chrome & Chemic				59 (512)	883-642
	_				
	Floor Temp INGRE		Room Pressure Cond		
Chemical Name	,	CIN No (Table 1)	. CAS No	DOT NO). Perce
Chromium Trioxide			1333-82-0		100
<u>م</u>					•
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	<u> </u>				. <u></u>
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HAZARD	DUS MATER	IAL INFO	RMAT	ION	
	IDENTIF	ICATION -			
Trademark Cadmiu	m Cyanide	Other	Name _	N/A	
Chemical Category	Alkaline M	etal Cyanid	e		
Use <u>Cadmium</u> P	lating T	rade Secret	Yes[] No [2	K]
Maximum Amount	100		Units	lbs	
Manufacturer's Name, Du Pont Wilmington DE					
Location: Bldg <u>M</u> Storage Types <u>D</u>	Floor Tempera INGREDI	ture/Pressu	Room re Cond		1/4
Chemical Name	C (Tr	IN NO. (able 1)	CAS No	. DOT N	lo. Percent
Cadmium Cyanide	_ 1	53	·····		100
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HAZARDOUS MATERIAL INFORMATION

	IDE	NTIFICAT	ION		
Trademark <u>Sodium</u>	Cyanide	(Other Name	N/A	
Chemical Category	Alkaline	metal cya	nide		
Use <u>Cadmium Plati</u>	ing .	_ Trade S	Secret: Yes [] No [^X]
Maximum Amount		100	Units	lbs	
Manufacturer's Name, Du Pont/Wilmington, DI	Address, 19898	and Phone (800), 441	e No. 9442		
ocation: Bidg <u>M</u> Storage Types <u>D</u>	Ter		Room Pressure Condi	itions 1/	4
			· ·	-	
Chemical Name	:	CIN No.	CAS No.	. DOT N	o. Perce
		CIN No. (Table 1)		, DOT N	1
			CAS No. 143-33-9	, DOT N	1
				, DOT N	0. Perce
				, DOT N	1
				, DOT N	1
				, DOT N	1
				, DOT N	1
				, DOT N	1
Sodium Cyanide				, DOT N	1
Chemical Name Sodium Cyanide				, DOT N	1

HAZARDOUS MATERIAL INFORMATION

	10	ENTIFICAT	TION			
Trademark <u>g</u>	ronodine 112		Other N	ame	- Manganese	<u>e Phosph</u> ate
Chemical Categ	ory <u>Corr</u>	osive and	metal			
USE Manganese P	hosphate Plati	.ng Trade	Secret:	Yes [] No [x]	
Maximum Amou	unt	30		Units_	gal	
Manufacturer's	Name, Addres	s, and Pho	ne No.			
Amchem Product	s 300 Brookaid	e ave Ambl	er, PA	19002	(215) 628	3-1364
·						
Location: Bldg	M Flo)0r <u>1</u> s	t	Room_	N/A	-
Storage Types		Temperature IGREDIENT		e Condi	tions <u>1/4</u>	<u>+</u>
•	· .	, .			·	

Chemical Name	CIN NO. (Table 1)	CAS No.	DOT No. P	ercent
Phosphoric Acid		7664-38-2		8
Nitric Acid		7697-37-2		2
Manganese Dihydrogen		18718-07-5	2(<u>></u>
Phosphate				

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HAZARDOUS MATERIAL INFORMATION

		IDENTIFICATION
Trademark	Hydro	xyacetic Acid Other Name
Chemical Cat	egory	Organic Acid
Use Nickel	Plating	Trade Secret: Yes [] No [x]
Maximum Am	ount	50 Units gal
Manufacturer E. I. Du Pont (302) 774-242	de Nemou	, Address, and Phone No. urs & Co. Wilmington, De 19898
Location: Bldg Storage Types	<u></u> 	Floor <u>1</u> st Room <u>N/A</u> Temperature/Pressure Conditions <u>1/4</u> INGREDIENTS

	(Table 1)			
Hydroxy Acetic Acid		79-14-1		70
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HAZARDOUS MATERIAL INFORMATION

IDE		ION		
Trademark Nitric Acid	. (Other Name	• 	
Chemical Category Inorganic	Acid		-	
Use Strip Parts	Trade S	Secret: Yes [] No [_X]	
Maximum Amount 50	0	. Units	gal	
Manufacturer's Name, Address E. I. Du Pont de Nemours & Co.			19898	
(302) 774-2421				
Location: Bldg M Floo Storage Types D Te INC		Pressure Cond		
Chemical Name	CIN NO. (Table 1)	CAS NO	DOT NO). Percer
Nitric Acid		7967-37-2		96
		·		
				•

HAZARDOUS MATERIAL INFORMATION

	IDENTIFICATION	<u></u>	
Trademark <u>Calciu</u>	m HydroxideOth	er Name	-
Chemical Category	Alaline Earth Hydroxide	<u> </u>	
USe Waste Treatment	·Trade Seci	ret: Yes []	No [X]
Maximum Amount	4000	Units	lbs
Manufacturer's Name, Chemstar Inc. P.O.Box	Address, and Phone N 127; Henderson, NV 8901		~
(702) 565-8995			
Location: Bldg M	Floor 1 st	Room	I/A
Storage TypesJ	Temperature/Pres	ssure Conditi	ions_1/4
		•	
Chemical Name	CIN NO. (Table 1)	CAS No.	DOT No. Percent
			05

Calcium Hydroxide		1305-62-0	 95
Calcium Hydroxide		1317-65-3	5
Magnesium Hydroxide		1309-42-8	 5
Silicon Dioxide		14808-60-7	1
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#### HAZARDOUS MATERIAL INFORMATION

	IDEN	TIFICAT	ION		
Trademark Metex M-	629		Other Name	N/A	
Chemical Category	Acid Salts	ı	• •	<u> </u>	
Use Activator	•	Trade S	Secret: Yes[	] No [x	]
Maximum Amount		400	Units	<u> 1bs</u>	
Manufacturer's Name, MacDermid Incorporated				06720	
(313 644-5626					
Storage Types <u>I</u>		perature/ REDIENTS			/4 lo. Percer
		(Table 1)	7(01.00.1		90
Sodium Bisulfate		! ;	<u>7681-38-1</u> 7681-49-4		10
Inorganic Flourides	<u> </u>	·	7001 47 4		10
		/   .			
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<u></u>			•		1
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#### HAZARDOUS MATERIAL INFORMATION

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	IDENTIFICATION
	- -
Trademark Soda Ash	Other Name Sodium Carbonate
Chemical Category Alkali	ne
Use <u>Waste Treatment</u>	Trade Secret: Yes [ ] No [X]
Maximum Amount	1000 Units 1bs
Manufacturer's Name, Addr	ess, and Phone No.
Stauffer Chemical Co. Bas	ic Chemical Division, Westport CT 06881
(205) 226-6602	
ocation: Bldg M	Floor 1.st Room N/A
Storage Types	Temperature/Pressure Conditions 1/4
· · · · · ·	
Chemical Name	CIN No. CAS No. DOT No. Percen
······································	

		r	1	r
Sodium Carbonate		497-19-8	·	100
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# HAZARDOUS MATERIAL INFORMATION

	IDEN	NTIFICATI	ON		
Trademark MIBK		(	)ther Name_ <u>Me</u>	thyl Isobu	<u>utyl Ke</u> tc
Chemical Category	Ketone				
USE Solvent		·Trade S	ecret: Yes [ ]	No [ _X ]	
Maximum Amount		50	Units	ga	1
Manufacturer's Name, A Union Carbide Corp/Solve	Address, ents & In	and Phon	e NO. es division Old	Ridgebur	y Rd,
DanBury, CT 06817 /(304)					
Location: Bldg M	Floo	r <u>lst</u>	Room <u>N</u>	/A	
Location: Bldg <u>M</u> Storage Types <u>D</u>	Ten INGI	nperature/ REDIENTS	Pressure Condit	ions <u>1/4</u>	<u></u>
Chemical Name		CIN NO. (Table 1)	CAS No.	DOT No.	Percent
Methyl IsoButyl Ketone					·
			108-10-1	1	00
	•		108-10-1	1	00
			108-10-1	1	00
			108-10-1	1	00
			108-10-1	1	00
			108-10-1		00
			108-10-1		00
			108-10-1		00
			108-10-1		00

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## HAZARDOUS MATERIAL INFORMATION

	- IDENTIFICATION
······································	-
Trademark Carbonate of	Other Name Potassium Carbonat
Chemical Category Alk	line
Use Nickel Plating	Trade Secret: Yes [ ] No [x]
Maximum Amount	2000 Units 1bs
Manufacturer's Name, Ac Chemicals & Plastics ; R	dress, and Phone No. ritan Plaza II; Edison, NJ 08837
(315) 487-4700	
Location: Bldg	Floor 1 st Room N/A
	Temperature/Pressure Conditions_1/4
Chemical Name	CIN NO. CAS NO. DOT NO. PERCE
Postassium Carbonate	. 584087 91

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IDEN	NTIFICAT	10N	·····	
Trademark Nickel Sulfate Cryst	al	Other Name	Nickel :	Sulfate Her
Chemical Category Metallic Sal	ts			
Use Nickel Plating		Secret: Yes	] No [x]	]
Maximum Amount	1000	Unit	5 <u>1bs</u>	<u>.</u>
Manufacturer's Name, Address, Harshaw/Filtrol Partnership ; 30			eveland, (	)H 44124
(216) 292-9200	· · · · · · · · · · · · · · · · · · ·			
	perature/ REDIENTS	Pressure Con	l N/A N/A	<u>'4</u>
		,		
Chemical Name	CIN No (Table 1)	CAS N	0. DOT N	o. Percent
	CIN No	CAS N	0. DOT N	0. Percent
Chemical Name	CIN No	CAS N	0. DOT N	
Chemical Name	CIN No	CAS N	o. DOT N	
Chemical Name	CIN No	CAS N	0. DOT N	
Chemical Name	CIN No	CAS N	o. DOT N	
Chemical Name	CIN No	CAS N	o. DOT N	
Chemical Name	CIN No	CAS N	o. DOT N	
Chemical Name	CIN No	CAS N	o. DOT N	
Chemical Name	CIN No	CAS N	0. DOT N	

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## HAZARDOUS MATERIAL INFORMATION

-		IDENTIFICA	TION	· · · · · · · · · · · · · · · · · · ·
	Trademark Sodium Acid Sulf	ite	Other Name <u>sodium</u>	MetaBisulfit
	Chemical Category Alkalin	۴. e	· · · · · · · · · · · · · · · · · · ·	
•	Use Waste Treatment	Trade	e Secret: Yes [ ] N	o [x].
	Maximum Amount	2000	Units 1b	s 🔨
	Manufacturer's Name, Addr			•
	Great Western Chemical ;	860 Wharf St	; Richmond, CA 948	04
	(415) 235-4810			
ł	_ocation: BldgM	Floor Is	tRoom_ _{N/A}	
_	Storage Types	Temperatur INGREDIEN	e/Pressure Condition	s_1/4
•	Chemical Name	CIN N (Table		T No. Percer
Γ	Sodium MetaBisulfite		7681-57-4	100
Γ				
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T	· · _ · · · · · · · · · · · · · · ·			
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	IDENTIFI			
Trademark _{Sodium Hyp}	pophosphite	Other Name		
Chemical Category so	odium Hypophos	phite Monohydra	te	
Use Metal Plating	Tra	de Secret: Yes	[ ] No [	x]
Maximum Amount	4000	Unit	s ^{1b}	S
Manufacturer's Name, A Atochem ; 266 Harristow			ck, New J	ersey
(209) 652-8575				
Storage TypesI	. Temperatu	re/Pressure Cond		11.
Chemical Name	- INGREDIEN CIN (Table	No. CAS N	0. DOT N	~ .
Chemical Name Sodium Hypophosphite	- INGREDIEN	No. CAS N		~ .
<b></b>	- INGREDIEN	NO. CAS NO		lo. Perce
Sodium Hypophosphite	- INGREDIEN	NO. CAS NO		lo. Perce
Sodium Hypophosphite	- INGREDIEN	NO. CAS NO		lo. Perce
Sodium Hypophosphite	- INGREDIEN	NO. CAS NO		lo. Perce
Sodium Hypophosphite	- INGREDIEN	NO. CAS NO		lo. Perce
Sodium Hypophosphite	- INGREDIEN	NO. CAS NO		lo. Perce
Sodium Hypophosphite Monohydrate	- INGREDIEN	NO. CAS NO		lo. Perce
Sodium Hypophosphite	- INGREDIEN	NO. CAS NO		lo. Perci

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#### HAZARDOUS MATERIAL INFORMATION IDENTIFICATION . Trademark _{Toluene} Other Name Methyl Benzene Chemical Category Aromatic Hydrocarbons Use Trade Secret: Yes [ ] No [X] solvent Maximum Amount 50 gal Units Manufacturer's Name, Address, and Phone No. Ashland Chemicals co.; P.O. Box 2219; Columbus, Ohio 43216 (514) 880-3333 Room N/A Location: Bldg M ·Floor 1 st Storage Types____ D Temperature/Pressure Conditions 1/4 INGREDIENTS -Chemical Name CIN NO. (Table 1) CAS No. DOT No. Percent Toluene 100 108-88-3 9

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	. IDENTIF	ICATION		
Trademark FCC C	lean-up 101	Other Nam	e ^{Solv}	ent
Chemical Category	Petroleum	•		
Use Degrease	Tr	ade Secret: Ye	s[]No	[X]
Maximum Amount	50	Un	its	gal
Manufacturer's Name Fluid Tech; 1127 57			15) 797-6	751
		· · · · · · · · · · · · · · · · · · ·		
ocation: Bldg <u>M</u>		st Roc		
	•	NTS		
Chemical Name	INGREDIE	NTS CAS		
	INGREDIE	NTS		
Chemical Name	INGREDIE	NTS		No. Percer
Chemical Name Methylene Chloride	INGREDIE	NTS	No. DOT	No. Percer
Chemical Name Methylene Chloride Xylene	INGREDIE	NTS	No. DOT	No. Percer
Chemical Name Methylene Chloride Xylene Kerosine	CIN (Tab	NTS	No. DOT	No. Percer 3 6 85
Chemical Name Methylene Chloride Xylene Kerösine Detergent	CIN (Tab	NTS	No. DOT	No. Percer 3 6 85 N/A
Chemical Name Methylene Chloride Xylene Kerosine Detergent CO-630	CIN (Tab	NTS	No. DOT	No. Percer 3 6 85 N/A 3
Chemical Name Methylene Chloride Xylene Kerosine Detergent CO-630	CIN (Tab	NTS	No. DOT	No. Percer 3 6 85 N/A 3

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# HAZARDOUS MATERIAL INFORMATION

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IDE	ENTIFICATION
Trademark NSA Cleaner	Other Name Sodium Nitrate
Chemical Category Alkaline	•
Use <u>Cleaner</u> (steel)	Trade Secret: Yes [ ] No [X]
Maximum Amount	400 Units 1bs
Manufacturer's Name, Address, <u>Chemco Products</u> Co. ; Rancho Dor	
(213) 537-5530	·
Storage Types <u> </u>	mperature/Pressure Conditions1/4 GREDIENTS
Chemical Name	CIN No. CAS No. DOT No. Percen
Borates, Tetra, sodium salts- decahydrate	1303964
Borates, Tetra, sodium Salts-penrahydrate	1303964
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#### HAZARDOUS MATERIAL INFORMATION

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	IDENTIFICATION
Trademark Acetylene	Other Name Ethyne
Chemical Category Alky	nes
Use Welding	Trade Secret: Yes [ ] No [x]
Maximum 'Amount	600 Units Cu ft
Manufacturer's Name, Ad Pacific Oxygen, Oakland	
(415) 444-8081	
	- INGREDIENTS
Chemical Name	CIN NO. CAS NO. DOT NO PER
Chemical Name Acetylene, Ethyne	
Chemical Name Acetylene, Ethyne	CIN NO. CAS NO. DOT NO. Per
	CIN NO. CAS NO. DOT NO. Per
	CIN NO. CAS NO. DOT NO. Per
	CIN NO. CAS NO. DOT NO. Per
	CIN NO. CAS NO. DOT NO. Per
	CIN NO. CAS NO. DOT NO. Per
	CIN NO. CAS NO. DOT NO. Per
Acetylene, Ethyne	CIN NO. CAS NO. DOT NO. Per

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# HAZARDOUS MATERIAL INFORMATION

<u>.</u>	IDENTIFICATION
Trademark	Other Name N/A
Chemical Category	Oxidizer
UseWelding	Trade Secret: Yes [ ] No [X]
Maximum Amount	1500 Units Cuft
	ne, Address, and Phone No. Mkland, Ca 94607 (415) 444-8081
Storage Types <u>L</u>	I Floor 1 st Room N/A Temperature/Pressure Conditions 1/4 INGREDIENTS
Chemical Name	CIN NO. CAS NO. DOT NO. Percent
Oxygen	1072 100

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#### HAZARDOUS WASTE INFORMATION

		astewater	ecret: Y	'es[]No	[x]
Location: Bidg <u>Main</u>	Floor	<u>1 st</u> R		N/A	
Amount Generated / Year	24.5	U	inits	tons	
	F006 emperatur GREDIENT	e/Pressure Cor		<b>2)</b> 926 1/4	
Chemical Name	CIN, No (Table 1)	CAS No	DOT I	1	ent
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	
			· · · · ·		

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#### 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

#### HAZARDOUS MATERIAL BUSINESS PLAN

c .

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

C. OWNER

.Wallace M. Francis

E. ADDRESS OF FACILITY

Same as above

9

G. EMERGENCY CONTACT PERSON

Name & Title

 Primary
 Wallace M. Francis

 President
 President

 Alternate
 Randall E. Lewis

 General Manager
 General Manager

B. BUSINESS PHONE

415 444-5535

D. SIC CODE

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. 3470

F. NATURE OF BUSINESS

Metal Finishing

H. 24-Hour Phone Numbers Business Non-Business

444-5535 254-0664

444-5535 ___

685-8884

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# HAZARDOUS MATERIAL INFORMATION

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<u></u>	IDEN	TIFICA	TION		
Trademark Bulfoc	528		Other Name	-	
Chemical Category	Alkaline	1	-	<del></del>	· · · · · · · · · · · · · · · · · · ·
Use Waste Trea	itment	Trade	Secret: Yes	5[]No[ ³	<]
Maximum Amount		200	. Uni	-	•
Manufacturer's Name, Buckman Labs; Memphis	Address, a , TN 3810	and Phor 8; (9	ne No. 01) 278-0330	)	
		······································	·		<u> </u>
Location: Bldg <u>M</u> Storage Types _E			Roo Pressure Cor		· .
	INGR	EDIENTS			
Chemical Name		CIN NO. (Table 1)	CAS N	IO. DOT N	o. Percent
Sodium Diethyldithio Carbamate			128-04-1		38
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# HAZARDOUS MATERIAL INFORMATION

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I	DENTIFICATIO	DN		
Trademark Gronodine		ther Name	- Zínc Pho	sphate
Chemical Category Corrosi				
Use Zinc Phosphate	Trade Se	ecret: Yes [	] No [x]	
Maximum Amount	30	Units	ga1	
Manufacturer's Name, Addres Amchem; Ambles, PA 19002;				
	-	- <u></u>	·~	
	oor <u>1 st</u> Temperature/Pr IGREDIENTS	Room ressure Condi	N/A tions_ ^{1/4}	
Chemical Name	CIN NO. (Table 1)	CAS No.	DOT No	. Percen
Zinc Dihydrogen Phosphate		13598-37-3		12
Zinc Nitrate		7779-88-6		12
Phosphoric Acid		7664-38-2		12
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#### HAZARDOUS MATERIAL INFORMATION

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		NTIFICA	TION -		
Trademark <u>Sulf</u> u	uric Acid		Other Nam	e	
Chemical Category	Acid				
Use Anodizing	•	Trade	Secret: Ye	s[]No	[x]
Maximum Amount		200 [·]	Un	its g	al
Manufacturer's Nam 				26-6602	
	<u> </u>				
		REDIENTS			·~ .
Chemical Name	•	CIN No	CAS	No. DOT	No. Pe
		CIN NO (Table 1)	CAS	No. DOT	
Chemical Name Sulfuric Acid		CIN NO (Table 1) 705	CAS	No. DOT	No. Pe
			CAS	No. DOT	
			CAS	No. DOT	
			CAS	No. DOT	
			CAS	No. DOT	
			CAS	No. DOT	
			CAS	No. DOT	98
Sulfuric Acid			CAS	No. DOT	

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#### HAZARDOUS MATERIAL INFORMATION

	DENTIFICATIO	DN	
Trademark Hydrochloric Act	.a 0	ther Name 🛛	luriatic Acid
Chemical Category Acid	1		
Use Metal Pickel	Trade Se	ecret: Yes [ ]	No [x ]
Maximum Amount	100	· Units	gal
Manufacturer's Name, Addres Stauffer Chemical Co. Westr			602
		······	
Location: Bldg yd - Fl	oor 1 st.	Room	N/A
Storage TypesE	Temperature/Pr	essure Conditi	ions1/4
П	NGREDIENTS		
Chemical Name	CIN No. (Table 1)	CAS No.	DOT No. Percen
Hydrochloric Acid	381		95
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# ... HAZARDOUS MATERIAL INFORMATION

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Trademark Propi	onic Acid		Other Name	N/A
Chemical Category	Acid			
Use <u>Metal Plat</u>	ing .	Trade	Secret: Yes [	] No [x ]
Maximum Amount	· .	50	Units	gal
Manufacturer's Name Union Carbide; Danbu		· •.	ne No. 744–3487	
_ocation: Bldgyd Storage TypesE	<b></b> ·		Room Pressure Condi	
	INGF	REDIENTS	;	
Chemical Name		CIN NO. (Table 1)	CAS No.	DOT No. Percer
Propionic Acid			79-09-4	100
· · · · · · · · · · · · · · · · · · ·		. •		
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# HAZARDOUS MATERIAL INFORMATION

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IDENTIFICA	TION	·····
	Other Name	Solid Film Lubrican
Graphite	- · ·	
Trade	Secret: Yes [	] No [X]
10	Units	5 gal
elle, 11 47900;		
Temperature	/Pressure Cond	itions 1/4
		• •
CIN No. (Table 1)	). CAS No	DOT NO. Percent
	1317-33-5	5
	7782-42-5	2
· ·	108-88-3	20
	64-17-5	50
	Graphite Trade 10 Address, and Pho ette, In 47906; Floor 1 st 	Graphite Trade Secret: Yes [ 10 Units Address, and Phone No. Pette, In 47906; (317) 463-25 Floor 1 st Room Temperature/Pressure Cond INGREDIENTS CIN No. CAS No. (Table 1) 1317-33-5 7782-42-5 108-88-3

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#### HAZARDOUS MATERIAL INFORMATION

	- IDENTIFICAT	ION	<u> </u>
Trademark Braycote 154	41	Other Name 011	
Chemical Category	Petroleum	· ·	
Use <u>Corrosion</u> Prevent	ion Trade S	Secret: Yes[] M	10 [ x]
Maximum Amount	50	Units	gal
Manufacturer's Name, Add Brumah-Castrol Inc. ; In			
	Floor <u>1 st</u> Temperature/F INGREDIENTS	Pressure Condition	
Chemical Name	CIN No. (Table 1)	CAS No. DO	DT No. Percer
Stoddard solvent		8052-41-3	75
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	· · ·		
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# HAZARDOUS MATERIAL INFORMATION

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	IDENTIFICATIO	ON	
Trademark Coretch	0	ther Name	
Chemical Category	Alkaline	· .	
Use Cleaner	Trade Se	ecret: Yes[]N	o [x ]
Maximum Amount	400	Units	lbs
Manufacturer's Name, Coral Chemical Co.			
·			
ocation: Bldg <u>M</u> torage Types I	Floor <u>1 st</u> Temperature/P INGREDIENTS	Room N ressure Conditions	
Chemical Name	CIN NO. (Table 1)	CAS NO. DO	T No. Perce
Caustic Soda		1310-73-2	90
5			
	1 1	· · ·	

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#### HAZARDOUS MATERIAL INFORMATION

	IDENTIFIC	ATION		
Trademark <u>Alumin</u>	etch Lf	Other Name	- Caust	ic
Chemical Category	Alkaline	•		<u> </u>
Use Etch alum	Trad	e Secret: Yes	[ ] No [ ]	x]
Maximum Amount	400	Unit	S1bs	
Manufacturer's Name Chemco Products Co.	· · · ·		2) 527_55	30
	Kalleno Dominguez			
Location: Bldg <u>M</u>	Floor <u>1 st</u>		N/A	
Storage Types <u> </u>	Temperatur INGREDIEN	e/Pressure Cond FS	ditions	L/4
Chemical Name	CIN N (Table	lo. CAS N	O. DOT N	o. Percer
Sodium Hydroxide		1310732		85
Alkaline		N/C		15
· · · · · · · · · · · · · · · · · · ·			1	1
			1	
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#### HAZARDOUS MATERIAL INFORMATION

Trademark <u>Acetone</u> Other Name <u>N/A</u> Chemical Category _{Ketones}	
Chemical Category Katanag	
Chemical Lategory Ketones	
Use <u>Solvent</u> Trade Secret: Yes [ ] No [x ]	
Maximum Amount55 Unitsgal	
Manufacturer's Name, Address, and Phone No. Union Chemicals division, Union Oil Corp. of California; 1342 Nor	th_Meach
Schaumburg, I1 ; (312) 885-5450	<del></del>
Chemical Name CIN No. CAS No. DOT No. F	Percent
(Table 1)	
Dimethyl Ketone 67-64-1 10	00

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#### HAZARDOUS MATERIAL INFORMATION

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	- IDENTIFI	CATION	
Trademark Alodine	· · · ·	Other Name	version Coatin
Chemical Category Chr	omic-acid M:	ixture .	
Use Protect alum	Tra	de Secret: Yes[]	No [ x]
Maximum Amount	100	Units	lbs
Manufacturer's Name, Add Amchem, Ambler, PA 19002	•		
Storage Types <u>E</u>	- INGREDIE	NO. CAS NO. D	05 <u>1/4</u>
Chromic Acid	(Tabl	e 1) 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
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	·   · .		12
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#### HAZARDOUS MATERIAL INFORMATION

		IDE	ENTIFICA	TION		
	Trademark Chromi	um Trioxide		Other Name	-	
	Chemical Category	Metal Oxi	de			
	Use Plat	ing	Trade	Secret: Yes [	] No [ x]	_
	Maximum Amount		500	Units	lbs	
	Manufacturer's Nam				9 (512) 883-642	21
	Location: Bidg <u>M</u> Storage TypesD	Floo		Room Pressure Condi	N/A	
-		ING	REDIENTS	5		
F	Chemical Name		CIN No (Table 1)	CAS No.	DOT No. Perc	ce
	Chromium Trioxide			1333-82-0	100	
					1	
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#### HAZARDOUS MATERIAL INFORMATION

	- IDENTIFICAT			
Trademark Cadmium Cya	nide	Other Name	N/A	
Chemical Category	lkaline Metal	Cyanide		
Use <u>Cadmium Platir</u>	g Trade	Secret: Yes [	] No [ x]	
Maximum Amount	100	Units	lbs	
Manufacturer's Name, Add Du Pont Wilmington DE 198				
	Floor 1	Room		
Storage TypesD	Temperature/ INGREDIENTS	Pressure Cond	itions_1/4	<u> </u>
		• •		
Chemical Name	CIN NO. (Table 1)	CAS No	. DOT NO. PO	ercen
Cadmium Cyanide	. 153		100	
			~	
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\$				<u> </u>
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# HAZARDOUS MATERIAL INFORMATION

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TrademarkSodium CyanideChemical CategoryAlkalineUseCadmium PlatingMaximum AmountManufacturer's Name, Address, Du Pont/Wilmington, DE 19898	metal cya Trade S 100 and Phon	Secret:		N/A ] No[ ³ 1bs	]
Use Cadmium Plating Maximum Amount Manufacturer's Name, Address,	Trade S 100 and Phon	Secret:			]
Maximum Amount Manufacturer's Name, Address,	100 and Phon	e No.			<b>)</b>
Manufacturer's Name, Address,	and Phon	e No.	Units_	1bs	
ocation: Bldg <u>M</u> Floor			Room		
Storage Types <u>    D                                </u>	perature/ REDIENTS	Pressure 	Condit	ions	4 
Chemical Name	CIN NO. (Table 1)	CA	S No.	DOT N	o. Perce
Sodium Cyanide		143-3	3-9		100
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		<u> </u>			
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#### _ HAZARDOUS MATERIAL INFORMATION

IDENTIFICATION
Trademark <u>Gronodine 112</u> Other Name <u>Manganese Phosph</u> ate
Chemical Category Corrosive and metal
Use Manganese Phosphate Plating Trade Secret: Yes [ ] No [x]
Maximum Amount Units Units
Manufacturer's Name, Address, and Phone No. Amchem Products 300 Brookaide ave Ambler, PA 19002 (215) 628-1364
ocation: Bldg <u>M</u> Floor <u>1 st</u> Room <u>N/A</u>
Storage Types       E       Temperature/Pressure Conditions       1/4         INGREDIENTS       INGREDIENTS

Chemical Name CIN No. CAS No. DOT No. Percent

7664-38-2	8
7697-37-2	2
18718-07-5	20
	-
	7697-37-2

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#### HAZARDOUS MATERIAL INFORMATION

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		IDENTIFICAT	10N	
Trademark	Hydro	xyacetic Acid	Other Name	
Chemical Cate	gory	Organic Acid		
Use Nickel P	lating	Trade	Secret: Yes [ ]	No [x]
Maximum Amo	ount	50	Units	gal
	<u> </u>	urs & Co.,Wilming		
	1			
(302) 774-242	· · ·		· · ·	·
(302) 774-242 Location: Bldg	т М	Floor _1 st	Room	N/A
		· · ·	/Pressure Conditio	

Chemical Name CIN No. CAS No. DOT No. Percent

Hydroxy Acetic Acid	<u>;                                    </u>		79-14-1		70
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# HAZARDOUS MATERIAL INFORMATION

· · · · · · · · · · · · · · · · · · ·	IDENTIFICAT	ION		
Trademark Nitric Acid		Other Name	-	
Chemical Category Inorga	nic Acid		<u>.</u>	
Use Strip Parts	Trade S	Secret: Yes[	] No [ _X ]	
Maximum Amount	50	Units	gal	
Manufacturer's Name, Addr E. I. Du Pont de Nemours &			19898	·
(302) 774-2421				
Storage TypesD	Floor <u>1</u> st Temperature/ INGREDIENTS	Pressure Cond		_ 
Chemical Name	CIN NO (Table 1)	CAS No	. DOT No	. Percer
Nitric Acid		7967-37-2		96
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# HAZARDOUS MATERIAL INFORMATION

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II	DENTIFICATION
Trademark <u>Calcium Hydros</u>	xide Other Name Lime
Chemical Category Alaline	Earth Hydroxide
Use Waste Treatment	• Trade Secret: Yes [ ] No [ x]
Maximum Amount 4000	Units _{1bs}
Manufacturer's Name, Addres Chemstar Inc. P.O.Box 127; Hen	
(702) 565-8995	
~ <u></u>	loor <u>1 st</u> Room <u>N/A</u>
	Temperature/Pressure Conditions 1/4 NGREDIENTS

Chemical NameCIN No.<br/>(Table 1)CAS No.DOT No.PercentCalcium Hydroxide1305-62-095

Calcium Hydroxide		1305-62-0	95
Calcium Hydroxide		1317-65-3	.5
Magnesium Hydroxide	<u></u>	1309-42-8	5
Silicon Dioxide		14808-60-7	1
			<u>.</u>
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#### HAZARDOUS MATERIAL INFORMATION

	IDENTIFICATION -	. i 
Trademark Metex M-	01	Name N/A
Chemical Category	Acid Salts	<u>~ .</u>
Use Activator	Trade Secre	t: Yes [ ] No [x ]
Maximum Amount	400	_ Units
	Address, and Phone No. ; 526 Hunington; Waterbu	ry, CT 06720
(313 644-5626		
Location: Bldg <u>M</u>	Floor <u>1 st</u>	Room_N/A
Storage Types		ure Conditions <u>1/4</u>

Chemical Name CIN No. CAS No. DOT No. Percent

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Sodium Bisulfate	 7681-38-1		90
Inorganic Flourides	7681-49-4		10
· · ·			
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#### HAZARDOUS MATERIAL INFORMATION IDENTIFICATION -Trademark Other Name Sodium Carbonate Soda Ash Chemical Category Alkaline - -Use • Trade Secret: Yes [ ] No [X] Waste Treatment 1. Maximum Amount 1000 Units 1bs 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. (fable 1)
 CAS No. DOT No. Percent

 Sodium Carbonate
 497–19–8
 100

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# HAZARDOUS MATERIAL INFORMATION

<u> </u>	IDENTIFICATION
Trademark MIBK	Other Name Methyl Isobutyl Ketone
Chemical Categor	•
Use <u>Solvent</u>	Trade Secret: Yes [ ] No [x]
Maximum Amount	50 Unitsga1
Manufacturer's Na	me, Address, and Phone No.
Union Carbide Corp,	Solvents & Intermediates division Old Ridgebury Rd,
DanBury, CT 06817 ,	(304) 744–3487
ocation: Bidg	Floor 1 st Room N/A
Storage Types	Temperature/Pressure Conditions

Chemical Name	CIN No (Table 1)	CAS No.	DOT NO	. Percent
Methyl IsoButyl Ketone		108-10-1		100
· · · · · · · · · · · · · · · · · · ·				
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# HAZARDOUS MATERIAL INFORMATION

][	DENTIFICAT	-10N			<b>-</b> .
Trademark Nickel Sulfate Cr	ystal	Other Name	Nickel S	ulfate He	xahyd
Chemical Category Metallic	Salts ,				
Use Nickel Plating		Secret: Yes [	] No [x]		
Maximum Amount	1000	Units	lbs	·	
Manufacturer's Name, Addres Harshaw/Filtrol Partnership ;	•		eveland, O	н 44124	
(216) 292-9200					
		Pressure Cond	l <u>N/A</u> litions <u>1/</u>	<u> </u>	
Chemical Name	CIN NO (Table 1)	. CAS NO	DOT NO	). Percen	t
Nickel Sulfate Hexahydrate		7786-81-4		100	
					•••

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# HAZARDOUS MATERIAL INFORMATION

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	- IDENT	IFICATI	ON		
Trademark Sodium Acid Su	lfite		Other Name	- Sodium Me	taBisulfit
Chemical Category Alkali	ine	r .	• .		
Use Waste Treatment		Trade S	ecret: Yes	[ ] No [x	]
Maximum Amount	20	00	Unit	S lbs	~ .
Manufacturer's Name, Add Great Western Chemical ;				A 94804	
(415) 235-4810			<u></u>		
Storage Types	Tempe - INGRE[	rature/P DIENTS			
Chemical Name		CIN NO. Table 1)	CAS N	0. DOT N	o. Percen
Sodium MetaBisulfite	.		7681-57-4	_	100
\$				1	
				· ·	

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# HAZARDOUS MATERIAL INFORMATION

	IDEI	NTIFICA	TION		
Trademark _{Sodium}	Hypophosph:	ite	Other Name	-	
Chemical Category	Sodium Hy	pophosph	Lte Monohydra	te	
Use Metal Plati	ng	Trade	Secret: Yes	[ ] No [ ²	x]
Maximum Amount	4000		· Unit	S ^{1b}	5
Manufacturer's Name, Atochem ; 266 Harrist				ck, New Je	ersey
(209) 652-8575		•			
Location: Bidg <u>M</u> Storage Types <u>I</u>	Floor Tem INGR		/Pressure Con		/4
<u>.</u> .	, ,				
Chemical Name		CIN No (Table 1)	. CAS N	0. DOT N	o. Perc
Chemical Name Sodium Hypophosphite			CAS N	0. DOT N	0. Perc
				0. DOT N	}
Sodium Hypophosphite				0. DOT N	}
Sodium Hypophosphite				0. DOT N	}
Sodium Hypophosphite				0. DOT N	}
Sodium Hypophosphite				0. DOT N	100
Sodium Hypophosphite				0. DOT N	}
Sodium Hypophosphite				o. DOT N	100
Sodium Hypophosphite Monohydrate				o. DOT N	100

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HAZARDOUS MATERIAL	INFORMATION

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	—— IDI	ENTIFIC.	ATION		
Trademark _{Toluene}			Other Nam	e Meth	yl Benzene
Chemical Category	Aromatic	Hydroca	rbons		
Use solvent		Trad	e Secret: Ye	s[] No	) [X]
Maximum Amount	۱.	50	Un	its ^{ga}	1
Manufacturer's Name, Ashland Chemicals co.			•	hio 4321	6
(514) 880-3333					
Location: Bldg <u>M</u> Storage Types <u>D</u>	Floc Te ING		e/Pressure Co		1/4
Chemical Name	:	CINA			
Chemical Name	;	CIN N (Table		No. DOT	No. Perçi
Chemical Name Toluene				No. DOT	No. Perç
			1)	No. DOT	No. Perci
	:		1)	No. DOT	
			1)	No. DOT	
			1)	No. DOT	
			1)	No. DOT	
			1)	No. DOT	
			1)	No. DOT	
Toluene			1)	No. DOT	

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# HAZARDOUS MATERIAL INFORMATION

		ATION		
Trademark FCC Clean-up 10	01	Other_Name	Solvent	
Chemical Category Petrole	um			
Use Degrease	Trad	e Secret: Yes	[ ] No[X	]
Maximum Amount	.50	Unit	S ga	1
Manufacturer's Name, Address Fluid Tech; 1127 57th Ave; Oa			) 797-6751	
Location: Bidg M Fio Storage Types D To IN	emperature	Room Pressure Cond	n N/A litions 1/	4
Chemical Name	CIN N (Table 1	o. CAS No	DOT NO	). Percei
Chemical Name Methylene Chloride		0. CAS No 75-09-2	D. DOT NO	). Percer 3
		, 	DOT NO	
Methylene Chloride		75-09-2	DOT NO	3
Methylene Chloride Xylene Kerösine		75-09-2 108-38-1	DOT NO	3
Methylene Chloride Xylene	(Table 1	75-09-2 108-38-1	DOT NO	3 6 85
Methylene Chloride Xylene Kerösine Detergent	(Table 1	75-09-2 108-38-1	DOT NO	3 6 85 N/A
Methylene Chloride Xylene Kerosine Detergent CO-630	(Table 1	75-09-2 108-38-1	DOT NO	3 6 85 N/A 3
Methylene Chloride Xylene Kerosine Detergent CO-630	(Table 1	75-09-2 108-38-1	DOT NO	3 6 85 N/A 3
Methylene Chloride Xylene Keròsine Detergent CO-630 CO-430	(Table 1	75-09-2 108-38-1		3 6 85 N/A 3

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#### HAZARDOUS MATERIAL INFORMATION

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· · · · · · · · · · · · · · · · · · ·	ENTIFICATION	
Trademark NSA Cleaner	Other Name	- Sodium Nitrate
Chemical Category Alkalin		
USe Cleaner (steel)	Trade Secret: Yes [	] No [X ]
Maximum Amount	400 Units	1bs
Manufacturer's Name, Addres Chemco Products Co.; Rancho I		
(213) 537-5530	······································	
Storage Types	or <u>1 st</u> Room_ emperature/Pressure Condit GREDIENTS	
Chemical Name	CIN NO. CAS NO. (Table 1)	DOT No. Perce
Borates, Tetra, sodium salts- decahydrate	1303964	
Borates, Tetra, sodium Salts-penrahydrate	1303964	
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\$		

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# HAZARDOUS MATERIAL INFORMATION

600 ss, and Pho 94607 loor <u>1 st</u>	e Secret: Yes [ ] Units one No.	eu ft
600 ss, and Pho 94607 loor <u>1 st</u>	Units O	eu ft
600 ss, and Pho 94607 loor <u>1 st</u>	Units O	eu ft
ss, and Pho 94607 loor <u>1</u> st	one No.	
94607		A
	Room_ ^{ℕ/}	A
	Room N/	A .
remperature	e/Pressure Conditio	ns_ 1/4
NGREDIENT	S	
CIN N (Table 1	0. CAS NO. D	OT No. Perce
	74-86-2	100
	· ·	
	NGREDIENT <u>C</u> IN N	

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	MATCHAL	INFORMATION	•
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<u> </u>	IDE	NTIFICAT	10N	···· · · · · · · · · · · · · · · · · ·	~ .
Trademark	gen		Other Name	- N/A	
Chemical Category	Oxidizer	•	•		
Use Welding	-	Trade	Secret: Yes	[ ] No [ ^X	[]
Maximum Amount		1500	- Unit	S Cuft	:
Manufacturer's Nam Pacific Oxygen, Oa	•		e No. 15) 444-8081		
ocation: Bidg <u>M</u> Storage Types <u>L</u>				n <u>N/A</u>	
	ING	REDIENTS	, <u></u>		1/4
Chemical Name		CIN NO. (Table 1)	CAS N	0. DOT N	o. Perce
Oxygen			1072		100
	· -		• ·		
	,				
¢					
\$					

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#### HAZARDOUS WASTE INFORMATION

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. Metal Fi	NTIFICAT nishing W t Sludge	astewater	ecret: Ye	es[] _{No}	[x]
Location: Bldg	Floor	<u>1 st</u> R		<u>N/A</u>	
Amount Generated / Year	24.5	U	Inits	tons	
	F006 emperatur GREDIENT	e/Pressure Con	NO.(Table	····	<u></u>
Chemical Name	CIN No (Table 1)	- 	. DOT N	o. Perce	ent
Calcium Hydroxide		1305-62-0		5	
Nickel Hydroxide		12054-48-7		12	4
Trivalent Chromium	204			12	
Sodium Diethyldithio Carbamate	• .	128-04-0		5	
Magnesium Oxide		1309-48-4		5	
Water		N/A		60	
		•			1
				<u> </u>	1
· · · · · · · · · · · · · · · · · · ·					1
· ·					1

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

### <u>Hazardous Materials Management Plan</u>

(Part II)

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

785 7th. Street

(Facility Address)

_Oakland, California 94607____ (Facility City)

NOTE;

A standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a standard and a

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.

Mallru M. Francis	WALLACE M. FRANCIS	
Authorized Signature	Print Name	
1/29/93 -	President/Owner	
Date	Title	

rev 92790

#### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc.

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EBMUD - Facility ID <u>033-00921</u>

		. •
Trade Name Information	State	Federal
s) Composition 🗖 Pure 🖉 Mixture 🗍 '	Waste 26) Waste Code	26a Waste Code
n Common/Trade Name FCC CL	ean up 101 —	
8) Manufacturer Fluid	Tech	Phone (415)797-675
(a)		
²⁹⁾ Constituent 1 30) CAS # 75092		3%
Constituent Name Methyle		
Constituent 2 CAS #18038:	<ol> <li>Percent (%) by wt</li> </ol>	6 %
Constituent Name Xy lene		
Constituent 3 CAS #800820	Percent (%) by wt	85%
Constituent Name <u>Kerosin</u>	ne.	
Constituent 4 CAS #	Percent (%) by wt	3 %
Constituent Name CO-630		<u></u>
Constituent 5 CAS #	Percent (%) by wt	3%
Constituent Name CO-43	· · · · ·	
	· · · · · · · · · · · · · · · · · · ·	·
	lean up 101	
MSDS Ref #/ ID Code		
1) Trade Secret? 🖾 Yes 🗔 No 35) Extre		
5) Physical State 🗖 Solid 🗖 Gas 🖾 L	iquid 377 Specific Gravity	y (if liquid) <u>. 867</u>
DOT Hazard Class $FL$	39) UNNA# <u>1993</u>	_ 40) Pressure?
) Health Hazard	43) Re	eactivity
1) Health Hazard0 1) Flammability3 45) Specia	l Hazards <u>N/A</u> mi	icrocuries (if appl)
		•••
	······································	
	·····	

<u>Stora</u>	<u>ge Detail</u>	Cont.			Max Daily	Avg Daily		Waste Gener-	#  Days/yr
Map 46)	Location 47)	Туре 48)	Press 49>	Temp 50)		Amt	Vessel	ated (yr)	
-17	Trailer		1		55	30	55		365
					•				
Trade	name Totals				55	30	55		

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#### Hazardous Materials Management Plan Hazardous Materials Inventory

				an marci	THIO TIC	VCITUTY	
Facility Name	Francis	Plating	06	Oakland,	Inc.	Facility ID	EBMUD 033-00921

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Composition Pure Mixture Common/Trade Name Tolue Manufacturer Ashtan	ne	264 VY aste Code
Manufacturer AshLan	d Chemicai	Phone (514) 880-3
29) Constituent 1 30) CAS # 10882 Constituent Name Methyl	Benzane –	
Constituent 2 CAS # Constituent Name		
Constituent 3 CAS # Constituent Name		
Constituent 4 CAS # Constituent Name		
Constituent 5 CAS # Constituent Name	Percent (%) by wt	
Generic Name/Use (optional) <u> </u>	oluene	· · · · · · · · · · · · · · · · · · ·
Trade Secret? Yes 🖄 No 35) Extra Physical State 🥅 Solid 🗂 Gas 🕅 L	Jouid an Specific Gravity (	(f)
DÓT Hazard Class $FL$ Health Hazard $2$ Flammability $3$ 45) Specia	43) Reac	0) Pressure?

Stora	ge Detail	Cont.			Max Daily	Avg Daily		Waste	#
Map 46)	Location 477	Type 48)	Press 49)	Temp 50)		Amt		Gener- ated (yr)	Days/yr on site \$\$)
17	Trailer	D	1	1	55	30	55		365
						, 			
							·		·
									<u> </u>
[rade:	name Totals				55	30	55		

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Hazardous Materials Management Plan Hazardous Materials Inventory

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Facility Name	Francis	Plating	of Oakland	 Facility ID	033-00921
• •			Oakland.		

Trade Name Information	State	Federal
	kture 🔲 Waste 26) Waste Code	26ª Waste Code
27) Common/Trade Name M	id Floc #1300L	
28) ManufacturerR	ochester Midland	Phone <u>538-1900</u>
	#31) Percent (%) by wt odium Dimethyldithiocarb	
Constituent 2 CAS Constituent Name	# Percent (%) by wt	
Constituent 3 CAS	# Percent (%) by wt	
Constituent Name	# Percent (%) by wt	
Constituent 5 CAS Constituent Name	# Percent (%) by wt	
32) Generic Name/Use (optio	nal)Thiocarbamates/Wast	e Treatment
33) MSDS Ref #/ ID Code	35) Extremely (Acutely) Hazardo	OUSZ Yes IN NO
Developed State C Solid C	Case Iliquid an Specific Gravit	x (if liquid) $1.18$
136) Thysical State _ Solid _	Gas Liquid 377 Specific Gravit	40) Pressure?
(38) DOI Mazard Class On the		eactivity 1
44) Flammability 7	43) Re (45) Special Hazards <u>AUC</u> m	icrocuries (if appl)

Stora Map	ge Detail Location	Cont. Type 48)	Press 49)	Temp	Max Daily Amt 51) Gal	Avg Daily Amt 52) Gal	Max in One Vessel 53)	Waste Gener- ated (yr) 54)	# Days/yr on site 55)
	East Yard				<u>300</u> 300	<u>200</u>	<u>55</u>		<u>365</u>

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#### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name _____ Francis Plating of Oakland, Inc. Facility ID _____

(Trade Name Information	State	Federal
25) Composition Pure Mixture W	aste 26) Waste Code	26a Waste Code
277 Common/Trade Name Zinc Pho		
28) Manufacturer <u>Allied - Kelit</u>	e	Phone (312) 297-3570
²⁹⁾ Constituent 1 30) CAS # $\frac{13598}{27-3}$	The Percent (%) by ust	12
Constituent Name Zinc Dihy	drogen Phosphate	
Constituent 2 CAS # 7779-8	8-6 Percent (%) by wt	
	itrate	
Constituent 3 CAS # 7664-3	⁸⁻² Percent (%) by wt	12
Constituent Name	,	
Constituent 4 CAS #	- Percent (%) by wt Water	Bai.
Constituent Name	- Water	
Constituent 5 CAS #	Percent (%) by wt	
Constituent Name		
32) Generic Name/Use (optional) <u>Aci</u>	d phosphate / Rus	st Preventive
33) MSDS Ref #/ ID Code		
34) Trade Secret? Yes 🖾 No 35) Extrem	nely (Acutely) Hazard	
14) Physical State C Solid Cas Allic	uid an Specific Gravit	r(if liquid) = 1.5
36) Physical State 🗖 Solid Gas ALic 38) DOT Hazard Class Corrosive Mat	eria in Innix # 1760	y (II IIquid <u>1 1 5 -</u>
41) Health Hazard       2         44) Flammability       0         45) Special	<b>43)</b> Ke	
Tianunaointy 45) Special	mazards m	icrocuries (if appl)
	•	

( <u>Stora</u> Map 46)	ge Detail 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 Gener- ated (yr) 54)	# Days/yr on site 55)
16 45	Trailer Tank	<u> </u>	1			55	55		365
Trade	name Totals				100	<u> </u>	<u> </u>		

#### Hazardous Materials Management Plan Hazardous Materials Inventory

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

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(Trade Name Information 25) Composition Pure Mixtur	State e□ Waste 26) Waste Code	Federal 26a Waste Code
27) Common/Trade Name Sul 28) Manufacturer	-	Phone (203) 226-6602
29) Constituent 1 30) CAS #76 Constituent Name CIN-	64939 31) Percent (%) by wt 5 #705 Sulfuric Acid	98%
Constituent 2 CAS #_ Constituent Name	Percent (%) by wt Water	······
Constituent Name	Percent (%) by wt	
Constituent Name	Percent (%) by wt	
Constituent 5 CAS # _ Constituent Name	Percent (%) by wt	
32) Generic Name/Use (optional)	Inorganic Acid	Anodizing PH
33) MSDS Ref #/ ID Code 34) Trade Secret?□ Yes 12 No 33) 36) Physical State □ Solid □Gas	Extremely (Acutely) Hazardou	ıs? Ă Yes ☐ No
38) DOT Hazard Class CORR	39) UNNA#	40) Pressure?
<ul> <li>41) Health Hazard <u>4</u></li> <li>43) Flammability <u>0</u> 45) Space 45</li> </ul>	pecial Hazards <u>Acid</u> mic	rocuries (if appl)

İ	Stora	ge Detail	<u> </u>	*****		Max	Avg	Max in	Waste	#
	Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Daily Amt ⁵¹⁾ Gal.	Daily Amt 52) _{Gal} .	One Vessel 53) _{Ga} r	Gener- ated (yr)	Days/yr on site 55)
	$\frac{9}{34}$	CarBoy Sto Ano. Tank Ano. Tank			1	400	200	400		365
	Trade	name Totals				400	200	400		

# Hazardous Materials Management Plan Hazardous Materials Inventory

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English Marine	Francis i	Plating	of	Oakland,	Inc.	EBMUD
Facility Name		<u></u>				Facility ID 033-00921

Trade Name Information	State	Federal
25) Composition Pure Mixture V 27) Common/Trade Name Hydroch	loric Acid	26a Waste Code
28) Manufacturer Stauffer Ch.	ecal	Phone (203) 226-6602
29) Constituent 1 30) CAS # 76 470	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)	organic Acid	
33) MSDS Ref #/ ID Code		
34) Trade Secret? Yes 🖾 No 35) Extrem	mely (Acutely) Hazardo	us? 🖾 Yes 🗀 No
36) Physical State 🔲 Solid 🖂 Gas 🛄 Lie	quid 371 Specific Gravity	(if liquid) <u>1.2</u>
38) DOT Hazard Class Strong Acid (	<u>CORR</u> 39) UNNA#	40) Pressure?
41) Health Hazard $\frac{4}{\sqrt{2}}$	A and AS) Rea	activity
<ul> <li>41) Health Hazard <u>4</u></li> <li>44) Flammability <u>0</u> 45) Special</li> </ul>	Hazards mic	crocuries (if appl)

Stora	ge Detail	Cont.			Max	Avg		Waste	#
Map 46)	Location 471	Type 45)	Press 49)	Temp 50)	Daily Amt ⁵¹⁾ Gal.	Daily Amt ⁵²⁾ Gal.	Vessel	Gener- ated (yr) 54)	Days/yr on site 55)
9 32	CarBoy St HCL Tank	0. G	1	1	400	200	400		365
						·			
 Frade	 name Totals		]		400	200	400		······

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#### 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 27) Common/Trade Name Propio	Waste 26) Waste Code	26ª Waste Code
28) Manufacturer <u>Union</u>	Carbide	Dh === (3/14) / 44 = 3/18
		Phone (304) 744-348
29) Constituent 1 30) CAS $\#^{79}$ -Constituent Name $\overline{Pro}$	⁰⁹⁻⁴ ₃₁₎ Percent (%) by wt	100%
Constituent 2 CAS #	-	
Constituent 3 CAS # Constituent Name	Percent (%) by wt	
Constituent 4 CAS # Constituent Name	Percent (%) by wt	
Constituent 5 CAS # Constituent Name	Percent (%) by wt	
32) Generic Name/Use (optional) _	Mild Acid / Electro	léss Nickel Additive
33) MSDS Ref #/ ID Code		
34) Trade Secret? 🗔 Yes 🖾 No 35) Ex	(tremely (Acutely) Hazardo	us? Yes MA No
36) Physical State 🔲 Solid 🔲 Gas 🎽		
38) DOT Hazard Class CORR	39) I INN A #	AN Pressure?
(1) Health Hazard		
41) Health Hazard ² 44) Flammability45) Spe	aint Horordo Acid -	
- All manufacture 45) Spe	mi mazaros <u>motos</u> mi	crocuries (ir appi)

Stora	ge Detail	Cont.		Max Daily	Avg Daily	Max in One	Waste Gener-	# Days/yr
Map 46)	Location 471	Type 48)	Temp 50)		Amt	Vessel 53)	ated (yr) 54)	on site 55)
31	EN STO.	E	 	100	50	55		385
			 		 	·		
 Trade	l name Totals	<u> </u>	 <u> </u>	100	50	55		<u> </u>

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### Hazardous Materials Management Plan Hazardous Materials Inventory

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

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Trade Name Information	State	Federal
s) Composition I Pure I Mixture I	Waste 26) Waste Code	26a Waste Code
n Common/Irade Name Conetch		
Manufacturer <u>Conal Chemical</u>		Phone (310) 531-6363
29)	0	
Constituent 1 30) CAS # $1310-7$	3-31) Percent (%) by wt	908
Constituent Name Sodium Hy		
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		
		· · ·
Generic Name/Use (optional) <u>Cau</u>	<u>stic Soda / Cleaner</u>	
MSDS Ref #/ ID Code		
Trade Secret? Yes 🕅 No 35) Extre	mely (Acutely) Hazardou	15? 🔲 Yes 🔀 No
Physical State 🖾 Solid 🖂 Gas 🗔 Li	quid 37 Specific Gravity	(if liquid)
DOT Hazard Class CORR	39) UNNA#	40) Pressure?
Health Hazard3	43) Rea	ctivity0
Health Hazard3 Flammability043) Special	Hazards <u>ALK</u> mic	rocuries (if appl)
		• • •

Ϊ	Stora	ge Detail	Cont.		_	Max Daily	Avg Daily	Max in One	Waste Gener-	#  Days/yr
	Map 46)	Location 47)	Type 45)	Press 49)	Temp 50)		Amt	Vessel	ated (yr)	On site 55)
		<u>Ano. Sto.</u> Trailer	<u> </u>	1	1	500	300	500		365
							·			
								·		
	Trade	name Totals				500	300	500		

### Hazardous Materials Management Plan Hazardous Materials Inventory EBMUD

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

(T. ) N. (		
Trade Name Information	State	Federal
25) Composition Pure X Mixture 27) Common/Trade Name Aluminetch	Waste 26) Waste Code	261 Waste Code
28) Manufacturer Chemco Products		Phone 213 537-5536
29)		
29) Constituent 1 30) CAS #131073	32_31) Percent (%) by wt	858
Constituent Name Sodium Hyd	troxide	
Constituent 2 CAS #	Percent (%) by wt	158
Constituent Name Alkaline		
Constituent 3 CAS #	Percent (%) by wt	
Constituent Name		
Constituent 4 CAS #	Percent (%) by wt	
Constituent Name		<del></del> .
Constituent 5 CAS #	Percent (%) by wt	
Constituent Name		4 <del>7</del>
		· · · · · · · · · · · · · · · · · · ·
32) Generic Name/Use (optional) <u>Ca</u>	ustic Soda / Cleaner	
33) MSDS Ref #/ ID Code		
34) Trade Secret? 🗌 Yes 🖾 No 35) Extr	emely (Acutely) Hazardo	
36) Physical State 🕅 Solid 🗍 Gas 🗍 L	iquid an Specific Gravit	(if liquid)
34) DOT Hazard Class CORR	ant INNIA #	(II IIquiu)
38) DOT Hazard Cla <u>ss</u> CORR 41) Health Hazard <u>3</u>		
41) Health Hazard 41) Flammability0 45) Specia	43) Re	
45) Specia	II Hazards <u>Her</u> m	crocuries (if appl)
Storage Detail	May Arra M	
Cont	Max Avg Ma	ax in Waste #

<u>Stora</u>	<u>ge Detail</u> 1	Cont.			Max Daily	Avg Daily	Max in One	Waste Gener-	#  Days/yr	
Map 46)	Location 47	Type 45)	Press 49)	Temp 50)		Amt	Vessel	ated (yr)	on site 55)	
<u>35</u> <u>17</u> 	Ano. Sto. Trailer			T	<u>500</u>	200	500		365	
 Trade	name Totals			<u> </u>	500	200	500			-

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CIP6590

### Hazardous Materials Management Plan Hazardous Materials Inventory

<b>T</b> (11)	<b>Επανοί</b> δ	Plating a	al	Oabland	TNO	-	EBMUD	
Facility Name	manexs	Truing (	0	ouicuna,	Inc.		033-00981	

Trade Name Information State	
1       Irade Name Information       State         25)       Composition [3]       Pure []       Mixture []       Waste 26)       Waste Code         27)       Common/Trade Name       Acetone       Acetone	Federal 26a Waste Co <u>de</u>
28) Manufacturer Union Chemical	Phone(312)885-5150
29) Constituent 1 30) CAS #67641 31) Percent (%) by wt 10 Constituent Name	00
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 Solverts / Cleaner	
<ul> <li>33) MSDS Ref #/ ID Code</li></ul>	? 🗌 Yes 🕅 No f liquid) - 79
38) DOT Hazard Class FL 39) UNNA#_ 1090	n Pressure?
41) Health Hazard       1       43) React         44) Flammability       3       45) Special Hazards       N/A	ocuries (if appl)

. . .

Stora	ge Detail	Cont.			Max	Avg		Waste	#
Map 46)	Location 47)	Type 48)	1	Temp 50)	Daily Amt ⁵¹⁾ Gal.	Daily Amt ⁵²⁾ Gal.	One Vessel ⁵³⁾ Gal.	Gener- ated (yr) 54)	Days/yr on site 55)
17	Trailer	E	Ţ		100	55	55		365
		· ·				·			 
Trade	name Totals	1	1		100	55	55		

GIP6590

#### Hazardous Materials Management Plan Hazardous Materials Inventory

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

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Trade Name Information	State	Federal
s) Composition 🗔 Pure 🖾 Mixture 🗆	] Waste 26) Waste Code	261 Waste Code
n Common/Trade Nam <u>e</u> Alodi:	ne	
8) Manufacturer Amchei	m	Phone 215) 628-1000
29)		
29) Constituent 1 30) CAS # 333 Constituent Name Chromit	820 31) Percent (%) by wt <u>c Acid</u>	25 ·
Constituent 2 CAS # 768 Constituent Name Sodium	1494 Percent (%) by wt Fluoride	<i>ö</i>
Constituent 3 CAS # 169	23958 Percent (%) by wt ium Fluozirconate	<u> </u>
Constituent Name Potass	75537 Percent (%) by wt tum Fluoborate	••••••••••••••••••••••••••••••••••••••
Constituent 5 CAS # 1379 Constituent Name Potass	46662 Percent (%) by wt ium Ferricyanide	17.
) Generic Name/Use (optional)		e / Aluminum Pootecto
) MSDS Ref #/ ID Code		
) Trade Secret? 🖸 Yes 🖄 No 35) Ext	tremely (Acutely) Hazardo	ous? 🔲 Yes 🖄 No
) Physical State 🛃 Solid 🗍 Gas 🗔	Liquid 377 Specific Gravit	y (if liquid)
) DOT Hazard Class $Oxy$		
	AN D	eactivity <u> </u>
neaun nazaru	ial Hazards Oxidizenn	

<u>Stora</u>	<u>ge Detail</u>	Cont.			Max Daily	Avg Daily	Max in One	Waste Gener-	#  Days/yr
Map	Location	Туре	Press	Temp		Amt	Vessel	ated (yr)	on site
46)	47)	48)	<del>49</del> )	50)	silbs.	52) Lbs,	53 <u>1</u> 65	. 54)	35)
35	Ano. Sto.	D	1	-1-	100		50		365
16	Trailer						·		
						[			
					· ·		<u> </u>		
						·			
	·····						··		· · · · · · · · · · · · · · · · · · ·
<b>Frade</b>	name Totals				100	50	50		•

#### Hazardous Materials Management Plan Hazardous Materials Inventory

EBMUD Facility Name <u>Francis Plating of Oakland, Inc.</u> Facility ID <u>033-00921</u>

Trade Name Information	State	Federal
25) Composition 🖾 Pure 🗔 Mixture 🗔 W	Vaste 26) Waste Code	264 Waste Code
27) Common/Trade Name Cadmium		
28) Manufacturer <u>Talco American</u>		Phone (215) 333-6800
29) Constituent 1 30) CAS #7 <u>440439</u>	31) Percent (%) by wt	aa ag
Constituent Name <u>Cadmium</u>		77.78
Constituent 2 CAS #	Percent (%) by wt	
Constituent Name		
Constituent 3 CAS #	Porcort (%) by with	
Constituent Name	rercent (%) by wt	<del></del>
Constituent 4 CAS #	Borecot (97) has set	
Constituent Name	_ Percent (%) by wt _	
	D	
	Percent (%) by wt	
Constituent Name		
tel Conorio Marco (Marchaelle ) Hega	W Matal / Cadmium	Source
32) Generic Name/Use (optional) <u>Hear</u>		
33) MSDS Ref #/ ID Code		
34) Trade Secret? Yes 🖉 No 33) Extrem	nely (Acutely) Hazardou	15? 🔄 Yes 🛅 No
36) Physical State 🖾 Solid 🖂 Gas 🗆 Lic	auid 377 Specific Gravity	(if liquid)
38) DOT Hazard Class POIS B	39) UNNA#	40) Pressure?
1) Health Hazard	43) Rea	ctivity0
<ul> <li>41) Health Hazard 3</li> <li>44) Flammability 0 45) Special</li> </ul>	Hazards <u>N/A</u> mic	rocuries (if appl)

<u>Stora</u>	<u>ge Detail</u> '	Cont.	· · · ·		Max Daily	Avg  Daily	Max in One	Waste Gener-	#  Days/ут
Map 46)	Location 47)	Туре 45)	Press 49)	Temp 50)		Amt	Vessel	ated (yr)	on site 55)
17 20	Trailers Cad/ Tank	<u></u>	1	<u> </u>	200	50	50		365
						, <u> </u>			
							·		
							·		
Trade	name Totals	I	/	<u> </u>	200	50	50		

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#### Hazardous Materials Management Plan Hazardous Materials Inventory

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Facility Name ______ Francis Plating of Oakland, Inc. ______ Facility ID ______

Trade Name Information State	Federal
25) Composition 🖾 Pure 🗔 Mixture 🗔 Waste 26) Waste Coc	le 26a Waste Code
277 Common/Trade Name Sodium Cyanide	
28) Manufacturer Great Western chemical	Phone 503 228-2600
²⁹⁾ Constituent 1 30) CAS #1 <u>43339</u> 31) Percent (%) by	r wt 98%
Constituent Name Sodium Cyanide	
Constituent 2 CAS # Percent (%) by	/ 1.1
Constituent Name	· · · · · · · · · · · · · · · · · · ·
	/ 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/ Zin	nc/Copper Plating
33) MSDS Ref #/ ID Code	
34) Trade Secret? Yes 🖾 No 35) Extremely (Acutely) Haz	ardous? 🖾 Yes 🗔 No
36) Physical State 🖄 Solid 🗌 Gas 🔲 Liquid 37) Specific Gr	avity (if liquid)
34) DOT Hazard Class POIS B 39) UNINA #	avity (in inquity
38) DOT Hazard Class <u>POIS B</u> 39) UNNA# 41) Health Hazard <u>4</u>	$\sum_{i=1}^{n} \varphi_{ij} = 1 = 0$
41) Health Hazard <u>4</u> 44) Flammability <u>0</u> 45) Special Hazards <i>Poison</i>	B) Reactivity
The manufacture and the second second second second	_ inderocuries (ir appi)
· · · · · · · · · · · · · · · · · · ·	

Stora	ge Detail	Cont.			Max	Avg	Max in	Waste	#
Map 46)	Location 47)	Сони. Туре 48)	Press 49)	Temp 50)	Daily Amt ⁵¹⁾ Lbs.	Daily Amt ⁵²⁾ Lbs.	One Vessel ⁵³⁾ Lbs .	Gener- ated (yr) 54)	Days/yr on site 55)
17	Trailer	D	1	1	200	50	200		365
	· · · · · · · · · · · · · · · · · · ·								
						·	·		
Trade	name Totals				200	50	200		

### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name	Francis	Plating o	ob Oaklo	und, Inc	H	Facility ID	EBNUD 033-0092	1

Trade Name Information 25) Composition II Pure Mixture 27) Common/Trade Name Nitric	Acid	Federal 264 Waste Code
28) Manufacturer E. I. D	lupont	Phone (302) 774-2421
29) Constituent 1 30) CAS # 7967 Constituent Name <u>Nitri</u> Constituent 2 CAS # Constituent Name <u>Water</u> Constituent 3 CAS # Constituent A CAS # Constituent 4 CAS # Constituent Name Constituent 5 CAS # Constituent Name	c Acid Percent (%) by wt	47/60
<ul> <li>32) Generic Name/Use (optional) <u>Ind</u></li> <li>33) MSDS Ref #/ ID Code</li> <li>34) Trade Secret? Yes M No 35) Extr</li> <li>36) Physical State Solid Gas M</li> <li>36) DOT Hazard Class <u>CORR/OXY</u></li> <li>41) Health Hazard <u>3</u></li> <li>44) Flammability <u>0</u> 45) Species</li> </ul>	Liquid 377 Specific Gravity 39) UNNA# ²⁰³¹	us? Yes X No (if liquid) <u>1.5</u> 40) Pressure?

Stora	ge Detail	Cont.			Max	Avg		Waste	#
Map 46)	Location 471	Cont. Type 48)	Press 49)	Temp 50)	Daily Amt ^{\$1} Gal.	Daily Amt ⁵²⁾ Gal.	One Vessel ⁵³ }al.	Gener- ated (yr) 54)	Days/yr on site 55)
7	CarBoy Sto Sto.Tank Strip Tank	. D 			150 4000	100	150		365 355
									·
Trade	name Totals				4150	4100	4150		

# Hazardous Materials Management Plan Hazardous Materials Inventory

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

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(T-	J- X1 Y (											
	de Name Info				S	itate		Federal				
25)	omposition 🛛	] Pure [	JMIX	ure	Naste 26) V	Vaste Cod	e 2	6a Waste C	lo <u>de</u>			
	ommon/Trac	ie ivam	e Hydr	<u>oxyace</u>	tic Acid							
28) 17	lanufacturer	_ <del></del>	vupont	<u> </u>		<u> </u>	P	hone <u>(302</u>	774-2421			
1	9) Constituer	1 1	C A C #	79141					······			
İ	Constituer	1130		in Ani	31) Perc	ent (%) by	wt <u>70%</u>					
	Constituer	11 1 4 <u>a</u> 11 (e 1 + 2	CAS#	LC ACL	<u>и-пушоху</u> Вола							
	Constituen	it Name			— Wate	ent (%) by r	wt	—				
	Constituent 3 CAS # Percent (%) by wt											
	Constituen		-		reitt	ent (76) by	w.		ļ			
	Constituen		CAS #		Perce	ent (%) by	wit					
	Constituen							_				
	Constituen	t5 (	CAS #		Perce	ent (%) by	wt					
	Constituen	t Name										
						· · · · · · · · · · · · · · · · · · ·						
ł					, , , ,		<u> </u>	1 0 1 1 1 1	L /			
32)	eneric Name	/Use (o	ptional	1) - 0 rg	anic Acia	/ Electr	oless Nic	rel Addi	tive			
	SDS Ref #/ II											
34) Tr	ade Secret?	]Yes 🛛	] No 35	)) Extre	mely (Acu	itely) Haza	urdous? [	]Yes 💢 I	No			
36) Ph	ysical State [	∃ Solid	□Gas	s 🖾 Li	quid 377 Sj	pecific Gra	wity (if liqu	uid <u>) 103</u>	<b></b>			
38) DC	OT Hazard Cl	a <u>ss Ac</u>	id	<u> </u>	39) L	JNNA#	40) Pr	essure?				
	alth Hazard			<u> </u>		43	) Reactivity	/				
44) Fla	mmability _	0	45)	Special	Hazards	ACIA	microcur	ies (if appl	l)			
									)			
Stora	ge Detail				Max	A.v.a.	Max in	TAZente				
		Cont.			Daily	Avg  Daily	One One	Waste	# ``			
Мар	Location	Туре	Press	Temp		Amt	Vessel	Gener-	Days/yr			
46)	47)	48)	49)	50)	51)	52)		ated (yr)				
					Gal.	Gal.	53) Gal	54)	55)			
31	EN Sto.	E.	1	1	100	50	55		365			
						ļ.						
								<u></u>				
Test.	name Totals				100	50	55					

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### Hazardous Materials Management Plan Hazardous Materials Inventory

Trade Name Information	State	Federal
) Composition 🗌 Pure 🖾 Mixture	Waste 26) Waste Code	26a Waste Code
n Common/Irade Name Meter M-	-0 <i>49</i>	
Manufacturer <u>Macderma</u>	<i>id</i>	Phone
29) Constituent 1 30) CAS # 76813 Constituent Name <u>sodium</u>	Bisulfate	
Constituent 2 CAS # 76816 Constituent Name Inorgan	<i>ic</i> Florides	10%
Constituent 3 CAS # Constituent Name	Percent (%) by wt	
Constituent 4 CAS #	Percent (%) by wt	
Constituent 5 CAS # Constituent Name	Percent (%) by wt	
Generic Name/Use (optional) <u>Aci</u> MSDS Ref #/ ID Code	ld Salts / Cleaner	·
Trade Secret? Yes No 33) Extre Physical State Solid Gas L DOT Hazard Class ORM-B Health Hazard 1 Flammability 0 43) Specia	emely (Acutely) Hazardo iquid 377 Specific Gravity	ous? 🔲 Yes 🎞 No / (if liquid)
Health Hazard 1	39) UNNA# <u>1027</u>	40) Pressure?
Flammability 0 45) Specia	HazardsAcid mi	crocuries (if appl)

( <u>Stora</u> Map 46)	ge Detail Location 477	Cont. Type 48)		Temp 50)	Max Daily Amt 51) ^{Lbs} ,	Avg Daily Amt 52) ^{Lbs} .	Verel	Waste Gener- ated (yr) 54)	# Days/yr on site 55)
	Trailer Act. Tank				<u> </u>	400			<u></u>
Trade	name Totals				500	400	500		

### 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 $\square M$	ixture Waste 26) Waste Code	264 Waste Code
277 Common/Trade Name M	IIBK Methyl-Isobutyl Ke <del>tone</del>	
28) Manufacturer	Inion Cardice	_ Phone <u>304)744-848</u> ?
29)		
Construent Name	5#108101 31) Percent (%) by wt 10 Methyl Isobutyl Ketone	
Constituent 2 CAS	# Percent (%) by wt	
Constituent Name		
Constituent 3 CAS	# Percent (%) by wt	
Constituent Name	· · · · · · · · · · · · · · · · · · ·	
	# Percent (%) by wt	
Constituent Name		
Constituent 5 CAS	# Percent (%) by wt	
Constituent Name		
32) Generic Name/Use (ontio	nal) <u>Ketones / Cleaner</u>	
33) MSDS Ref #/ ID Code		······································
34) Trade Secret? Yes XXI No	35) Extremely (Acutely) Hazardous	
36) Physical State 🗂 Solid 🥅 (	las Miliguid in Specific Crawley /	80
38) DOT Hazard Class FL		n Pressure?
41) Health Hazard2	43) Reac	$\frac{1}{1}$
44) Flammability <u>3</u>	43) Reac (13) Special Hazards <u>N/A</u> micro	ocuries (if appl)

<u>Stora</u>	<u>ge Detail</u>	Cont.			Max Daily	Avg  Daily		Waste Gener-	#  Days/yr
Map 46)	Location	Type 48)		Temp	Amt	Amt	Vesse!	ated (yr)	on site
17-	Trailer		49) 	50) - <u>-</u>	51)Gal.	32;al.	55 53 Gal		55) 365
						( <u></u>			
									<u> </u>
Trader	name Totals				55	30	55		

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#### Hazardous Materials Management Plan Hazardous Materials Inventory

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

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Trade Name Information State Federal 25) Composition 🚈 Pure 🗔 Mixture 🗔 Waste 26) Waste Code 261 Waste Code 27 Common/Trade Name Methyl Ethyl Ketone 28) Manufacturer East Bay Oil Phone (415)782-2040 29) Constituent 1 30) CAS # 8933 99% 31) Percent (%) by wt Constituent Name Methyl Ethyl Ketone Constituent 2 CAS # Percent (%) by wt Constituent Name Constituent 3 CAS # Percent (%) by wt Constituent Name Constituent 4 Percent (%) by wt CAS # Constituent Name Constituent 5 CAS # Percent (%) by wt Constituent Name 32) Generic Name/Use (optional) <u>Ketone / Cleaner</u> 33) MSDS Ref #/ ID Code 34) Trade Secret? Yes Tho 35) Extremely (Acutely) Hazardous? Yes Tho 36) Physical State Solid Gas Liquid 37 Specific Gravity (if liquid).  $\frac{80}{FL}$ 38) DOT Hazard Class ______ 39) UNNA#______ 40) Pressure? 2 41) Health Hazard _ 43) Reactivity___ 45) Special Hazards _____ microcuries (if appl) _____ 3 44) Flammability ____

Stora	ge Detail	Cont.			Max	Avg	Max in	Waste	#
Map 46)	47)	Type 48)		Temp 50)	Daily Amt 51) Gal.	Daily Amt 52) _{Gal} ,		Gener- ated (yr)	Days/yr on site 55)
17	Trailer		<u> </u>	<u> </u>	55	30	55		365
						·			
Trader	name Totals		I		55	30	55		

#### Hazardous Materials Management Plan Hazardous Materials Inventory

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

		· · · · · · · · · · · · · · · · · · ·
Trade Name Information	State	Federal
s) Composition I Pure I Mixture W	aste 26) Waste Code	264 Waste Code
n Common/Trade Name Potassium	Carbonate	
8) Manufacturer Chemicals	& Plustics-	Phone 315) 487-470
29)		
Constituent I 30) CAS #0 0 4007	_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		<del></del>
) Generic Name/Use (optional) <u>Pc</u>	ot ASH	
MSDS Ref #/ ID Code		
) Trade Secret? Yes 🕅 No 33) Extrem	nely (Acutely) Hazardo	US? Yes HA No
Physical State 👫 Solid 🗆 Gas 🗖 Lio	uid an Specific Gravity	(if liquid)
) Physical State A Solid Gas Liq ) DOT Hazard Class N/A ) Health Hazard 2	39) I INN A #	AN Pressure?
Health Hazard2	A1 Re	activity
Flammability 0 45) Special 1	Hazards $\frac{N/A}{m}$	gogurios (if appl)
	нисаниз ЦИ	

Stora	ge Detail	Cont.			Max	Avg		Waste	#
Map 46)	Location 471		Press 49)	Temp 50)	Daily Amt 51) ^{Lbs} .	Daily Amt 52) ^{Lbs} .	One Vessel 53) ^{Lb s}	Gener- ated (yr) 54)	Days/yr on site 55)
11	Dry Chem. Sto.			<u> </u>	2000	1000			- <u>7 fi 5</u>
							·		
 Trade	name Totals	]			2000	1000			

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### Hazardous Materials Management Plan Hazardous Materials Inventory

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

Trade Name Information		
25) Composition Par Diverse	State	Federal
25) Composition Pure Mixture 27) Common/Trade Name Nicke	Waste 26) Waste Code	26a Waste Code
28) Manufacturer <u>Harsho</u>	w	
		Phone (215) 292-9200
29) Constituent 1 200 CAS # 270	0.014 D	0.0.0
Constituent 1 30) CAS # 778	$\frac{5001431}{11}$ Percent (%) by wt	99%
Constituent Name Nic Constituent 2 CAS #	ekel Sulfate	
Constituent Name	Percent (%) by wt	
Constituent 3 CAS #	Percent (%) by wt	
Constituent 4 CAS #	Percent (%) by wt	
Constituent Name		
Constituent 5 CAS #	Percent (%) by wt	
Constituent Name		
<ul> <li>32) Generic Name/Use (optional)</li> <li>33) MSDS Ref #/ ID Code</li> </ul>		
14) Trade Secret? Yes (7) No 35) Ex	(tremely (Acutely) Hazard	DUS? Yes KA NO
Si i ilysical state [] Solia   Gas [	LUQUID in Specific Gravit	v (if liquid)
$\mathcal{O}$	391 [ [] [] [] [] [] [] [] [] [] [] [] [] [	Les Deservers ?
1) Health Hazard 2	(0) 01 11 11	
<ul> <li>(1) Health Hazard <u>2</u></li> <li>(4) Flammability <u>0</u> (45) Spectrum</li> </ul>	cial Hazards $N/A$	
· · · · · · · · · · · · · · · · · · ·		(crocuries (ir appi)
· · · · · · · · · · · · · · · · · · ·	·	
Storage Detail	Max Avg M	
t Cont.		ax in Waste #
		ne Gener- Days/yr
Map Location Type Press Ter	np Amt  Amt  Ve	ssel ated (yr) on site

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46) 47) **48**) 49) 51) Lbs. 50) 52)Lbs. 53) Lbs 54) 55) 11 Dry Chem. J 1 2400 1 1200 50 365 Sto. 2400 Tradename Totals 1200 50

#### Hazardous Materials Management Plan Hazardous Materials Inventory

EBNUD Facility Name Francis Plating of Oakland, Inc. Facility ID 033-00921 <u>Trade Name Information</u> State Federal 25) Composition TPure Mixture Waste 26) Waste Code 26a Waste Code 271 Common/Trade Name Sodium Metabisulfite 28) Manufacturer Great Western Chemical Phone (570) 235-4810 29) Constituent 1 30) CAS #⁷⁶⁸¹⁵⁷⁴31) 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 Percent (%) by wt Constituent 5 CAS # _____ Constituent Name 32) Generic Name/Use (optional) <u>Sodium</u> Hydrogen Sulfite / Waste Treatment 33) MSDS Ref #/ ID Code ____ 34) Trade Secret? 🗌 Yes 🖾 No 33) Extremely (Acutely) Hazardous? 🛄 Yes 🖄 No 34) Physical State Solid Gas Liquid 37 Specific Gravity (if liquid)
 38) DOT Hazard Class ORM-B
 39) UNNA# 40) Pressure? _____ 39) UNNA# _____ 40) Pressure?__ 2 41) Health Hazard ____ 43) Reactivity 0 45) Special Hazards <u>N/A</u> microcuries (if appl) 44) Flammability

Stora	<u>ge Detail</u>	Cant			Max	Avg		Waste	#
Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Daily Amt 51) Lbs	Daily Amt s21 ^{Lbs} .	One Vessel 53) ^{Lbs}	Gener- ated (yr)	Days/yr on site 55)
18	Waste Trm <del>Eust Yard</del>	. J	1	1	2400	1200	50		365
						`			
					······				
Ггаde	name Totals	İ			2400	1200	50		

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### Hazardous Materials Management Plan Hazardous Materials Inventory

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

Trade Name Information		·
251 Composition Al Russ Classes	State	Federal
25) Composition A Pure Mixture 27) Common/Trade Name Sodia	Waste 26) Waste Code	26a Waste Code
28) ManufacturerAtochem	um Hypophosphite	
		Phone ⁽²¹⁵⁾⁵⁸⁷⁻⁷⁸⁹⁵
29) Constituent 1 to CAS #765	91530 D	1000
Constituent Name	9153031) Percent (%) by wt	100%
Constituent Name <u>sodin</u> Constituent 2 CAS #	um Hypophosphite	
Constituent Name	Percent (%) by wt	
Constituent 3 CAS #	Percent (%) by wt	
i Consuluent Name	•	
Constituent 4 CAS #	Percent (%) by wt	
Constituent 5 CAS #	Percent (%) by wt	
Constituent Name		
10) Conoria Nama /T las (audia 1) S	alt of Phoenhania la	Electroless Nicke
<ol> <li>Generic Name/Use (optional) ^S</li> <li>MSDS Ref #/ ID Code</li> </ol>	all of thospholice Act	la/ Additives
W Trade Somet2 Ver The New F		
34) Trade Secret? Yes X No 33) E	xtremely (Acutely) Hazardo	us? 🔲 Yes 🛣 No
36) Physical State $\swarrow$ Solid Gas (38) DOT Hazard Class $\frac{1RR}{41}$ (41) Health Hazard $\frac{1}{2}$	Juquid 37 Specific Gravity	(if liquid)
(1) Health Wagard 7	39) UNNA#	40) Pressure?
(4) Elementability $\theta$	• • • • • • • • • • • • • • • • • • •	activity
<ul> <li>41) Health Hazard <u>1</u></li> <li>43) Flammability <u>0</u> 43) Specific 43</li> </ul>	cial Hazards $\underline{W/A}$ mic	rocuries (if appl)
Storage Detail	Max Avg Ma	x in Waste #
Cont.		
Map Location   Type   Press   Te		
	- Please learne Age	sel ated (yr) on site

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Ma 46	5)	Location 47)	Type 48)	Press 49)	Temp 50)	Amt $\mathfrak{s}_{1}$	Amt ³² Lbs.	Vessel ³³ Lbs	ate	ner- d (yr) <b>54)</b>	Days/yr on site 55)
$\frac{3}{17}$		EN Sto. Trailers		1	1	4000	2000	500			365
							· 				
Tra	dei	name Totals		/		4000	2000	500			

C1P6390

### 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	e 26) Waste Code	264 Waste Code
27) Conunon/Irade Name WSA Cleaner	· · · ·	
28) Manufacturer <u>Chemco Products</u>		Phone (213) 537-5536
29) Constituent 1 30) CAS # 130 396 431)	Percent (%) by wt 85%	
i Consument Name Borates, Tetr	ra, Sodium Salts-a	lecahydrate
Constituent 2 CAS #	Percent (%) by wt	
Constituent Name		
Constituent 3 CAS #	Percent (%) by wt	·
Constituent Name		
	Percent (%) by wt	
Constituent Name		
Constituent 5 CAS #	Percent (%) by wt	
Constituent Name		
· ·		
32) Generic Name/Use (optional)	ler	
33) MSDS Ref #/ ID Code		
34) Trade Secret? 🖾 Yes 🗔 No 33) Extremely	(Acutely) Hazardous?	Yes IN
36) Physical State 7 Solid Gas Liouid	an Specific Gravity (if I	iauld)
38) DOT Hazard Class IRR	39) UNNA# (0)	Processing?
Theatur Hazard	(3) Reactiv	1 HV 0
44) Flammability 43) Special Haz	ards ALK micros	ries (if appl)
		mics (# appn

Stora	ge Detail	Cont.			Max Daily	Avg Daily	Max in One	Waste	#
Map 46)	Location 471	Туре 48)	Press 49)	Temp 50)		Amt	Vessel	Gener- ated (yr)	Days/yr on site 55)
17 26	Trailer Soak Tank			<u> </u>	500	400	500		365
Trade	name Totals				500	400	500		

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### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc.

EBMUD _ Facility ID 033-00921

Tra	ide Name Inf	ormatic			<u> </u>	State			
-25) C	omposition	I Pure [	Mixt	ure	Waste 261	Waste Co	do a	Federal	-
27)	Common/Tra	de Nam	e 4	cetui	ono	maste CO	ue 2	64 Waste (	Code
28) N	lanufacturer		Ai	rco				hone (80)	0)772-385
	20)								
i		nt 1 30)	CAS #	7 <u>4862</u>	31) Per	cent (%) by	y wt 100%		•
	Consulati	IL LA QUIN	= A	cetyl	ene. Ei	thune			
	Constituer	nt 2	CAS #		Per	cent (%) by	y wt		
	Constituer			· · · · · · · · · · · · · · · · · · ·					
	Constituer	1t 3	CAS #		Per	cent (%) by	y wt		
	Constituer						· · · · · · · · · · · · · · · · · · ·		
	Constituen Constituen		CAS #		Per	cent (%) by	/ wt		
				<u></u>					
	Constituen	t Nama	CA3 #		Per	cent (%) by	/ wt		
	Corparati	( I A MILE	·						
1									
32) (	Generic Name	/Use (o	ntiona	I) AZ	kyne /	Weldina			
33) M	ISDS Ref #/ I	D Code	<i>p</i> =0.14	-/				<u>·</u>	
34) Tr	ade Secret?	1Yes 🕅	No 1	n Extre	melv (Ac	ntelv) Haz	ardous?		NI
36) PT	ysical State	T Solid	A Ga	s 🗆 Li	auid 17 !	Specific Gr	avity (if lin	uid)	
		433	FG			UNNA#	<u>1001</u> 40) Pr	essure?	
1.) . MA	Pairn Hagard	-							
4) Fla	mmability _	4	45)	Specia	l Hazards	N/A	microcur	ies (if ann	1)
•				•		· · · · · · · · · · · · · · · · · · ·		ico (a app	
	······································								
Stora	<u>ge Detail</u>	-			Max	Avg	Max in	Waste	#
	1.	Cont.			Daily	Daily	One	Gener-	Days/yr
-	Location	Туре	Press	Temp	Amt	Amt	Vessel	ated (yr)	
46)	47)	48)	49)	50)	51) CU.	F 52) C21 F	t. Cu. Ft		55)
16	Trailer	<u> </u>		- <u>-</u>	1000	800			
					1000	- 800	1000		365
					<del></del>	- /			
					·				<b></b>
								·	

1000

800

1000

Tradename Totals

:,

### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating of C	Dakland, Inc.	EBMUD - Facility ID <u>033-00921</u>
Trade Name Information 5) Composition I Pure Mixture V	State Vaste 26) Waste Code	Federal 261 Wasto Codo
7 Common/Trade Name Oxygen a) Manufacturer <u>Pacific Oxyg</u> e		Phoné 5107444-808
29) Constituent 1 30) CAS # 778244 Constituent Name Oxygen		100%
Constituent 2 CAS # Constituent Name		
Constituent 3 CAS # Constituent Name Constituent 4 CAS #	•	
Constituent Name	Percent (%) by wt Percent (%) by wt	
Constituent Name		
Generic Name/Use (optional) MSDS Ref #/ ID Code	Dxidizer	
Trade Secret? Yes X No 35) Extrem Physical State Solid X Gas Lic DOT Hazard Class	uid un Specific Gravit	v (if liquid)
Health Hazard Flammability 45) Special	Hazards m	activity icrocuries (if appl)
·		

•	<u>Stora</u> Map 46)	ge Detail Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Amt	Amt	1	Waste Gener- ated (yr) Ft. 54)	#  Days/yr on site 55)
		Trailer		2		<u>1500</u>	- <u>-</u>	<u> </u>		<u> </u>
	Trade	name Totals				1500	1000	1500		

### Hazardous Materials Management Plan Hazardous Materials Inventory

ridzardous ivialeriais inve	ntory
Facility Name Francis Plating of Oakland, Inc.	EBNILID
	Facility ID033-00921
Trade Name Information State	Federal
25) Composition 🗋 Pure 🖾 Mixture 🗔 Waste 26) Waste Cod	e 181 261 Waste Cada
5) Composition Pure Mixture Waste 26) Waste Cod 7) Common/Trade NameMetal Finishing Waste Tr 1) Manufacture	eatment Sludge
B) Manufacturer Francis Plating	Phone(510) 444-55
Constituent 1 30) CAS #12054487 Percent (%) by	wt 12 ·
Consuldent Name Nickel Hudroxide	
Constituent 2 CAS # 204 Percent (%) by	wt 12
Consument Name Trivalent Chromium	
Constituent 3 CAS # 128040 Percent (%) by	vert 10
Constituent Name <u>Sodium Diethyldithiocar</u>	hamate
Constituent 4 CAS # 1309484 Percent (%) by	15
Cullsuluent Name Magnagain And da	w( <u>10</u>
Constituent 5 CAS # Percent (%) by Constituent Name Water	·····
Constituent Name Water	w(
Generic Name/Use (optional) <u>Hazardous</u> Waste,	/ Waste Recyclable —
MSDS Ref #/ ID Code	
Trade Secret? Yes A No 30 Extremely (Acutoly) Hasa	
	Repetitive 0
Health Hazard $2$ (3) Flammability $0$ (5) Special Hazards $N/A$	Reactivity
	nucrocuries (if appl)
orage Detail Max Avg	
Max Avg	Max in Waste #

Stora Map 46) 4 18	Location 477 East Id. Waste Tre Waste Tre		Temp 50) - <u>1</u> - <u>1</u> 	Max Daily Amt 515 ¹ u.Ya 25	Amt	Max in One Vessel I. ssju. Y	Waste Gener- ated (yr) d. 50	# Days/yr on site 55) 365 365
Trade	name Totals	 		35	25		50	

### Hazardous Materials Management Plan Hazardous Materials Inventory

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Facility Name Francis Plating of Oakland, Inc.	EBMUD - Facility ID 033-00921
Trade Name InformationState25) CompositionPure MixtureWaste 26) Waste Code27) Common/Trade Name Aluminum Clene 7528) Manufacturer	
29) Constituent 1 30) CAS # 11234531) Percent (%) by we Constituent Name Diethylene Glycol Monobuty Constituent 2 CAS #25155300 Percent (%) by we Constituent Name Sodium Dodecylbenzene Sul	1 y T Ether 99 famate
Constituent 3       CAS # Percent (%) by wt         Constituent Name       Constituent 4       CAS # Percent (%) by wt         Constituent Name       Constituent 5       CAS # Percent (%) by wt         Constituent 5       CAS # Percent (%) by wt         Constituent 15       CAS # Percent (%) by wt	
32)       Generic Name/Use (optional)       Alkaline / Cleaner         33)       MSDS Ref #/ ID Code	y (if liquid) _ 40) Pressure?

<u>Stora</u>	ge Detail	Cont.			Max	Avg	Max in	Waste	#
Map 46)	Location 471	Type 48)	Press 49)	Temp 50)	Daily Amt ⁵¹⁾ Lbs,	Daily Amt 52) _{Lbs} ,	One Vessei • 53) _{Lbs}	Gener- ated (yr) 54)	Days/yr on site 55)
	Trailer Tank.		1		500	250	500		365
						·			
	name Totals	ł.			500	250	500		

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### Hazardous Materials Management Plan Hazardous Materials Inventory

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Fac	ility Name _	Francis Plat	ing of	Oakland,	Inc.	Facili	EB ty ID <u>033</u>	NUD -00921
25) C 27) C	Gility Name       Francis Plating of Oakland, Inc.       Facility ID       033         ade Name Information       State       Federal         Composition       Pure (A Mixture]       Waste 26) Waste Code       26a Waste         Common/Trade Name       Bonderite       Phone(31         (29)       Constituent 1       30) CAS #766393       31) Percent (%) by wt       .75         Constituent Name       Hydroflouric Acid       Percent (%) by wt       .75         Constituent Name       Nitric Acid		Code 1583-930					
	Constituer Constituer Constituer Constituer Constituer Constituer	$\begin{array}{ccc} nt \ Value & nt \\ nt \ 2 & CAS \\ nt \ Name & Na \\ nt \ 3 & CAS \\ nt \ Name & CAS \\ nt \ 4 & CAS \\ nt \ Name \\ nt \ Name \\ nt \ 5 & CAS \\ \end{array}$	13338 13338 1000000000000000000000000000	72 Perc Acid 20 Perc Acid Perc	ent (%) by ent (%) by ent (%) by	wt <u>2</u> wt <u>5</u> wt		
93) M H) Tra K) Ph 8) DC 1) He	SDS Ref #/ I ade Secret? ysical State [ )T Hazard Cl alth Hazard	D Code ] Yes [] No : ] Solid [] Ga lass1 2	us) Extre us AL	emely (Acu iquid 377 S 39) (	itely) Haza pecific Gra JNNA#	ardous? [ wity (if liq 40) Pr	]Yes [] uid <u>)1,1</u> ressure?	No
Stora	<u>ge Detail</u>			Max	Avg	Max in	Waste	#
Map 46)	Location	Cont. Type Press 48) 49)		Amt	Daily Amt	One Vessel 53Gal	Gener- ated (yr)	Days/yr

·	Map 46)	Location	Type 48)		Temp 50)	Amt 51)Gal.	Daily Amt 52) Gal.		Gener- ated (yr) 54)	Days/yr on site 55)
	17 46	Trailer Tank		1	1	55	30	55		365
	·						ļ			
1	<u> </u>									······································
	 Frade	name Totals				5 5	30	55		

#### 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 The Pure Mixture Waste 26) Waste Code 26a Waste Code 27) Common/Trade Name Magnésium Oxide 28) Manufacturer <u>Dow Chemical</u> Phone 517) 636-4400 ²⁹⁾ Constituent 1 30) CAS #130942831) Percent (%) by wt 90% Constituent Name Magnesium Oxide Constituent 2 Percent (%) by wt CAS # Constituent Name Constituent 3 Percent (%) by wt CAS# Constituent Name Constituent 4 CAS # Percent (%) by wt Constituent Name

Percent (%) by wt

 32)
 Generic Name/Use (optional)
 Metal Oxide / Waste treatment supply

 33)
 MSDS Ref #/ ID Code

 34)
 Trade Secret?
 Yes

 35)
 Physical State
 No 35)

 36)
 Physical State
 Solid

 37)
 DOT Hazard Class
 IRR

 38)
 DOT Hazard Class
 IRR

 39)
 UNNA#
 40)

 41)
 Health Hazard
 0

 42)
 Flammability
 0

 43)
 Special Hazards
 N/A

Constituent 5 CAS #

Constituent Name

ан, С

Stora	ige Detail	Cont.			Max	Avg	1 -	Waste	#
Map 46)	Location 477	Type 43)	Press 49)	Temp 50)	Daily Amt ^{\$1)} Lbs.	Daily Amt s2) _{Lbs} .		Gener- ated (yr) 54)	Days/yr on site \$5)
<u>18</u> <u>39</u>	Waste Irm: EN Supp.	tt. J		1	5000	2400	50		365
						·			·
									·····
Trade	name Totals	.			5000	3400	50		<u> </u>

# Hazardous Materials Management Plan

II	
Hazardous Materials Invent	ory
Facility Name Francis Plating of Oakland, Inc.	
	Facility ID
	· · ·
Trade Name Information State	Federal
25) Composition Pure A Mixture Waste 26) Waste Code	26a Waste Code
$-i \Delta I$ Cummon / Frane Name $-i (Lorthologg) N - o kol$	
28) Manufacturer <u>Fidelity Chemical Products</u>	Phone(201) 242-4110
29) Constituent 1 30) CAS #778681431) Percent (%) by w	t 5
Consuluent Name Nickel Sultate	
Constituent 2 CAS #7681530 Percent (%) by wi	t 4
1 IConstituent Name Sodium Hupophosphite	
Constituent 3 CAS #001310732 Percent (%) by wi	2
Construent Name Soarum 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 33) Extremely (Acutely) Hazard	lous? TYes TA No
36) Physical State 🔲 Solid 🖂 Gas 🖾 Liquid 377 Specific Gravi	ty (if liquid) $1 \cdot 5$
38) DOT Hazard Class Not regulated 39) UNNA#	An Pressure?
36) Physical State       Solid       Gas       Liquid       37       Specific Gravil         38) DOT Hazard Class       Not       regulated       39) UNNA#         41) Health Hazard       3       39) UNNA#       43) R	eactivity 2
41) Health Hazard       3       43) R         44) Flammability       0       43) Special Hazards       N/A	uccornig
	action in abbit

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Stora	ige Detail	Cont.			Max Daily	Avg Daily	Max in One	Waste	#
Map 46)	Location 47)	Type 48)	Press 49)	Temp 50)		Amt 52)	Vessel 53)	Gener- ated (yr) %)	Days/yr on site 55)
5	Storage		<u> </u>	<u> </u>	-5000-	5000	5000		365
6	Plating	<u> </u>		<u> </u>	5000	5000	5000		365
30	Tanks	<u> </u>		<u> </u>	2000	3000	2000	·	365
	· · · · · · · · · · · · · · · · · · ·					·			
						-			
[rade:	name Totals	·	I		12000	12000	12000		

### Hazardous Materials Management Plan Hazardous Materials Inventory

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

Trade Name Information ) Composition Pure Mixture 7 Common/Trade Name_Sodius	State Waste 26) Waste Code Waste code	Federal 26a Waste Co <u>de</u>
) Manufacturer <u>Pacific Coas</u>	t Chemicals	Phone 510) 549-552
Constituent Name Sodium Constituent 2 CAS # Constituent Name Constituent 3 CAS # Constituent Name Constituent 4 CAS # Constituent Name	9120 31) Percent (%) by wt m Dichromate Dihydrate Percent (%) by wt Percent (%) by wt Percent (%) by wt Percent (%) by wt Percent (%) by wt	100%
Constituent Name	Chromic Compound xtremely (Acutely) Hazardous Liquid 37 Specific Gravity (1 39) UNNA#	if liquid)

: : -

Stora	<u>ge Detail</u>	Cont.			Max Daily	Avg		Waste	#
Map 46)	Location 471	Type 48)	Press 49)	Temp 50)			One Vessel 53Lbs	1 1	Days/yr on site 55)
16	Trailer	E	1	1	500	250	500		65
						·			
·									· · · · · · · · · · · · · · · · · · ·
Trade	name Totals	!			500	250	500		

### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating Of Oakland, Inc. EBMUD 633-00921

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8) Manufacturer <u>Talo</u>	<i>letals</i> Phone <u>215) 333</u>	-680
Constituent Name 22nd	413231) Percent (%) by wt 99%	•
Constituent Name	Percent (%) by wt	
Constituent 3 CAS # Constituent Name	Percent (%) by wt	
Constituent 4 CAS # Constituent Name		
Constituent 5 CAS # Constituent Name	Percent (%) by wt	
<ul> <li>Generic Name/Use (optiona)</li> <li>MSDS Ref #/ ID Code</li> </ul>	Heavy Metal Zinc / Zinc Source	
) Trade Secret? Yes K No 3	tremely (Acutely) Hazardous? 🔲 Yes 🎽 No	•
Physical State 🖾 Solid 🗆 Gas	Liquid 37 Specific Gravity (if liquid) ted39) UNNA# 40) Pressure?	
DOT Hazard Class Not reg	ted 40) Pressure?	
Health Hazard	cial Hazards $\frac{N/A}{2}$ microcuries (if appl)	

	<u>Stora</u> Map	ge Detail Location	Cont.   Type	Press	Temp	Max Daily Amt	Avg Daily Amt	Max in One Vessel	Waste Gener- ated (ут)	#  Days/yr  on site
	<b>46)</b>	47) Trailer	45) 	<b>49)</b>	50)	51) Lbs.	52) _{Lbs} .	53) _{Lbs}		55)
						300	200	300		365
•							·			
	Trader	name Totals				300	200	300		

### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating 0	f Oakland, Inc.	EBMUD Facility ID 033-00921
Trade Name Information 25) Composition Pure Mixture W 27) Common/Trade Name Zinc Cya 28) Manufacturer Great Western Cha	niae emical	Phone (510) 228-2800
Constituent 4 CAS # Constituent Name	_31) Percent (%) by wt ide Percent (%) by wt Percent (%) by wt Percent (%) by wt	
	Percent (%) by wt	
<ul> <li>32) Generic Name/Use (optional)</li></ul>	11d 37) Specific Gravity 39) UNNA#39	ous? [] Yes [] No (if liquid) 40) Pressure?

. .

Stora Map 46)	ge Detail Location 47)	Cont. Type	Press	Temp 50)		Avg Daily Amt	One Vessel	Waste Gener- ated (yr)	# Days/yr on site
<u> </u>	Trailer				51) Lbs, 300	52) _{Lbs} .	53) <i>LB</i>	s , 54)	<b>55)</b> <u>365</u>
Trader	ame Totals	l.	i .		300	150	300		

C1P6590

### Hazardous Materials Management Plan Hazardous Materials Inventory

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

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(Irade Name Information	State	Federal
25) Composition Pure Mixture V 27) Common/Trade Name	Waste 26) Waste Code_	26a Waste Code
ACELLO A		
28) Manufacturer Van Waters & Ro	ger	Phone 408) 456-9196
29) Constituent 1 30) CAS # 64197		A 2
I CONSULUENTINAME ACETIC A	cid -	
Constituent 2 CAS # Constituent Name	Percent (%) by wt	
Constituent 3 CAS # Constituent Name	Percent (%) by wt	
Constituent Name	Percent (%) by wt	
Constituent 5 CAS # Constituent Name	Percent (%) by wt	
32) Generic Name/Use (optional) <u>Ac</u>		
33) MSDS Ref #/ ID Code	: <i>uu</i>	
34) Trade Secret? Yes #7 No 38) Extrem	nely (Acutely) Hazardou	s? TYes M No
34) DOT Hazard Class CORR/FL	Juid 377 Specific Gravity (	(if liquid) <u>1.05</u>
41) Health Hazard	397 UININA#	40) Pressure?
<ul> <li>41) Health Hazard2</li> <li>44) Flammability2 43) Special .</li> </ul>	Hazards $N/A$ micro	Couries (if appl)
		ocurros (11 appl)

<u>Stora</u>	ge Detail	Cont.			Max	Avg	Max in	Waste	#
Map 46)	Location 47)		Press 49)	Temp 50)	Daily Amt ⁵¹⁾ Gal,		One Vessel 53) _{Gal}	Gener- ated (y7)	Days/yr on site 55)
9	<u>CarBoySto</u>		1		100	50	55		365
						·	·		
Trader	name Totals	l.			100	50	55		

GIP6390

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

## <u>Hazardous Materials Management Plan</u>

(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.

Randall E. Lewis Authorized Signature Print Name June 1, 1995 General Manager for Francis Plating Date of Cakland, Inc. Title

### Hazardous Materials Management Plan Hazardous Materials Inventory

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

(Irade Name Information	State Federal
25) Composition 🗖 Pure 🖾 Mixture 🗔 V 27) Common/Trade Name Aluminetch	Vaste 26) Waste Code 26a Waste Code
28) Manufacturer Chemco Products	Phone(213)537-5536
29)	
Constituent 1 30) CAS #1310732	31) Percent (%) by wt 85%
Constituent Name Sodium Hudr	oxide
Constituent 2 CAS #	Percent (%) by wt 15%
Constituent Name Alkaline	
Constituent 3 CAS #	Percent (%) by wt
Constituent Name	
	Percent (%) by wt
Constituent Name	1 ciccii (70) by wt
Constituent 5 CAS #	Percent (%) by ut
Constituent Name	
32) Generic Name/Use (optional) <u>Cau</u>	stic Soda / Cleanan
33) MSDS Ref #/ ID Code	
	nely (Acutely) Hazardous? 🔲 Yes 🖄 No
14) Physical State IX Solid Concerning	nery (Acutery) Hazardous? [] Yes [X] No
30 DOT Hazard Class CORR	juid 37 Specific Gravity (if liquid)
41) Health Hazard	39) UNNA# 40) Pressure?
44) Flammahilita A an C it	43) Reactivity <u>0</u> Hazards <u>ALK</u> microcuries (if appl)
the manufacility 45) Special	Hazards <u>ALA</u> microcuries (if appl)
	•

Stora	ge Detail	Cont.			Max Daily	Avg Daily	Max in	Waste	#
Map 46)	Location 477	Type 48)	Press 49)	Temp 50)	Amt 51) Lbs.	Amt		Gener- ated (yr) 54)	Days/yr on site 55)
<u>35</u> <u>17</u>	Ano. Sto. Trailer	1	1	<u> </u>	500	200	500		365
Trade	name Totals				500	200	500		

### Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating	of Oakland, Inc.	EBMUD Facility ID 033-00921
Trade Name Information 25) Composition [27] Pure [27] Mixture 27) Common/Trade Name Acetonic	2	Federal de264 Waste Code
28) Manufacturer Union Chemical		Phone(312)885-5150
²⁹⁾ Constituent 1 30) CAS #6764 Constituent Name	1131) Percent (%) b	y wt 100
Constituent 2 CAS # Constituent Name	Percent (%) b	y wt
Constituent 3 CAS # Constituent Name	Percent (%) b	y wt
Constituent 4 CAS # Constituent Name	Percent (%) b	y wt
Constituent 5 CAS # Constituent Name	Percent (%) by	y wt
32) Generic Name/Use (optional) <u>V</u> 33) MSDS Ref #/ ID Code	olatile Solverts / C	Leaner
<ul> <li>34) Trade Secret? Yes Mo 33) Ex</li> <li>36) Physical State Solid Gas 33</li> <li>36) DOT Hazard Class FL</li> </ul>	Luduid un Specific Ca	$\mathbf{P}_{\mathbf{r}}$
<ul> <li>41) Health Hazard <u>1</u></li> <li>43) Flammability <u>3</u> 45) Spece</li> </ul>	ial Hazards <u>N/A</u>	u) Reactivity microcuries (if appl)
Storage Detail	Max Avg	Max in Waste #
Map Location Type Press Terr	Daily Daily	One Gener- Days/yr

21

j.

		1.	Cont.		1	Daily	Daily	One	Gener-	Days/yr
	Мар	1	Туре	Press	Temp	Amt	Amt			on site
	46)	47)	45)	49)	50)	51) Gal.	52) Gal.	53)Gal.	54)	55)
	17	Trailer	E	1	<u> </u>	100	55	55		365
	·									
•							·			
C	Trade	name Totals	_			100	55	55		

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### Hazardous Materials Management Plan Hazardous Materials Inventory

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

	me Information	•	State		Federal	
25) Compos ;27) Commo	ition 🗇 Pure 🖱 Mix n/Trade Name 🛛 A	ture Waste : <i>Lodine</i>	26) Waste Code		264 Waste Code	
	cturer A				Phone 215) 628-	-100?
	nstituent 1 30) CAS Instituent Name ^{Ch}					
Cor	istituent Name 50	#7681494 P dium Fluori	ercent (%) by wt de	0		
Con	stituent Name <u>Po</u>	tassium Flu			·	
Con	stituent Name Po	tassium Flu		····		
Con	stituent 5	<u>13746662</u> Pe tassium Fer	ercent (%) by wt ricyanide	18		
			4 9 7			
33) MSDS R	Name/Use (optiona ef #/ ID Code				Aluminum Prot	<u>ec</u> tc:
34) Trade Sec 36) Physical S 38) DOT Haz	Tet? [] Yes 首 No 3 State 蒼 Solid □Ga ard Class Oxy	s Liquid 37	Acutely) Hazardo Specific Gravity 9) UNNA # <u>146</u> 3	/ (if li	auid)	
41) Health Ha 44) Flammabi	azard			activi	ity 1	-

Storage Detail						Avg	Max in	Waste	#
Map 46)	Location 47)	Cont. Type 48)		Temp 50)	Daily Amt ⁵¹ Lbs.	Daily Amt 52) Lbs.	One Vessel \$3Lbs	Gener- ated (yr) , 34)	Days/yr on site 55)
35	Ano. Sto. Trailer	D	1	<u> </u>	100	50	50		365
						·			·
							· · · · · · · · · · · · · · · · · · ·		
Frader	name Totals	1.	l		100	50	50		<del></del>

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### Hazardous Materials Management Plan Hazardous Materials Inventory

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

Trade Name Information	State	
25) Composition Pure Mixtur		Federal
277 Common/Trade Name Cadmiu		262 Waste Code
28) Manufacturer <u>Talco America</u>		Dha=-19151333-4900
		Phone (215) 333-6800
29) Constituent 1 30) CAS #74	10130 31) Percent (%) by with	00 0%
Constituent Name <u>Cad</u>	$\frac{40457}{100}$ Sin 1 ciccult (70) by W(	77.70
Constituent 2 CAS #	Percent (%) by wt	·····
Constituent Name		······
Constituent 3 CAS #	Percent (%) by wt	
Constituent Name		
Constituent 4 CAS #	Percent (%) by wt	
Constituent Name		
	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) Hazardo	
w Physical State 67 Solid CGas	🗆 Liquid en Specific Cravin	(if liquid)
$\begin{array}{c} \text{33) DOT Hazard Class POIS B} \\ \text{41) Health Hazard } \\ \end{array}$	391 [ INN A #	(n nquid <u>,</u>
41) Health Hazard 3		
<ul> <li>41) Health Hazard</li> <li>44) Flammability</li> <li>6</li> <li>45) Sp</li> </ul>	$\frac{1}{N/A}$ mi	TOGUTION (if appl)
·		
	· · · · · · · · · · · · · · · · · · ·	·
Storage Detail	Max Avg Ma	x in Waste #

£1. Stik

þ

Map       Location       Type       Press       Temp       Amt       Amt       Vessel       ated (yr)       on site         44)       47)       48)       49)       50)       51)       Lbs.       52)       Lbs.       53Lbs.       54)       55)         17       Tratters       K       1       1       200       50       50       50       365         20       Cad/ Tank	Storage Det	<u>ail</u> Cor	ıt.		Max Daily	Avg  Daily	Max in  One	Waste Gener-	#
20     Cad/ Tank     20     200     30     30     30       20     Cad/ Tank     20     200     30     30     30	.• .	ion   Typ	e Press	· ·	Amt	Amt	Vessel	ated (yr)	1
				I	200		50		365
	20 Cad7	Tank							
						·			
Tradename Totals		<u></u>							<u></u>
Tradename Totals								 	
	Fradename T	otals					<del></del>	l	

GIP6590

#### Hazardous Materials Management Plan Hazardous Materials Inventory EBMUD

Facility Name Francis Plating of Oakland, Inc. Facility ID _____

<u> </u>	
/ Trade Name Information	State Federal
25) Composition 🖾 Pure 🗔 Mixture 🗔 Wast	e 26) Waste Code 264 Waste Code
277 Common/Trade Name_Sodium Cyanid	
28) Manufacturer <u>Great Western chemic</u>	al Phone 503 228-2600
²⁹⁾ Constituent 1 30) CAS #1 <u>43339</u> 31)	Percent (%) by wt 98%
Constituent Name Sodium Cyanid	e
Constituent 2 CAS #	
Constituent Name	· · · · · · · · · · · · · · · · · · ·
Constituent 3 CAS #	Percent (%) by wt
Constituent Name	
	Percent (%) by wt
Constituent Name	
Constituent 5 CAS #	Percept (%) by wit
Constituent Name	
32) Generic Name/Use (optional) <u>Cyanid</u>	2/Cadmium/ Tinc/Conner Plating
32) Generic Name/ Use (optional) <u>ogwidda</u>	
33) MSDS Ref #/ ID Code	
34) Trade Secret? 🖸 Yes 🖾 No 33) Extremely	y (Acutely) Hazardous? 🕅 Yes 🗌 No
36) Physical State 📉 Solid 🖂 Gas 🔲 Liquid	1 377 Specific Gravity (if liquid)
38) DOT Hazard Class POIS B	39) UNNA# 40) Pressure?
(1) Uselth Userand 4	In Deservice ()
44) Flammability 45) Special Ha	zards Poison microcuries (if appl)

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Stora	ge Detail	Cont.			Max Daily	Avg  Daily	Max in  One	Waste Gener-	#  Days/ут
Map 46)	Location 477	Type 45)	Press 49)	Temp 50)		Amt	Vessel 53)Lbs	ated (yr)	on site 55)
17	Trailer	D	1	1	200	50	200		365
	·					ļ			
					200		200		
Trade	name Totals			1				<u></u>	

### Hazardous Materials Management Plan Hazardous Materials Inventory

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

Composition I Pure Mixture	State Federal
Common/Trade Name Nitri	_ Waste 26) Waste Code 26a Waste Code
	Phone (302) 774-2
²⁹ Constituent 1 30) CAS # 796	737231) Percent (%) by wt 47760
Constituent Name Nitr	ic Acid
Constituent 2 CAS #	Percent (7) by with
Constituent Name Wate	<u> </u>
Constituent 3 CAS #	Percent (%) by wt
Constituent Name	
Constituent 4 CAS #	Percent (%) by wt
Constituent Name	
Constituent 5 CAS #	Percent (%) by wt
Constituent Name	
7.	companie Ariz ( Dessination Cluic i
	norganic Acid / Passivation Stripping
MSDS Ref #/ ID Code	
Irade Secret? Yes M No 35) Ext	tremely (Acutely) Hazardous? 🔲 Yes 🗷 No
rnysical State T Solid TGas M	Liquid an Specific Crawler (14 Novid) 7 5
OI Mazard Class Conn/OAL	$3911$ INN A $\#^{2}0^{3}$ (a) Processes 7
Health Hazard	ial Hazards <u>Acid</u> microcuries (if appl)
Flammability 43) Spec	ial Hazards Acid microcuries (if appl)

-----

	ge Detail	Cont.	1_	l	Max Daily	Avg Daily	Max in One	Waste Gener-	#  Days/yr
Map 46)	Location 471	Type 48)	Press 49)	Temp 50)	Amt ⁵¹ Gal.	Amt 52) Gal,	Vessel syal.	ated (yr) 54)	on site \$5)
	CarBoy Sto Sto.Tank	. D 	1	$\frac{1}{1}$	<u> </u>	100	150 4000		385
23	Strip Tank								
									<u></u>
Trade	name Totals				4150	4100	4150		

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#### Hazardous Materials Management Plan Hazardous Materials Inventory

ЕВМИД

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

(F 1 ) I I I I I I I I I I I I I I I I I I	
(Trade Name Information	State Federal
25) Composition 🖾 Pure 🗔 Mixture 🗔 W	aste 26) Waste Code 262 Waste Code
277 Common/Trade Name Hydroxyacet	ic Acid
28) Manufacturer <u>F.I. Dupont</u>	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	
	Percent (%) by wt
Constituent Name	
	Percent (%) by wt
Constituent Name	. Tercent (%) by wt
Otrage	ric Acid / Electroless Nickel Additive
ist denene rame, use (upuonal)	
33) MSDS Ref #/ ID Code	
	nely (Acutely) Hazardous? 🔲 Yes 🔀 No
36) Physical State 🖂 Solid 🖂 Gas 🖾 Liq	uid 377 Specific Gravity (if liquid) <u>103</u>
38) DOT Hazard Class Acid	39) UNNA# 40) Pressure?
41) Health Hazard ²	AN Reactivity 0
44) Flammability 0 45) Special I	Hazards <u>Acid</u> microcuries (if appl)
·	

<u>Stora</u>	ge Detail	Cont.			Max Daily	Avg  Daily	Max in One	Waste Gener-	#  Days/yr
Мар	Location	Type	Press	Temp		Amt		ated (yr)	on site
46)	47)	48)	49)	50)	51) Gal.	<b>52)</b> Gal.	53) Gal	54)	55)
-31	EN Sto.	E	1	1	100	50	55	1 <u> </u>	365
					<del></del>	[			
							·	· .	
Trade	name Totals	1	l	<u> </u>	100	50	55		,

# Hazardous Materials Management Plan Hazardous Materials Inventory

EBNUD Facility Name Francis Plating of Oakland, Inc. _____ Facility ID ______ 033-00921

(T I N I I I I I I I I I I I I I I I I I	·
(Trade Name Information	State Federal
25) Composition 🗔 Pure 🖾 Mixture 🗔 Was	te 26) Waste Code 26a Waste Code
277 Common/Trade Name Metex M-629	
28) Manufacturer <u>Macdermid</u>	Phone Phone
····	
²⁹⁾ Constituent 1 30) CAS # 768138 J ₁	) Percent (%) by wt 90 %
Constituent Name <u>Sodium</u> Bis	ulfate
Constituent 2 CAS # 7681494	Percent (%) by wt / //
Constituent Name Inorganic	Florides
	Percent (%) by wt
Constituent Name	
	Percent (%) by wt
Constituent Name	
	Percent (%) by wt
Constituent Name	rercent (%) by wt
32) Generic Name/Use (optional) <u>Acid S</u>	alts / Cleaner
33) MSDS Ref #/ ID Code	
34) Trade Secret? Yes Mo 33) Extremely	y (Acutely) Hazardous? [] Yes [] No
36) Physical State 区 Solid □Gas □Liquid 38) DOT Hazard Class ORM-B	1 37 Specific Gravity (if liquid)
38) DOT Hazard Class Onla-D	39) UNNA# <u></u> 40) Pressure?
41) Fiealth Hazard 1	In Popping 1
44) Flammability 45) Special Ha	zards <i>Acid</i> microcuries (if appl)
	••
	·····

<u>Stora</u> Map 46)	ge Detail Location 47	Cont. Type 45)	Press	Temp	Max Daily Amt 31) ^{Lbs}	Avg Daily Amt 32) ^{Lbs} .	Max in One Vessel ss ^{Tb s}	Waste Gener- ated (yr) 54)	# Days/yr on site 55)
16	Trailer	<u> </u>		<u> </u>	-500	400			- 255
27	Act. Tank								
								· .	
{					<u> </u>				
Frade	name Totals				500	400	500		······································
									<u> </u>
							e.		CIP6390

### 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 W	Vaste 26) Waste Code	261 Waste Code
277 Common/Trade Name Methyl E		
28) Manufacturer <u>East Bay</u> (		Phone (415) 782-204
20)		
²⁹⁾ Constituent 1 30) CAS # ⁸⁹³³	31) Percent (%) by wt ⁹	9%
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) <u>Ke</u>	tone / Cleaner	
33) MSDS Ref #/ ID Code		
34) Trade Secret? 🗌 Yes 🎽 No 35) Extrem	nely (Acutely) Hazardous	2 TYPE KING
36) Physical State $\Box$ Solid $\Box$ Gas $\bigtriangleup$ Liq	uid an Specific Gravity (i	fliquid) ⁸⁰
$\frac{1}{FL} = \frac{1}{FL}$	an I INNIA #	ngulu <u>r</u>
(1) Health Hazard $2$		
(1) Health Hazard <u>2</u> (4) Flammability <u>3</u> (5) Special 2	Waranda N/A	
		scuries (ir appi)

ana a Sana a Mana ana

<u>Stora</u>	ige Detail	Cont.			Max Daily	Avg  Daily	,	Waste Gener-	# Days/yr
Map 46)	Location 47)	Type 48)	Press 49)	Temp 50)		Amt		ated (yr)	On site 55)
17	Trailer		<u> </u>	· <u> </u>	55	30	55		365
						·			
Trade	name Totals				55	30	55		

#### Hazardous Materials Management Plan Hazardous Materials Inventory

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

Trade Name Information	State	Federal
n Composition I Pure Mixture V n Common/Trade Name Potassium	Waste 26) Waste Code	261 Waste Code
) Manufacturer <u>Chemicals</u>	& Plastics	Phone 315) 487 - 479
29) Constituent 1 30) CAS #584087 Constituent Name Potassium		99%
Constituent 2 CAS # Constituent Name	Percent (%) by wt	
	Percent (%) by wt	
Constituent 4 CAS # Constituent Name	Percent (%) by wt	
Constituent 5 CAS #	Percent (%) by wt	·
) Generic Name/Use (optional)	Pot ASH	······
MSDS Ref #/ ID Code		
Trade Secret? Yes No 35) Extre Physical State X Solid Gas DOT Hazard Class	mely (Acutely) Hazardov quid 37 Specific Gravity 39) UNNA#	us? Yes 🖄 No (if liquid) 40) Pressure?
Health Hazard	Hazards <u>N/A</u> mic	r

Stora	i <mark>ge Detail</mark>	Cont.			Max Daily	Avg Daily	Max in One	Waste Gener-	# Days/yr
Map 46)	Location 47)	Type 48)	Press 49)	Temp 50)			1		On site 55)
	Dry Chem. Sto.				2000 	,			
					·				
Trade	name Totals				2000	1000	<u>50</u>	I	
						*1	a. 		CIP6590

# 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
27 Common/Trade Name Nickel	Sulfate
28) Manufacturer <u>Harshaw</u>	Phone (215) 292-929
29)	
29) Constituent 1 30) CAS # 77868	<u>1431)</u> Percent (%) by wt 99%
Constituent Name Nicke	l 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	
2) Generic Name/Use (optional) <u>Inc</u>	organic Metallic Salt / Nickel Source
3) MSDS Ref #/ ID Code	
A) Trade Secret ( Yes KX No 33) Extre	mely (Acutely) Hazardous? 🔲 Yes 🖄 No
b) Physical State Solid Gas Solid	quid 37 Specific Gravity (if liquid)
b) DOT Hazard Class URM = E	39) UNNA# <u>9188</u> 40) Pressure?
1) Health Hazard $2$	(d) Reactivity 0
rianimability43) Special	Hazards $N/A$ microcuries (if appl)
	••••••

Stora	ge Detail	Cont.	_		Max Daily	Avg Daily		Waste Gener-	#
Map 46)	Location 471	Type 48)	Press 49)	Temp 50)	Amt 51): Lbs.	Amt	1	ated (yr)	Days/yr on site 55)
	Dry Chem. <del>Sto.</del>		1	<u> </u>	2400	1200	50		365
						·			
Trade	name Totals				2400	1200	50		

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# Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc. EBNUD

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Trade Name Information	State	Federal
Composition Pure Mixture Common/Trade Name Sodium	letabisulfite	26a Waste Code
) Manufacturer Great Wes		Phone 570 235 - 42
²⁹⁾ Constituent 1 30) CAS # ⁷⁶⁸¹ Constituent Name Sodium	⁷⁴ 31) Percent (%) by wt 100 Metabisulfite	07
Constituent 2 CAS # Constituent Name	Percent (%) by wt	
Constituent 3 CAS # Constituent Name	Percent (%) by wt	
Constituent 4 CAS #	Percent (%) by wt	
Constituent 5 CAS # Constituent Name	Percent (%) by wt	
Generic Name/Use (optional) 50	dium Hydrogen Sulfite	/ Waste Treatme
MSDS Ref #/ ID Code Trade Secret? Yes X No 35) Extra Physical State C Solid C	emely (Acutely) Hazardous?	
DOT Hazard Class ORM-B	iquid 377 Specific Gravity (if 1	iquid)
Health Hazard2	40) 40) Reactive 1 Hazards <u>N/A</u> microc	

Map 46)	Location 477 Waste Trm East Yard	Cont. Type 48)	Press 49) 1	Temp 50) 1	Max Daily Amt 51) Lbs 2400	Avg Daily Amt 52) ^{Lbs} .	Max in One Vessel s3) ^{Lbs}	Waste Gener- ated (yt) 54)	# Days/yr on site 55) 365
Trade:	name Totals				2400	1200	50	·	

	Ala	meda (	Count	y De	partment	of Env	/ironmen	tal Heal	h
			rdou	is Ma	aterials	Manag	gement		
			Ha	zardo	us Mater	ials Inve	ntory		
Fa	cility Name _	Francis	Plati	ing of	Oakland,	Inc.	<b>—</b> 11.	EB;	1UD 00021
							Facili	y ID	-00721
Tr	ade Name Inf								·
					117	State	• ·	Federal	
25) C	Composition Common/Tra	da Mam		ure	Waste 26)	Naste Cod	le 2	6a Waste (	lode
28)	Manufacturer	At	ochem	u c um	пурорно.	sprice		·····	++++++++++++++++++++++++++++++++++++++
;,							I-	hone	)
ł	29) Constitue	nt1 30)	CAS #	76815	30 ₃₁₎ Perc	ent (%) hu	urt 100%		•
	Constitue	nt Name			Hypophos				
	Constituer		00	avam		ent (%) by	wt		¦
ł	Constituer						····		
İ	Constituer	nt 3	CAS #		Perc	ent (%) by	wt		
	Constituer					citt (707 07	····		
	Constituer	nt 4	CAS #		Perc	ent (%) hv	wt		
	Constituer	nt Name		<del></del>				·	
	Constituer	at 5 (	CAS #		Perce	ent (%) by	wt		
	Constituen	it Name		<del></del>					
33) N 34) Tr 36) Pr 38) D(	Generic Name ISDS Ref #/ I vade Secret? vysical State [ OT Hazard Cl ealth Hazard	D Code Yes 7 Solid ass 1 1 1 1 1 1 1 1 1 1 1 1 1 1	] No 39	s) Extre	emely (Acı iquid 377 S 39) L	itely) Haz pecific Gra JNNA#	ardous? [ avity (if liq 40) Pr	]Yes [X]   uid) essure?	No 
	ealth Hazard ammability _			<u> </u>	177	N/A	3) Reactivit	Y	
44) E16	$\underline{\mathbf{munabully}}$		45)	Specia	I Hazards		microcur	ies (if appl	)
								•	,
					_				· · · · ·
Stora	ige Detail				Max	Avg	Max in	Waste	#
	1	Cont.			Daily	Daily	One		
Мар	Location	Type	Press	Temp		Amt	Vessel	Gener-	Days/yr
46)	47)	48)	49)	50)			1	ated (yr)	on site
			17/	50)	⁵¹⁾ Lbs.	S2Lbs.	53) bs	· 54)	55)
	EN Sto.	I	1	1	4000	2000	500		365
17	Trailers								· · · · · · · · · · · · · · · · · · ·
						,			
							•		· · ·
						<u> </u>			<u> </u>
]									
Trade	name Totals				4000	2000	500		<u> </u>
				•			' <u></u> '	'	

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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 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 <u>Chemco Produces</u> Phone (213) 537 - 553 29) Constituent 1 30) CAS # 130396431) Percent (%) by wt 85% Constituent Name Borates, Tetra, Sodium Salts-decahydrate Percent (%) by wt Constituent 2 CAS# Constituent Name Percent (%) by wt Constituent 3 CAS # Constituent Name Constituent 4 Percent (%) by wt CAS # Constituent Name Constituent 5 CAS # Percent (%) by wt Constituent Name Cleaner 32) Generic Name/Use (optional) _ 33) MSDS Ref #/ ID Code ____ 34) Trade Secret? 🖾 Yes 🔲 No 33) 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 ____ 43) Reactivity ____0 44) Flammability ______ 43) Special Hazards ______ microcuries (if appl) _____

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Stora	ige Detail	Cont.				Avg		Waste	#
Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 30)	Daily Amt ³¹⁾ Lbs.	Daily Amt 52) _{Lbs} ,	Vessel	Gener- ated (yr)	Days/yr on site 55)
17 26	Trailer Soak Tank	<u> </u>	1	1	500	400	500		365
						·			
									·····
 Frader	name Totals	.	]		500	400	500		

	Alar	neda (	lount	y Deg	partment	of Env	ironmen	tal Healt	h
	· I	Hazai					ement	Plan	
	_		Haz	ardou	is Materi	als Inver -	itory	EBI	IUD
Fac	ility Name <u> </u>	rancis	Plati	ng ob	Oakland,	Inc.	Facilit	y ID <u>033-</u>	00921
								•	•
( Ira	<u>de Name Inf</u>	ormatio	n		9	itate		Federal	
, 25) Ci	omposition 🖸	] Pure [	]Mixt [.]	ure 🗌 🖞	Waste 26) V	Vaste Code	e 24	6a Waste C	ode
22) C	lommon/Trac fanufacturer	ie Nam	e <u>A</u>	<u>cetyl</u> nco	ene			7000	)772-385
1 1 1			0 \/	1.00			I ⁵	hone <u>t au u</u>	///2-000
1	²⁹⁾ Constituer	nt 1 30)	CAS #	74862	31) Perc	ent (%) by	wt 100%		,
	Constituer	it Name	A	cetul	ene. Eth	iune		_	
	Constituer	nt 2	CAS #		Perc	ent (%) by	wt		··
ļ	Constituer	it Name					•		
ł	Constituer		CAS#		Perce	ent (%) by	wt		
	Constituen		CAS #		Dene		·····		
	Constituen				Ferce	ent (%) bý	wt		
	Constituen				Perce	ent (%) by	wt		
	Constituen	t Name		<u></u>			····		
1									
<ul> <li>33) M</li> <li>34) Tr</li> <li>36) Ph</li> <li>38) DC</li> <li>41) He</li> </ul>	Generic Name (SDS Ref #/ II ade Secret? ysical State [ DT Hazard Cl ealth Hazard unmability _	D Code  Yes [7] ]Solid ass0	] No 33 MGas FG	) Extre	emely (Acu quid 377 Sj 39) L	itely) Haza becific Gra INNA#	vity (if liqu	uid) essure?	_
Stora	ge Detail				Max	Avg	Max in	Waste	#
		Cont.	t_	)	Daily	Daily	One	Gener-	Days/yr
Map	Location			Temp	1	Amt	Vessel	ated (yr)	on site
46)	47)	48)	49)	50)	³¹⁾ Cu.F	t, ⁵²⁾ Cu, Ft	. Cu. Ft	54)	55)
16	Trailer		2		1000	800	1000		365
						·			
							•.		
			<u> </u>						
Trade	name Totals	l	!		1000	800	000		
				L L			·	·	

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# Hazardous Materials Management Plan Hazardous Materials Inventory

Fa	acility Name	Franci	s Plat	ing of	Vakland,	Inc.	Faci	lity ID <u>03</u>	EBNUD 33-00921
·25) ( ;27) (	ade Name In Composition Common/Tra	🚺 Pure ade Nar	⊟Mi× ne 0	xygen	Waste 26)	State Waste Cod	de	Feder 26a Waste	
	Manufacturer	•							0)444-808-
	29) Constitue Constitue		v = v	xygen	44731) Per	cent (%) by	ywt 10	0%	
	Constitue	nt Nam	e			cent (%) by	/ wt		
	Constitue Constitue	nt Nam	e	<u> </u>		cent (%) by		·	
	Constitue Constitue	nt Nam		<u></u>		ent (%) by			
	Constitue: Constitue:	nt 5 nt Nami	CAS # 		Perc	ent (%) by	wt		
32) ( 3) N	Generic Name ISDS Ref #/ 1	e/Use (c	ptiona	(۲	Oxidize	27			
4) Tr	ade Secret?[	7Yes 🛙	٦ No ٦	s) Extra	emely (Ac	tely) Har	ardous?		
s) Ph	nysical State ( OT Hazard C	🗍 Solic	Ga	s 🗆 L	iquid 37 S	pecific Gra	ardous?   avity (if li	L Yes L	No
9) D(	OT Hazard C	lass	Oxy		39) [	JNNA#	1072,00 H	ressure?	
1) He	ealth Hazard					<b>6</b>	) Reactivi	ity_0	
й Г1 <b>с</b>	ealth Hazard ammability _		45)	Specia	l Hazards	Oxy	microcu	ries (if ap	ol) (Ic
<u> </u>		<del></del>			· · · · · · · · · · · · · · · · · · ·				
Stora	ze Detail				Max	Å	Maria		·
1		Cont.			Daily	Avg  Daily	Max in One		# '
Лар	Location		•	Temp	Amt		Vessel	Gener- ated (yr)	1 / - / / ·
46)	47)	48)	49)	50)	1	. 52) Cu. F	}	1	55)
16	Trailer		2	<u> </u>		1000		-	

1500

1000

1500

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ii F

Tradename Totals

### Hazardous Materials Management Plan Hazardous Materials Inventory

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

·					
Trade Name Information		State		Federa	
25) Composition 🗔 Pure 🖾 Mixture	🗌 Waste 26	) Waste Co	de 181	261 Waste	Code
277 Common/Trade NameMetal F	rinishing	Waste 1	"re <del>atmen</del> t	Sludge	<u> </u>
28) Manufacturer Francis	Plating			Phone ⁽⁵⁷	0)444-555
			-		
29) Constituent 1 30) CAS #120	5448 ₃₁ ) Pe	rcent (%) b	ywt 12		•
Constituent Name Nicke	l Hydrox	ide			
Constituent 2 CAS # 2	04 Pe	rcent (%) b	ywt 12		
Constituent Name Triva	lent Chr	omium		·	
Constituent 3 CAS # 128	040 Pe	rcent (%) b	y wt 10		
Constituent Name <u>Sodium</u>	Diethyl	dithioca	rbamate		
Constituent 4 CAS # 130	9484 Pe	rcent (%) b	ýwt 15		
Constituent Name Magn	esium Ox	ide			
Constituent 5 CAS #	Pe	rcent (%) b	y wt		
Constituent Name Wate	r				
32) Generic Name/Use (optional) _	Hazardo	us Waste	/ Waste	Recycl	able
33) MSDS Ref #/ ID Code					
34) Trade Secret? 🗌 Yes 🖪 No 35) E	<tremely (a<="" td=""><td>cutely) Ha</td><td>zardous? [</td><td>🗌 Yes 🖾</td><td>No</td></tremely>	cutely) Ha	zardous? [	🗌 Yes 🖾	No
36) Physical State 🖾 Solid 🗂 Gas 🦷	Liquid 27	Specific G	ravies lifling	nutd)	
38) DOT Hazard Class ORM-E	<u>·</u> 39	)UNNA#_	<u>9188</u> 40) F	ressure?	
41) Health Hazard <u>2</u>			43) Reactivi	ty	
41) Health Hazard <u>2</u> 44) Flammability <u>0</u> 45) Spe	cial Hazard	lsA	_ microcu	ries (if ap	ol)
· · · · · · · · · · · · · · · · · · ·				• •	,
	<u> </u>		· · ·		· · ·
Storage Detail	Max	Avg	Max in	Waste	#
, Cont.	Daily	Daily	One	Gener-	Davs/vr

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i,

	1	Cont.			Daily	Daily	One	Gener-	Days/yr
Map	Location	Type	Press	Temp			Vessel		on site
46)	47)	48)	49)	50)	<b>su</b> u.Yd	. <b>52)</b> Cu.Yo	2. <b>ss</b> ju.Y	d. 54)	55)
4	East Id.	J	1	-1	25	-17		-50	365
18	Waste Tre	at A	1	1	10	8	-10		355
	&Temp. Waste Tre								
	<i>waste</i> 11.e								
							<u> </u>		
Trade	name Totals	<u> </u>	l		35	25	11	50	

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# Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating of Oakland, Inc.

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EBNUD Facility ID 033-00921

11	<u>ade Name In</u>	formation	·	State		Federa	· · · · · · · · · · · · · · · · · · ·
25)	Composition[	🗆 Pure 🖾 Mi>	kture Waste 2	) Waste Co	ode	26a Waste	
40	condition/ th	adelvame 801	naerıte			204 1145(6	Code
28)	Manufacturer	Pari	ker. Chemical			Phone 31	3)583-9300
		·				r none <u></u>	
i	Constitue	ent 1 30) CAS	#7 <u>66393</u> 31) Pe	rcent(%) b	wwt 25		•
			1010100000000	A (17.7)			•
	Constitue	ent 2 CAS	#7697372 Pe	rcent (%) b	14 14+ 2		
		11/1 ACTOR					
	Constitue	nt3 CAS	#1333820 Pe	rcent (%) b	77 71.16 0		
	Constitue	nt Name Ch	romic Acid		y wt	· ·	
			Pe				
		ncivame				-	
	Constitue		Per				
	Constitue	nt Name	, re.	$\operatorname{cent}(\%)$ by	y wt		
32) (	Generic Name	e/Use (optiona	Chrome (	Compound	/ Alumi	num Trea	tmant
3) M	ISDS Ref #/ 1	ID Code					
u) Tr	ade Secret?		a Even to ()				
A Ph	vsical State		s) Extremely (A	cutely) Haz	zardoüs? [	Yes 🗖	No
in DX	OT Hazard C		IS Calliquid 377 RR 39	Specific Gr	avity (if lie	quid) <u>1,1</u>	
1) Ha	alth Warand	2		UNNA#_	40) P	ressure?	
4) El 2	mmability				13) Reactivi	y	
4 E.Id	munaointy _	45)	Special Hazard	s <u>N/A</u>	_ microcu	ries (if app	1)
_	•					• •	
			·····				
51013	<u>ge Detail</u>	_	Max	Avg	Max in	Waste	#
. 1		Cont.	Daily				
Map	Location	Type Press	Temp Amt		Vessel	1	Days/yr
46)	47)	48) 49)		1 I	1 63361		on site

SIGal 55) 54) Trailer 17 D 1 55 1 30 55 365 Tank 46 Tradename Totals 55 30 55

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# Hazardous Materials Management Plan Hazardous Materials Inventory

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

rade Name Information Composition @ Pure  Mixture	State	Federal
Common/Trade Name Magnësi	Waste 26) Waste Code	264 Waste Code
Manufacturer Dow Chemi		DL. (517)676 4
, <del>, , , , , , , , , , , , , , , , , , </del>		Phone 517) 636-4
²⁹⁾ Constituent 1 30) CAS #1309 Constituent Name Magnes	um 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		
		· <u></u>
Generic Name/Use (optional)	tal Oxide / Waste t	reatment supply
MSDS Ref #/ ID Code		
rade Secret? Yes 🖾 No 35) Extr	emely (Acutely) Hazardou	15? TYes K No
nysical State (A) Solid []Gas (1)	iquid an Specific Cravine	/16.11.m.s.1.m.X
lealth Hazard ammability 45) Specia		ctivity 0
ammability 0 40 Specia	Wagarda N/A	

Stor	ige Detail	Cont.			Max	Avg	Max in	Waste	#
Map 46)	47)	Туре 45)	Press 49)	Temp 50)	Daily Amt s1) _{Lbs} .	Daily Amt 52) _{Lbs} ,		Gener- ated (yr) 54)	Days/yr on site 55)
18 39	Waste Irm; EN Supp.	.t. J	1	1	5000	2400	50		365
						·			
						·			
Trade	name Totals	·I.	l	]	5000	2400	50		

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### Hazardous Materials Mana L D1

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Hazardous Materials Management Plan Hazardous Materials Inventory	
Facility Name Francis Plating of Oakland, Inc. Ei	BNUD 3-00921
(Tende M	•
Trade Name Information State Federa	al
25) Composition Pure Mixture Waste 26) Waste Code 261 Waste 27) Common/Trade Name Electroless Nickel 261 Waste	Code
ing Manufactures Fidelity Champage unother the	
23) Manufacturer <u>Fluettig chemical Products</u> Phone ⁽²⁰⁾	1)242-411
²⁹⁾ Constituent 1 30) CAS #7 <u>786814</u> 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 Name Sodium Hydroxide	
Constituent 4 CAS # Percent (%) by wt	
constituent Name	
Constituent 5 CAS # Percent (%) by wt	······································
Constituent Name	•
<ul> <li>32) Generic Name/Use (optional) Heavy Metal Liquid / Electroless</li> <li>33) MSDS Ref #/ ID Code</li> </ul>	Nickel Sc
H) Trade Secret? T Yes Th No an Extramaly (A such ) II	
34) Trade Secret? Yes 🖄 No 35) Extremely (Acutely) Hazardous? Yes 🖄	No
(a) Physical State $\Box$ Solid $\Box$ Gas $\Box$ Liquid 37 Specific Gravity (if liquid) $\frac{1.5}{1.5}$ (a) DOT Hazard Class Not regulated 39) UNNA# (0) Pressure?	
<ul> <li>4) Flammability</li> <li>41) Special Hazard</li> <li>42) Special Hazard</li> <li>43) Reactivity</li> <li>44) Special Hazard</li> </ul>	<b></b>
(1) Health Hazard       3       (1) Health Hazard       40) Pressure?         (1) Health Hazard       3       (1) Reactivity       2         (2) Flammability       0       (3) Special Hazards       N/A       microcuries (if app	
microcuries (if app	

Map 46)	ge Detail Location 471	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt 51)	Avg Daily Amt 52)	Max in One Vessel 53)	Waste Gener- ated (yr)	# Days/yr on site 55)
	Storage	A		<u> </u>	-5000-	5000	5000-		365
	Plating	A		<u> </u>	5000	- s <del>ooo</del> -	5000		365
30	Tanks	<u>A</u>			2000	3 <del>000</del>	2000		365
	name Totals				12000	12000	12000		

### 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
277 Common/Trade Nam <u>e</u> Sodium 1		
28) Manufacturer Pacific Coast (	Chemicals	_ Phone 510) 549-5585
20)		· · · · · · · · · · · · · · · · · · ·
29) Constituent 1 30) CAS # 78912	20 31) Percent (%) by wt 2	.00%
Constituent Name Sodium L	Dichromate Dihydra <del>te</del>	<del>, · · · · · · ·</del>
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		
Chr	omic Compound	
32) Generic Name/Use (optional)		
33) MSDS Ref #/ ID Code		
34) Trade Secret? 🗖 Yes 🔣 No 35) Extre	mely (Acutely) Hazardou	s? [] Yes [] No
36) Physical State 🖾 Solid 🖂 Gas 🔤 Li	iquid 37 Specific Gravity (	if liquid)
34) Trade Secret? Yes X No 35) Extre 36) Physical State A Solid Gas Li 38) DOT Hazard Class Oxy 41) Health Hazard 3	39) UNNA#	10) Pressure?
43) Health Hazard <u>3</u> 44) Flammability <u>0</u> 45) Specia	43) Read	tivity 1
4) Flammability 0 43) Specia	l Hazards Oxidizer micr	ocuries (if appl)

	i <mark>ge Detail</mark> I	Cont.			Max Daily	Avg Daily	Max in One	Waste Gener-	# Days/yr
Map 46)	Location 47)	Type 48)	Press 49)	Temp 50)	Amt 51) Lbs.	Amt 52) Lbs.	1	ated (yr) 54)	on site 55)
16	Trailer	E	1	1	500	250	500	3	<i>6</i> 5
						,* 			
Trade	name Totals	I	<u></u>		500	250	500		

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# Hazardous Materials Management Plan Hazardous Materials Inventory

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

) Composition 🖾 Pure 🗔 Mixture ) Common/Trade Name Zinc	State Federal Waste 26) Waste Code 261 Waste Code
) Manufacturer <u>Talco M</u>	
29) Constituent 1 30) CAS # 131 Constituent Name ² inc	413231) Percent (%) by wt 99%
Constituent 2 CAS # Constituent Name	Percent (%) by wt
Constituent 3 CAS # Constituent Name	Percent (%) by wt
Constituent 4 CAS # Constituent Name	Percent (%) by wt
Constituent 5 CAS # Constituent Name	Percent (%) by wt
	Heavy Metal Zinc / Zinc Source
MSDS Ref #/ ID Code Trade Secret? Yes No 333 Ex: Physical State KI Solid Case	tremely (Acutely) Hazardous? 🗌 Yes 🏝 No
DOT Hazard Class Not regulat Health Hazard	Liquid 37 Specific Gravity (if liquid) $2 e^{d}$ 39) UNNA# 40) Pressure? 43) Reactivity tal HazardsN/A microcuries (if appl)

44

Stora	ge Detail	Cont.			Max Daily	Avg		Waste	#
Map 46)	Location			Temp 50)		Daily Amt 52) _{Lbs} .	Vessel	Gener- ated (yr)	Days/yr on site 55)
17	Trailer	E	1	<u> </u>	300	200	300		365
	<u> </u>								
	<del></del>						<u>.</u>		
							·		
	name Totals	I		——	300	200	300		

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Alameda Cou	nty Department of Env	Ionmeniai Health
-	ous Materials Manag Iazardous Materials Inver Lating Of Oakland, Inc	- I - ·
27) Common/Trade Name	State ixture Waste 261 Waste Code <i>Zino Cyanide</i>	
28) Manufacturer Great we	stern snemteas	Phone: 520/323-85
Constituent Name g	5 # 5 4 2 6 2 1 31) Percent (%) by inc Cuanide	
Constituent Name	# Percent (%) by	
Constituent Name		
Constituent 4 CAS Constituent Name		
Constituent 5 CAS Constituent Name	# Percent (%) by	wt
32) Generic Name/Use (optio 33) MSDS Ref #/ ID Code		
<ul> <li>34) Trade Secret? A Yes D No.</li> <li>36) Physical State A Solid C.</li> <li>38) DOT Hazard Class Poisor</li> <li>41) Health Hazard 3</li> </ul>	Gas Liquid 377 Specific Graves International Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contraction Contractication ion Contracticaticaticaticaticaticaticaticaticati	vity (if liquid) 7 2 3 40) Pressure?
41) Health Hazard <u>3</u> 44) Flammability <u>0</u>		
Storage Detail Cont.	Daily Daily	Max in Waste # One Gener- Days/yr

		Cont.			Daily	Daily	One .	Gener-	H Dave / vr
Map 46)	Location 47)	Type 48)	Press 49)	Temp 50)		Amt	1	ated (yr)	Days/yr on site 55)
17-	Trailer		1	<u> </u>	300	150	- 300		385
					·				
Trade	name Totals	I			300	150	300		·

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# Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name Francis Plating Of Oakland, Inc. Facility ID 277-003***

(T-d-N)		
/ Irade Name Information	State	Federal
25) Composition Pure Mixture	Waste 26) Waste Code	264 Waste Code
In Commony frade Name Acetic A	laid. Glacial	
28) Manufacturer Van Waters & Ro	Daer	Phone 403) 458-91
29) Constituent 1 and CAS $\pm 54.19.7$	,	
29) Constituent 1 30) CAS # 64197 Constituent Name Acetic A	31) Percent (%) by wt 14	7 <i>0</i>
Constituent 2 CAS # Constituent Name	Percent (%) by wt	
Constituent ?		_
Constituent 3 CAS # Constituent Name	Percent (%) by wt	
Constituent 4 CAS #		
Constituent Name	Percent (%) by wt	
Constituent Name_	Percent (%) by wt	
n Generic Name/Use (optional)	oi d	
MSDS Ref #/ ID Code	27 G	
) Trade Secret2 Yes IT No an Entry		
) Trade Secret? Yes M No 35) Extrem	mely (Acutely) Hazardous	3? 🗌 Yes 📇 No
) DOT Hazard Class CORR/FL	quid 37 Specific Gravity (i	fliquid) <u>2,05</u>
) Physical State ) DOT Hazard Class CORR/FL ) Health Hazard 2	39) UNNA# 4	o) Pressure?
Health Hazard2 Flammability2 45) Special	43) Reac	tivity0
45) Special	Hazards <u>W/A</u> micro	ocuries (if appl)
		••

Stora Map 46)	Location 47)	Cont. Type 48)		Temp 50)	Max Daily Amt 51) Gal.		One Vessel	Waste Gener- ated (yr)	# Days/yr on site 55)
9	CarBouSto		1		<u> </u>	50	55		365
Trade	name Totals				100	<u>50</u>	55		

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#### HAZARDOUS MATERIALS MANAGEMENT PLAN Facility Information

General Information

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1)Facility Name <u>-</u> 3)Street Address _	rancis	Plating og	f Oakland	, Inc.	VID 033-0	0921
3)Street Address	785 7t	i. Street	City_	Dakland	$Zip \frac{g_4}{g_4}$	607
4)Principle Busine	ss Activi	y Metal Fir	<u></u> #D&B#	N/A	6)SIC Code	3470
nEPA ID #_ <u>CADO</u>	0920610	<u>30</u> 8)Unif	orm Building	g Code Class 🔔	·	
9)Mailing Address	Same	3	City_	· <u> </u>	Zip	
10)Billing Address			City_		Zip	· · · · · · · · · · · · · · · · · · ·
11)# of Shifts	<u>2 or 3</u>	12)# Empl Shift 1 Start Shift 1 End	$\frac{9}{4:00p.m}$ #	Employees 2 c nift 2 Start 4:0 nift 2 End 12:0	$\frac{2r}{70P}$ ³ # Empl ² $\frac{70P}{70A}$ Shift 3 Sta $\frac{70A}{70A}$ Shift 3 En	or 3 $rt \frac{12:00}{12:00}a.$ d 7:30a.m.
13a) Area of Facili	y <u>27,8</u>	00 Sq.Ft.13	b) Hazardo	us Materials Sto	brage Area $\frac{26}{}$	000 Sq.F-
Facility Contacts 14)Primary Conta	ct <u>_Sean</u>	MacDougal	· .	Work Phone #	<u>(916)368-</u>	0100
	• • • • • • • • •	A = A = A + A = A	**			

Title	President/Owner		5
15)Secondary Contact	Randall E. Lewis	Work Phone # $\frac{(510)444-5535}{(510)444-5535}$	Ĩ
Title	General Manager	Home Phone # (510)685-8884	
16)Executive Contact	Sean MacDougall	Work Phone # (916) 368-0100	
Title	President/Owner	Home Phone # 011-63-2-635-522	5
177HMMP Contact	Sean MacDougall	Work Phone # (916) 368-0100	
TINC -	President/Owner	Home Phone #011-63-2-635-5225	
18)Property Owner	Erthco Environmental	Svc SWork Phone # (916) 368-0100	
19)Mailing Address	2.0. Box 276048	Home Phone # $(916)989-5592$	
City's	Sacramento, CA	Zip 95827	

### Land Use Information

	Adjacent Business Name
<u> </u>	Vacant Lot
N	Shopping Center
W	Shell Gas Station
5	Auto Parts House
	Special Land Uses St. Marys School
N.2	Lowell Jr. High School
W I	Apollo Apartments
S 2	Gingerbread House Rest.
22)Flood Zone 23)Water Table	<u>No</u> 24) Earthquake <u>18 Ft.</u> Faults

Contact	Phone
CalTrans	(415)923-4444
City of Oakland	(510)444-2489
Mr. Balt	(510)485-4961
Roger Schmidt	(510)289-0822
Contact Brother Male Anderson	Phone (510)444-8627
	(510)832-1436
Barbara Goody	(510)923-4444
T.J. Robinson.	(510)444-7373
N/A - General Bay A	rea
£.	· · · · ·

# Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name	Francis Plati	ng of Oakland	Facili	ty ID <u>033-00921</u>
· .	785 7th. Stre	et Oakland, (	TA. 94607	
Trade Name In	formation	State		Federal
25) Composition	<b>ede Name</b> South	] Waste 26) Waste C ern Water Treat	Code ment Co.	264 Waste Co <u>de</u>
8) Manufacturer				Phone (900) 973-1
29) Constitue	ent 1 30) CAS #	31) Percent (%)	by wt 40	•
Constitue	nt Name Sodium	1 Dimethyldithi	ocarbmate	
Constitue	nt 2 CAS #	Percent (%)	by wt	
Constitue	nt Name			
Constitue	nt 3 CAS #	Percent (%)	by wt	······································
Constitue	nt Name	· · · ·		·
Constitue	nt 4 CAS #	Percent (%)	hv wt	······
Constitue	nt Name			
Constitue	nt 5 CAS #	Percent (%)	hv wt	· · · · · · · · · · · · · · · · · · ·
Constituer	nt Name			
		Thickneh	/**	
		Thiocarbamates,	Waste Tre	atment
MSDS Ref #/ 1				
) Irade Secret?	] Yes 🖪 No 35) Ex	tremely (Acutely) H	lazardous? [	Yes 🗶 No
Physical State	🖸 Solid 🔤 Gas 🗖	Liquid 377 Specific ( 39) UNNA#	Gravity (if lic	[uid) <u>1.18</u>
DUI Hazard C	lass ORMB	39) UNNA#	+ <u> </u>	ressure?
Health Hazard			43) Reactivi	y1
Flammability _	45) Spec	ial Hazards <u>AUC</u>	microcu	ries (if appl)
·				· · ·
toman Datali				
torage Detail	Cart	Max Avg		Waste #
	Cont.	Daily Daily	One	Gener- Days/yr

ž

	Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Amt	Daily Amt 52) Gal	1	Gener- ated (yr) 54)	n Days/yr on site 55)
	18	East Yard			<u> </u>	300	200	<u> </u>		365
· . 										
	Frade	name Totals			 			 55		·

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# Hazardous Materials Management Plan Hazardous Materials Inventory

Facility Name _ Francis Plating of Oakland, Inc. Facility ID _____

Trade Name Information	State	Federal
s) Composition 🗔 Pure 🖾 Mixture	Waste 26) Waste Code	26a Waste Code
n Common/Irade Name Zinc Ph	osphate —	
s) Manufacturer <u>Allied - Keli</u>	te	Phone (312) 297-357
²⁹⁾ Constituent 1 30) CAS # 37-38 Constituent Name Zinc Dih	31) Percent (%) by wt	12 .
Constituent Name Zinc Dih	ydrogen Phosphate	
Constituent 2 CAS # 7779-		
Constituent Name Zinc	Nitrate	
	³⁸⁻² Percent (%) by wt	10
Constituent Name	rescent (%) by wt	12
Constituent 4 CAS #	Parant (01) have	Bal
Constituent Name	Percent (%) by wt	
Constituent 5 CAS #		
Constituent Name	Percent (%) by wt	
Generic Name/Use (optional) <u>Act</u>	la phosphate / Hus	t Preventive
MSDS Ref #/ ID Code		
Trade Secret? Yes No 35) Extre	mely (Acutely) Hazardo	us? TYes IT No
Physical State Solid Gas ALi DOT Hazard Class Corrosive Mat	quid 37 Specific Gravity	(if liquid) 7:5
DOT Hazard Class Corrosive Mat	<u>teria</u> (1760	AD Pressure?
Health Hazard2	43) Re:	activity $\theta$
Flammability 0 45) Special	Hazards <u>COR</u> mi	
	Hu	cocures (it apply
•		

Stora	ge Detail	Cont			Max De il	Avg	Max in	Waste	#
Map 44)	Location 47	Cont. Type 48)	Press 49)	Temp 50)	Daily Amt 51) Gal	Daily Amt 52) Gal	One Vessel 53)	Gener- ated (yr) 54)	Days/yr on site 55)
16 45	Trailer Tank		1		100	55	55		365
						·			
rader	name Totals	······································			100	55	55		<del></del>

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# Hazardous Materials Management Plan Hazardous Materials Inventory

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

25) (	ade Name In. Composition[	A Pure (	⊐Mix	ture	Waste 26)	State Waste Cod	de	Federa 261 Wasto	
27)	Common/11a	ide Naff	ie St	ulfur	ic Acid			26a Waste	Code
28)	Manufacturer	·	S	tauff	er Chema	ical co.		Phone (20	3)225-60
1	29) Constitue	nt 1 301	CAS #	76649	39 311 Por	cont (%) b			
	Constitue	nt Nam	e CII	V-#708	5 Sulfur	cent(%) o ric Acid	ywt <u>98%</u>		
	Constitue	nt 2	CAS #			cent (%) by			· · · · · · · · · · · · · · · · · · ·
	Constitue					Water			
. [.]	Constitue		CAS # =		Pero	cent (%) by	r wt	· · ·	·
	Constituer Constituer	nt 4	CAS #		Perc	cent (%) by	/ wt		
	Constituer		CAS#		Por				
	Constituer				Terc	ent (%) by	wt		
-				_	·····				
	-					A ?			
32) (	Generic Name	/Use (c	ptiona	1) <u>Ino</u>	rganic	Acid	A	nodizin	g PH
33) N	ASDS Ref #/ I	D Code	•	⁽¹⁾					
33) N	ASDS Ref #/ I	D Code	•	⁽¹⁾					
13) N 14) Ti 16) Pl	1SDS Ref #/ I ade Secret? Nysical State 1	D Code ]Yes ₪ ⊐ Solid		s) Extre	emely (Ac	utely) Haz	ardous? [	* Yes	No
13) N 14) Ti 6) Pl 8) D	ISDS Ref #/ I rade Secret? Nysical State [ OT Hazard Cl	D Code ]Yes M ]Solid ass_COI	⊿ No 3! ⊡Ga: RR	s) Extre	emely (Ac iquid 37 S	utely) Haz Specific Gri	ardous? [ avity (if lic	* Yes [uid] 2.5	No
13) N 14) Ti 16) Pl 16) D ⁽	ISDS Ref #/ I rade Secret? Nysical State [ OT Hazard Cl	D Code ]Yes M ]Solid ass_COI	⊿ No 3! ⊡Ga: RR	s) Extre	emely (Ac iquid 37 S	utely) Haz Specific Gri	ardous? [ avity (if lic	* Yes [uid] 2.5	No
13) N 14) Ti 6) Pl 8) D	ISDS Ref #/ I rade Secret? Nysical State [ OT Hazard Cl	D Code ]Yes M ]Solid ass_COI	⊿ No 3! ⊡Ga: RR	s) Extre	emely (Ac iquid 37 S	utely) Haz Specific Gri	ardous? [ avity (if lic	* Yes [uid] 2.5	No
33) N 14) Ti 16) Pl 8) D	1SDS Ref #/ I ade Secret? Nysical State 1	D Code ]Yes M ]Solid ass_COI	⊿ No 3! ⊡Ga: RR	s) Extre	emely (Ac iquid 37 S	utely) Haz Specific Gri	ardous? [ avity (if lic	* Yes [uid] 2.5	No
<ul> <li>13) N</li> <li>14) T1</li> <li>6) P1</li> <li>8) D0</li> <li>1) Ha</li> <li>4) F1a</li> <li>4) F1a</li> </ul>	ISDS Ref #/ I rade Secret? Nysical State [ OT Hazard Cl ealth Hazard ammability	D Code ]Yes M ]Solid ass_COI	⊿ No 3! ⊡Ga: RR	s) Extre	emely (Ac iquid 37 S	utely) Haz Specific Gri	ardous? [ avity (if lic	* Yes [uid] 2.5	No
<ul> <li>33) N</li> <li>34) Ti</li> <li>36) Pl</li> <li>36) Pl</li> <li>36) Pl</li> <li>40) Pl</li> <li>41) Ho</li> <li>42) Floor</li> </ul>	ISDS Ref #/ I rade Secret? Nysical State [ OT Hazard Cl	D Code ] Yes [ ] Solid ass COJ 4 0	⊿ No 3! ⊡Ga: RR	s) Extre	emely (Ac iquid 37 S	utely) Haz Specific Gra UNNA#	ardous? [ avity (if lic	[*] Yes quid) ^{2.5} ressure? ry <u>1</u> ries (if app	No  1)
33) N 34) Ti 34) Pi 36) Do 1) Ho 4) Fi 5tors	ISDS Ref #/ I rade Secret? Nysical State [ OT Hazard Cl ealth Hazard ammability	D Code ] Yes ] Solid ass COL 4 0 Cont.	2 No 32 Ga RR 45)	s AL	emely (Ac iquid 37) S 39) I l Hazards Max Daily	utely) Haz pecific Gr UNNA#	ardous? [ avity (if lic 40) P 3) Reactivity microcus  Max in	[*] Yes quid) ^{2.5} ressure? ty ries (if app Waste	No  1) #
<ul> <li>33) N</li> <li>34) Ti</li> <li>36) Pi</li> <li>36) Pi</li> <li>37) Pi</li> <li>38) Di</li> <li>39) Di</li> <li>31) Pi</li> <li>40) Pi</li> <li>41) Pi</li> <li>41) Pi</li> <li>42) Pi</li> <li>43) Pi</li> <li>44) Pi</li> <li>44) Pi</li> <li>44) Pi</li> <li>44) Pi</li> <li>45) Pi</li> <li>46) Pi</li> <li>47) Pi</li> <li>48) Pi</li> <li>49) Pi</li> <li>49) Pi</li> <li>49) Pi</li> <li>49) Pi</li> <li>40) Pi</li> <li>41) Pi</li> <li>41) Pi</li> <li>42) Pi</li> <li>43) Pi</li> <li>44) Pi</li> <li>44) Pi</li> <li>45) Pi</li> <li>46) Pi</li> <li>47) Pi</li> <li>48) Pi</li> <li>49) Pi</li> <li>49) Pi</li> <li>49) Pi</li> <li>49) Pi</li> <li>40) Pi</li> <li>41) Pi</li> <li>41) Pi</li> <li>42) Pi</li> <li>43) Pi</li> <li>44) Pi</li> <li>44) Pi</li> <li>44) Pi</li> <li>44) Pi</li> <li>45) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li> <li>46) Pi</li></ul>	ISDS Ref #/ I rade Secret? OT Hazard Cl ealth Hazard ammability rge Detail Location	D Code ] Yes ] Solid ass COL 4 0 Cont.	2 No 32 Ga RR 45)	s) Extre	emely (Ac iquid 37) S 39) I l Hazards Max Daily	utely) Haz Specific Gra UNNA#	ardous? [ avity (if lic 	[*] Yes [uid) 2.5 ressure? ry ry ries (if app Waste Gener-	No  l) #  Days/yr
33) N 34) Ti 36) Pl 36) Pl 36) Pl 36) Pl 31) Ho 41) Flore 51073 Viap 46)	ISDS Ref #/ I rade Secret? Nysical State [ OT Hazard Cl ealth Hazard ammability _	D Code Yes Solid ass CO 4 0 Cont. Type 43)	2 No 32 Ga RR 45)	s AL	emely (Ac iquid 37 S 39) I I Hazards Max Daily Amt	utely) Haz Specific Gra UNNA#	ardous? [ avity (if lic 40) P 3) Reactivity microcus Max in One Vessel	[*] Yes quid) 2.5 ressure? ty ty tries (if app Waste Gener- ated (yr)	No  1) #
33) N 34) Ti 34) Ti 36) Pl 36) Pl 36) Pl 37) Ho 40) Fla 5tora Map 46) 9	ISDS Ref #/ I rade Secret? Tysical State [ OT Hazard Cl ealth Hazard ammability _ rge Detail Location 47 CarBoy Sto	D Code Yes Solid ass CO 4 0 Cont. Type 43)	2 No 32 Gal RR 45) Press 49)	s Extre s ALi Specia	emely (Ac iquid 37 S 39) I I Hazards Max Daily Amt	utely) Haz Specific Gri UNNA#	ardous? [ avity (if lic 40) P 3) Reactivit microcus Max in One Vessel 53) Ga	[*] Yes quid) 2.5 ressure? ty ty tries (if app Waste Gener- ated (yr)	No 
33) N 34) Ti 34) Ti 34) Ti 34) Ti 34) Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti	ASDS Ref #/ I rade Secret? Tysical State [ OT Hazard Cl ealth Hazard ammability ge Detail Location 47 CarBoy Sto Ano. Tank	D Code Yes Solid ass CO 4 0 Cont. Type 43)	2 No 31 Ga <i>RR</i> 45) Press	Specia Temp 50)	emely (Ac iquid 37) S 39) I l Hazards Max Daily Amt S1) Gal	utely) Haz Specific Gra UNNA#	ardous? [ avity (if lic 40) P 3) Reactivity microcus Max in One Vessel	[*] Yes quid) 2.5 ressure? ty ty tries (if app Waste Gener- ated (yr)	No 
33) N 34) Ti 34) Ti 36) Pl 36) D 36) Pl 36) D 36) Pl 36) Pl 36) Pl 36) Pl 36) Pl 36) Pl 36) Pl 37) Pl 36) Pl 37) Pl 36) Pl 37) Pl 36) Pl 36) Pl 37) Pl 36) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) Pl 37) P	ISDS Ref #/ I rade Secret? Tysical State [ OT Hazard Cl ealth Hazard ammability _ rge Detail Location 47 CarBoy Sto	D Code Yes Solid ass CO 4 0 Cont. Type 43)	2 No 32 Gal RR 45) Press 49)	Specia Temp 50)	emely (Ac iquid 37) S 39) I l Hazards Max Daily Amt S1) Gal	utely) Haz Specific Gri UNNA#	ardous? [ avity (if lic 40) P 3) Reactivit microcus Max in One Vessel 53) Ga	[*] Yes quid) 2.5 ressure? ty ty tries (if app Waste Gener- ated (yr)	No 
333 M 34) Ti 34) Ti 34) Ti 34) Ti 34) Ti 34) Ti 34) 510 510 71 510 71 71 71 71 71 71 71 71 71 71	ASDS Ref #/ I rade Secret? Tysical State [ OT Hazard Cl ealth Hazard ammability ge Detail Location 47 CarBoy Sto Ano. Tank	D Code Yes Solid ass CO 4 0 Cont. Type 43)	2 No 32 Gal RR 45) Press 49)	Specia Temp 50)	emely (Ac iquid 37) S 39) I l Hazards Max Daily Amt S1) Gal	utely) Haz Specific Gri UNNA#	ardous? [ avity (if lic 40) P 3) Reactivit microcus Max in One Vessel 53) Ga	[*] Yes quid) 2.5 ressure? ty ty tries (if app Waste Gener- ated (yr)	No 
33) N 34) Ti 34) Ti 34) Ti 34) Ti 34) Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti 510 Ti	ASDS Ref #/ I rade Secret? Tysical State [ OT Hazard Cl ealth Hazard ammability ge Detail Location 47 CarBoy Sto Ano. Tank	D Code Yes Solid ass CO 4 0 Cont. Type 43)	2 No 32 Gal RR 45) Press 49)	Specia Temp 50)	emely (Ac iquid 37) S 39) I l Hazards Max Daily Amt S1) Gal	utely) Haz Specific Gri UNNA#	ardous? [ avity (if lic 40) P 3) Reactivit microcus Max in One Vessel 53) Ga	[*] Yes quid) 2.5 ressure? ty ty tries (if app Waste Gener- ated (yr)	No 

 Tradename Totals
 400
 200
 400

General and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s

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# Hazardous Materials Management Plan Hazardous Materials Inventory

English Mana	Francis	Plating	of	Oakland,	Inc.	-	EBMUD
Facility Name			_			Facility ID	033-00921
•						2	

( <u>Trade Name Information</u> 25) Composition [] Pure [] Mixture[]	State Waste 20 Waste Code	Federal
25) Composition Pure Mixture 27) Common/Trade Name Hydroci	hioric Acid	26a Waste Code
28) Manufacturer	hecat	Phone (203) 226-000
29) Constituent 1 30) CAS # 76477 Constituent Name	31) Percent (%) by wt	95%
Constituent 2 CAS # Constituent Name	Percent (%) by wt Water	
Constituent 3 CAS # Constituent Name	Percent (%) by wt	
Constituent 4 CAS # Constituent Name	Percent (%) by wt	
Constituent 5 CAS # Constituent Name	Percent (%) by wt	
	norganic Acid	
<ul> <li>MSDS Ref #/ ID Code</li></ul>	jauid en Specific Consider	$(16)(-11)^{-1} = 7$
) DOT Hazard Class <u>Strong</u> <u>Acid</u> ) Health Hazard <u>4</u> ) Flammability <u>5</u> Specia		40) Pressure? ctivity rocuries (if appl)

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Stora	ige Detail	Cont.			Max Daily	Avg Daily	Max in	Waste	#
Map 46)	Location 47)	Type 48)	Press 49)	Temp 50)		Amt		Gener- ated (yr) 54)	Days/yr on site 55)
9 32	CarBoy St HCL Tank	0. <u>G</u>		1	400	200	400		365
 Frader	name Totals				400	200	400		

n in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s

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# 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 🔤 27) Common/Trade Name Propion	Waste 261 Waste Codo
28) Manufacturer Union Co	arbide Phone (304) 744-543
Constituent Name Propi	⁹⁻⁴ 31) Percent (%) by wt 100%
Constituent 2 CAS #	Percent (%) by wt
Constituent Name	Percent (%) by wt
Constituent 4 CAS # Constituent Name	Percent (%) by wt
Constituent 5 CAS # Constituent Name	Percent (%) by wt
2) Generic Name/Use (optional) 3) MSDS Ref #/ ID Code	ild Acid'/ Electroless Nickel Additive
4) Trade Secret? Yes M No 35) Extre 6) Physical State Solid Gas L 9) DOT Hazard Class CORR	emely (Acutely) Hazardous? Yes 27 No Iquid 37 Specific Gravity (if liquid) ⁹⁹⁹ 39) UNNA# 40) Pressure?
n nealth nazaro	43) Reactivity Hazards microcuries (if appl)

in a si

Storage Detail Cont.				Avg	Max in	Waste	#		
Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Daily Amt 51) Gal.	Daily Amt 52) _{Gal}	One Vessel 53)	Gener- ated (yr) 54)	Days/yr on site 55)
31	EN STO.					50.	55		365
Trader	name Totals				100	50	55		

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# Hazardous Materials Management Plan Hazardous Materials Inventory

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

Trade Name Information 25) Composition I Pure Mixture	State Federal ] Waste 26) Waste Code 264 Waste Code
in Common/Irade Name Constch	
28) Manufacturer Conal Chemical	Phone (310) 531-6363
20)	
29) Constituent 1 30) CAS # 1310 Constituent Name Sodium	<u>-73-\$1)</u> Percent (%) by wt 90%
Constituent 2 CAS # Constituent Name	Percent (%) by wt
Constituent 3 CAS # Constituent Name	Percent (%) by wt
Constituent 4 CAS # Constituent Name	Percent (%) by wt
Constituent 5 CAS # Constituent Name	Percent (%) by wt
2) Generic Name/Use (optional) <u>Co</u>	ustic Soda / Cleaner
) MSDS Ref #/ ID Code	
DOT Hazard Class COPP	remely (Acutely) Hazardous? [] Yes [X] No Liquid 377 Specific Gravity (if liquid) 39) UNNA# 40) Pressure?
1 5388000 537357 4	
Flammability _0 45) Speci	al Hazards <u>ALK</u> microcuries (if appl)

( <u>Stora</u> Map 46)	Location 47)	Cont. Type 48)	Press 49)	Temp 50)	Max Daily Amt ⁵¹⁾ Lbs.	Avg Daily Amt 52) Lbs.s	Max in One Vessel 53) _{Lbs}	Waste Gener- ated (yr) 54)	#  Days/yr  on site   55)
	Ano. Sto. Trailer		1	<u> </u>	500	300	500	·	365
Trade	name Totals			   	500	 			

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#### APPENDIX B CURTIS & TOMPKINS TO-15 ANALYTE LIST AND REPORTING LIMITS

#### **VOLATILE ORGANICS** STANDARD REPORTING LIMITS

# Volatile Organics in Air TO-15

10-15			
CAS #	Compound	RL	RL 
74 55 0		ppv	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
			2.5
622-96-8	4-Ethyltoluene	0.5	
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



#### VOLATILE ORGANICS STANDARD REPORTING LIMITS



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