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August 19, 1992

Ms. Carolyn J. Douglas, M.S.
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

W.O. 4900-04-02-0008

**Subject: Transmittal of Final Site Inspection (SI) Report
Trojan Plating Company
Document Control Number 4900-04-02-AAAQ**

Dear Ms. Douglas:

ROY F. WESTON, INC. (WESTON) is pleased to present to you this final Trojan Plating Company Site Inspection Report. The Trojan Plating file is being sent to EPA under separate cover.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

ROY F. WESTON, INC.

Robert M. Sengebush, R.G.
SI Manager

RMS/cmc

Enclosure

cc: Sherry Nikzat - EPA (w/o enclosure)
Wenona Garside - EPA (w/o enclosure)
Frank Monahan - WESTON (w/enclosure)
Paul Sundberg - WESTON (w/enclosure)

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**SITE INSPECTION REPORT
TROJAN PLATING COMPANY
(EPA ID No. CAD982360489)**

Prepared for:

U.S. Environmental Protection Agency
Region IX
75 Hawthorn Street
San Francisco, CA 94105

EPA Contract Number 68-W9-0046
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**SITE INSPECTION REPORT
TROJAN PLATING COMPANY
(EPA ID NO. CAD982360489)**

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA), Region IX Site Evaluation Section, under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) has tasked Roy F. Weston, Inc. (WESTON) to conduct a Site Inspection (SI) at the Trojan Plating Company (TPC) site in San Bernardino, San Bernardino County, California.

The TPC site was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) in December 1987. A Preliminary Assessment (PA) was performed for EPA in April 1989. The purpose of the PA was to review existing information on the site and its environs to assess the threats, if any, posed to public health, welfare, or the environment and to determine if further investigation under CERCLA/SARA is warranted. After reviewing the PA, EPA decided that further investigation of TPC would be necessary to more completely evaluate the site using EPA's Hazard Ranking System (HRS) criteria. The HRS assesses the relative threat associated with the actual or potential releases of hazardous substances at a site. The HRS is the primary method of determining a site's eligibility for placement on EPA's National Priorities List (NPL). The NPL identifies sites at which EPA may conduct remedial response actions. This SI Report is the result of EPA's recent investigation.

Information presented in this report has been derived from multiple sources and will be referenced using parentheses which correspond to references listed in Section 8.0.

1.1 Apparent Problem

TPC came to the attention of the California Department of Health Services via a San Bernardino Telephone Directory (1). A drive-by conducted by DHS personnel in 1983 revealed that the site was inactive and that 55 gallon drums and spent acid bottles were present on site (1). On 19 March 1986, the San Bernardino Fire Department (SBFD) received a complaint concerning the general disorderly appearance and of waste materials and debris surrounding the TPC site (1).

2.0 SITE DESCRIPTION

This section describes the location, site specifics and operational history of the TPC site based upon available information obtained during the PA and this SI.

2.1 Location

Trojan Plating Company is located at 268 South Mountain View Avenue, San Bernardino, California in Township 1 South, Range 4 West, Section 10 (Latitude 34°, 05', 46", Longitude 117°, 17', 13") (9). The area surrounding Trojan Plating Company is primarily

commercial/residential (1). The site is located in the urban part of San Bernardino, in an area zoned for Commercial/Light Industrial (1). Burbank School is located less than a 1/4 mile from the site (1). The site location is shown in Figure 1.

2.2 Site Description and Operational History

The facility occupies approximately 9800 square feet (70 ft x 140 ft in area) (1). The facility consists of a single 2800 sq. ft. building and a paved front portion enclosed by a fence (1). It is bordered on the west by Accent Glass Company, on the south by a vacant lot, on the east by Mountain View Street and on the north by a small industrial park (Figure 2)(3).

Historical

Trojan Plating Company operated a plating facility at the site from 1970 to 1979 (1). Prior to 1970, the facility was occupied first by an equipment distribution company and then by a chicken stripping operation (1). Mr. Lawrence McConnehey, the current site owner, purchased the facility in 1970 and established TPC as a plating shop which conducted cadmium, copper, nickel, chrome, tin, gold and silver plating of various metal parts (1). In 1979, TPC shut down its plating shop and plating solutions were left to evaporate into "carbonates" that were to be used as fluxes in a separate mining business currently being conducted by Mr. McConnehey (1,3). Since these "carbonates" were used as products in this separate mining business, the "carbonates" were not evaluated as waste or used to determine waste quantities for the HRS model.

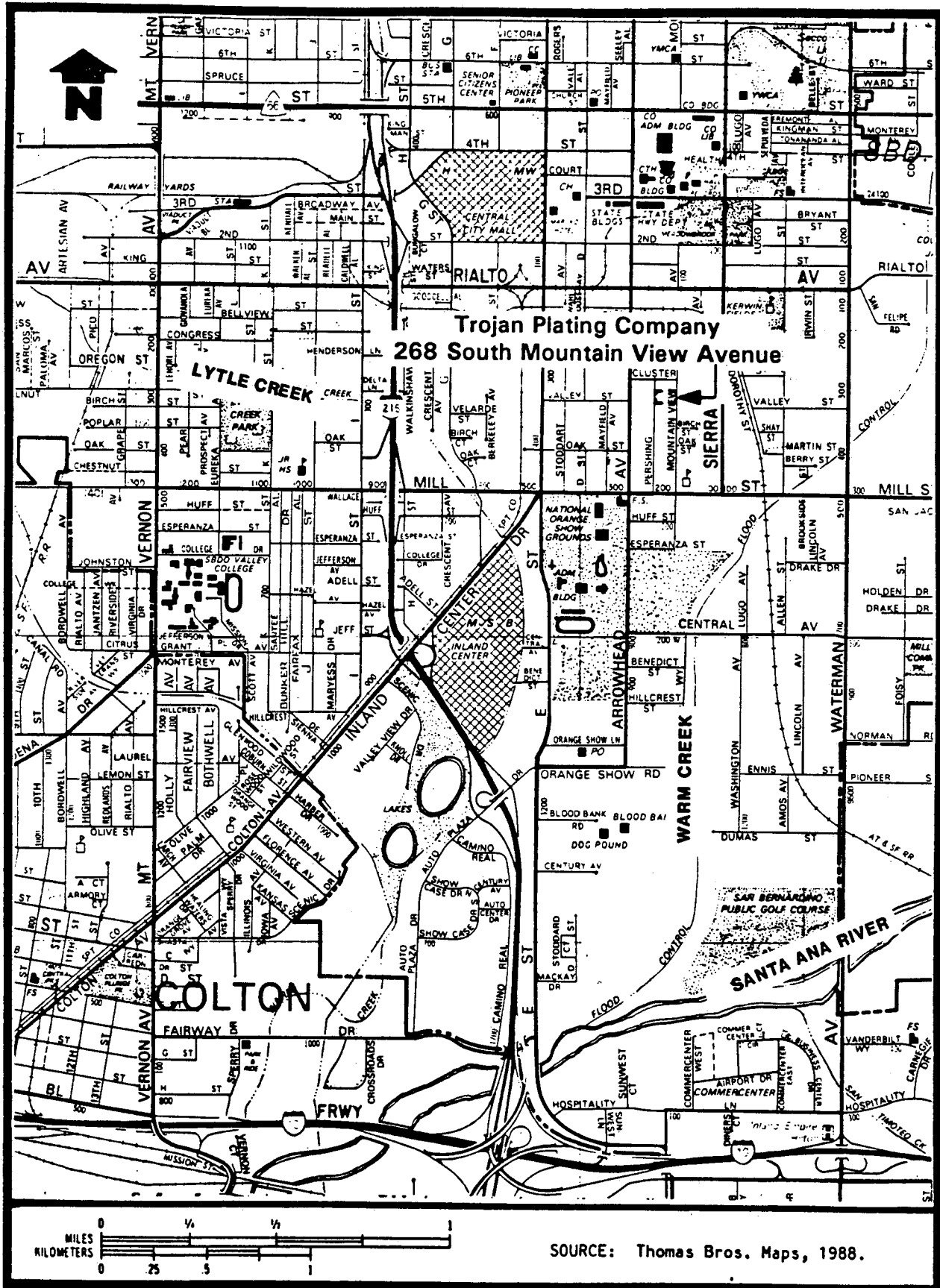
Current

The site is still owned by Lawrence McConnehey, the founder and operator of TPC. While the site has been inactive since TPC went out of business in 1979, equipment and materials are still present onsite. The site is surrounded by a barbed-wire fence and locking gate.

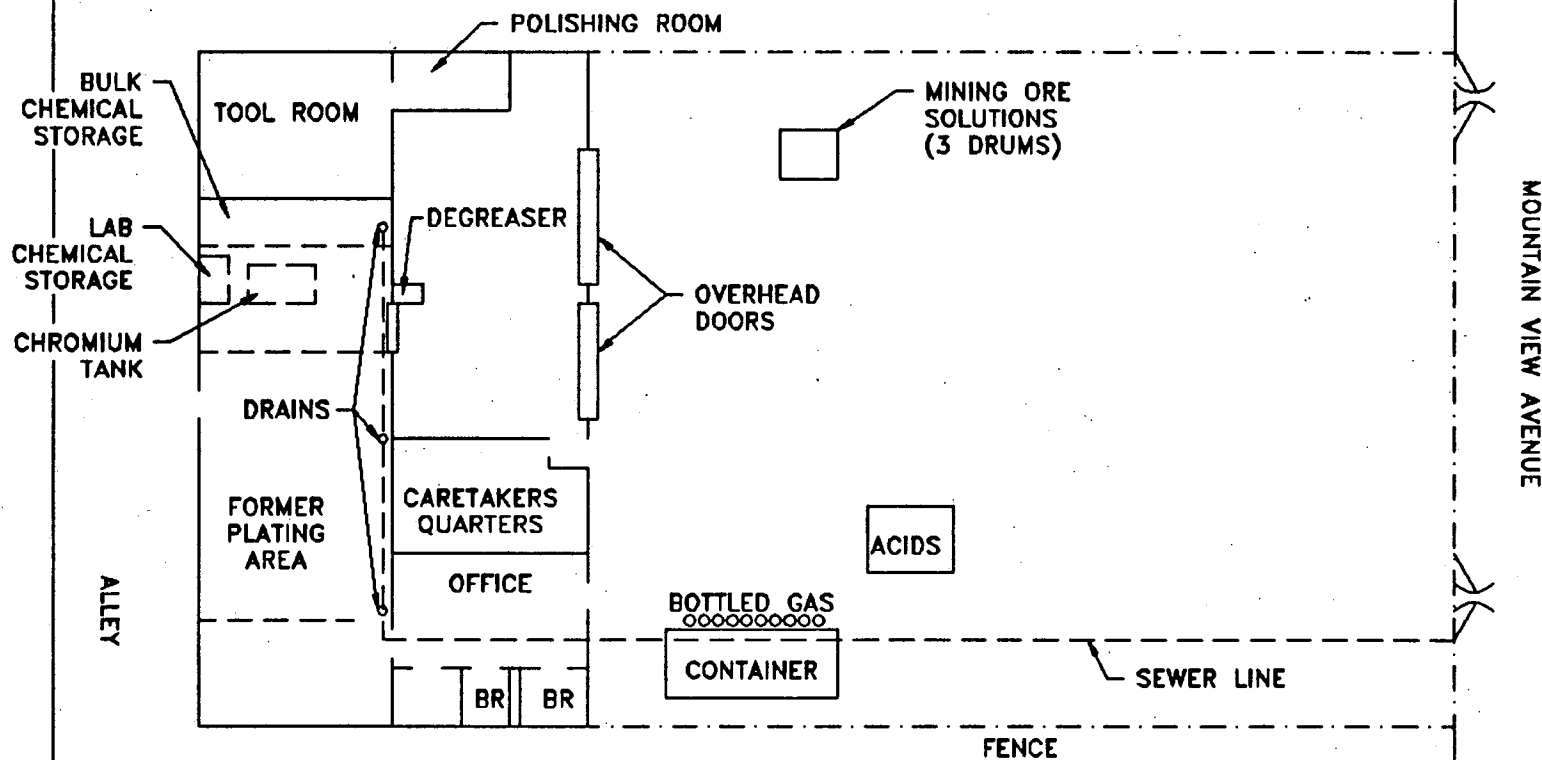
2.3 Regulatory Involvement

On 15 April 1986, the SBFD posted a "48 Hour Notice to Clean Premises" at TPC as there was no fire department access to the building. TPC did not comply with the notice. On 5 June 1986, the SBFD issued a Notice of Violation of the Municipal Code to TPC. McConnehey requested an extension due to extenuating circumstances (1).

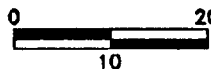
On 24 June 1986, the San Bernardino Environmental Health Department (SBEH), accompanied by the SBFD, inspected the site and found TPC to be in violation of hazardous waste generator requirements. It was noted that TPC was operating an unpermitted hazardous waste storage and disposal facility. Tanks and drums of spent chemicals had been accumulating on-site for longer than the maximum limit of 90 days. The SBFD generated the following list concerning TPC:



SITE LOCATION MAP
TROJAN PLATING COMPANY
268 SOUTH MOUNTAIN VIEW, SAN BERNARDINO, CALIFORNIA
FIGURE 1



SCALE (feet)



8/92/TROJAN.DWG

SITE MAP
TROJAN PLATING COMPANY
FIGURE 2

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- Inside:
1. Building is structurally unsafe; roof is collapsing.
 2. Mixing room for caustic materials has no flooring with a 2 foot drop.
 3. Large accumulation of storage (tanks, equipment) throughout.
 4. Caustics/flammables/combustibles: caustics are stored improperly.
 5. Spillage on floors (1).
- Outside:
1. Very poor access to building.
 2. Numerous unlabeled drums, some of which contain wastes.
 3. Large accumulation of unused machinery, weeds and debris (1).

On 24 June 1986, the SBEH found that the facility appeared to be a storage yard for someone involved in the plating and mining business. Pails of ores, plating tanks, acid bottles and old equipment were found in front of the plating shop. On the inside of the building, a 12-year old defunct plating operation was found with the following constituents in various drums and tanks. Chromic acid, nickel sulfide plating sludge, copper cyanide, copper cyanide salts, tin hydroxide plating solution, tin carbonate and tin plating rinse sludge. Nitric acid, hydrochloric acid, sulfuric acid, phosphoric acid, nickel acid and ferric chloride were also found at the facility (1).

The SBEH instructed McConnehey to remove the contents from all plating tanks at the facility and properly dispose of them at a Class I landfill. McConnehey was also instructed to segregate acids and oxidizers to prevent fires or explosions (1).

After some delay, McConnehey began to comply with the mandates of the SBFD and the SBEH. On 30 September 1986, McConnehey wrote to the SBEH to inform the Department of his progress towards compliance. The plating tanks were scraped, triple rinsed and the contents properly stored or disposed of at a landfill. On 3 October 1986, the SBEH conducted a second walk-through inspection and found that all requirements, as per the 24 June 1986 inspection, had been met (1).

3.0 INVESTIGATIVE EFFORTS

This section summarizes investigations conducted at the TPC site prior to this Site Inspection as well as the sampling conducted on behalf of EPA during the Site Inspection.

3.1 Previous Sampling

No previous soil or groundwater sampling has been performed at TPC.

3.2 EPA Sampling

Based upon the lack of previous data, a Sampling and Analysis Plan (SAP) was prepared for the sampling conducted during this Site Inspection and submitted to EPA for approval. This section presents the purpose and description for the sampling event, deviations from the sampling plan, and a discussion of the analytical results.

3.2.1 Purpose and Description of Sampling Event

A data gap in the HRS evaluation of this site was the lack of information on the waste types. The purpose of the sampling event was to fill this gap.

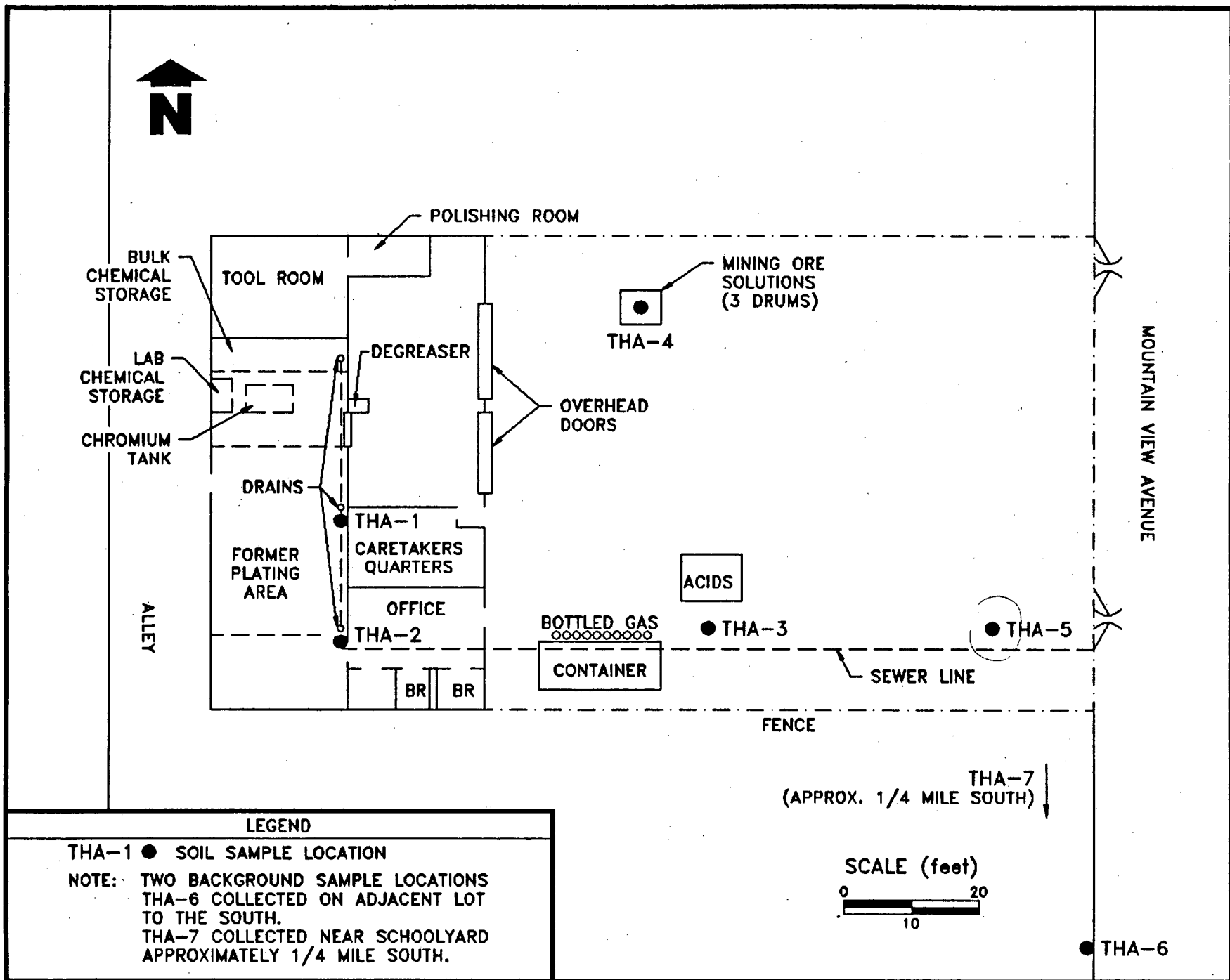
Soil samples were collected from five locations on the site and two locations off the site (to serve as background samples) and scheduled for analysis of routine analytical service (RAS) metals and cyanide. Sampling locations are shown in Figure 3. The samples consisted of soil samples and a duplicate (or co-located) soil sample. The labeling codes for each type of sample are described in detail in the Trojan Plating Sampling and Analysis Plan (SAP).

At five sampling locations, samples were collected at both one-half foot and two feet below the ground surface. Additionally, samples THA-1 and THA-2 were collected beneath a sanitary sewer line connection under the floor drains inside the Trojan building at a depth of approximately two feet below the concrete floor.

Quality assurance/quality control (QA/QC) samples consisted of a duplicate or co-located soil sample collected from location THA-2-2 (denoted THA-2-2-002) and two equipment decontamination water samples collected after decontaminating the sample scoop after collecting samples THA-1 and THA-2. The water samples were also scheduled for analysis of RAS metals and cyanide. The background soil samples, THA-6 and THA-7, were taken in the adjacent lot south of the site and near a school approximately one quarter mile south of the site, respectively.

Soil samples were obtained by digging down to the desired depth with a shovel and collecting the sample with a stainless steel scoop. The soil was placed into laboratory prepared eight ounce glass jars. All soil sampling locations were screened with an HNu photoionization detector (PID) to determine the possible presence of volatile organic compounds (VOCs), which would have required collecting of an additional soil sample using a drive sampler and then analyzing the sample for VOCs. (The drive sampler technique is used to collect "in-place" soil samples to minimize volatilization of the VOCs in the soil). However, the PID did not indicate the presence of any VOCs on the site and therefore no soil samples for VOC analysis were collected.

All samples were sealed, labeled and stored in a chilled cooler for shipping to the EPA CLP laboratory in Las Vegas, Nevada.



**SOIL SAMPLE LOCATIONS
 TROJAN PLATING COMPANY
 FIGURE 3**

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3.2.2 Deviations From Sampling Plan

All procedures and methods for sampling, decontamination, and health and safety were performed as outlined in the EPA approved SAP for Trojan Plating Company dated 15 October 1991 with the exception that two equipment decontamination blank samples were collected instead of one as specified in the SAP.

3.2.3 Discussion of Sample Results

This section presents a discussion of the analytical results for the seven soil samples taken in March 1992. Table 1 presents a summary of analytical results. A complete validated analytical report is presented in Appendix B.

3.2.3.1 Soil Sample Analytical Results

The TPC soil samples were analyzed for twenty-three metals plus cyanide and the analytical results are summarized in Table 1.

According to the HRS, if a hazardous material is present at a concentration which is three or more times the concentration of the background samples, then an observed release is present on the site. The background samples for this site consisted of samples from depths of 0.5 feet and 2.0 feet below the ground surface from sample locations THA-6 and THA-7. As noted in Figure 2, THA-6 was located in the vacant lot south of the TPC site while THA-7 was located near a school yard approximately one quarter mile away from the site. Table 1 also presents these analyses and displays an average of the background sample analyses for use as the benchmark concentration level for comparison to concentrations found in the onsite samples.

Seven metals were found to be present in concentrations which exceeded three times the average background concentration. These seven are cadmium, chromium, cobalt, copper, lead, nickel and zinc. The maximum value for each compound is shaded in Table 1. Of these compounds, cadmium exceeded the Total Threshold Limit Concentration (TTLC) as defined by the California Administrative Code Title 22. It is notable that samples from beneath the drain pipe location THA-1 contained elevated levels of cadmium, chromium, copper and nickel. Location THA-5 also showed elevated concentrations of cadmium, cobalt and nickel. The highest lead concentration was actually from background sample THA-6, located in the vacant lot south of the subject site.

Based on these results, there is an observed release of metals to soil on the TPC site.

3.2.3.2 QA/QC Analytical Results

Three QA/QC samples were collected during the site sampling, as required by the SAP. These samples consisted of a co-located soil sample analyzed for metals and deionized water poured over the cleaned (decontaminated) soil sampling device and analyzed for metals. The results of these analyses are also presented in Table 1. The analytical results for the co-located sample

Table 1
Analytical Results Summary

Soil Sample ID	Metals Analysis (mg/Kg)																							
	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	Va	Z	CN
THA-1-2-001	14300	7.1	0.96	84.5	0.8	93	21900	1130	11.9	77.7	20400	15.8	9310	616	0.13	99	4650	0.33	1	205	0.15	27.4	124	1.8
THA-2-2-001	7920	6.4	3.3	49	0.46	2.2	22500	226	7	11.4	11900	22.2	5100	270	0.11	110	2710	0.3	0.9	103	0.14	18.6	51.7	1.1
THA-2-2-002	6890	6.2	2.1	41.9	0.37	3	14900	207	6.4	18.4	11100	14.3	4400	228	0.11	110	2500	0.29	0.88	100	0.13	15	45.6	1.5
THA-3-0.5-001	12000	6.4	0.8	63.5	0.68	7.5	16100	319	24	49.6	17500	17.2	6360	432	0.11	213	3630	0.3	0.91	208	0.18	28.1	92.6	1.1
THA-3-2-001	11000	6.5	0.92	65.9	0.63	2.8	17800	89.8	9.7	14.7	16200	9.1	6660	450	0.11	15.8	38650	0.3	0.91	169	0.25	27.3	68.2	1.1
THA-4-0.5-001	9620	6.6	1.3	72.3	0.56	34.9	16800	16.9	9.2	100.7	14000	18.5	6220	393	0.12	313	3300	0.31	0.93	120	0.14	22.9	301	1.2
THA-4-2-001	13700	7	0.88	96.9	0.84	3.7	36900	18.8	11.3	16.9	19000	12.2	12500	560	0.12	238	4970	0.33	0.99	188	0.2	30.5	127	1.1
THA-5-0.5-001	1300	6.4	1.6	76.2	0.72	145	21700	22	9.5	28.1	18300	16.2	8130	472	0.11	23.5	4290	0.3	0.9	406	0.14	31.4	86.1	1.1
THA-5-2-001	13600	6.6	1.6	82.1	0.74	17.1	19600	116	109	88.3	19200	42.4	8130	500	0.12	877	4160	0.31	0.93	336	0.14	31.8	274	1.2
THA-6-0.5-001 BG	14500	6.7	1.2	104	0.83	3.9	41400	21.4	12	13.9	22700	17.7	13500	575	0.12	14.3	4480	0.31	0.94	299	0.21	38.5	80.8	1.2
THA-6-2-001BG	14200	6.6	2.5	103	0.78	6.3	25900	53.5	26.8	40.5	22100	148	10700	535	0.12	38.3	5320	0.31	0.93	174	0.16	33.6	133	1.2
THA-7-0.5-001BG	13200	6.6	28	90.9	0.74	3.3	25600	14.8	10.1	12.6	18700	12.3	10300	537	0.12	9.5	4850	0.31	0.93	256	0.28	30.3	97.9	1.2
THA-7-2-001BG	14900	7	10.7	131	0.89	3.6	52900	16.2	10.5	12.6	2230	5	16300	772	0.12	11	5120	0.33	0.99	401	0.18	30.4	76.1	1.2

Maximum Value	14900	7.1	28	131	0.89	145	52900	1130	109	100.7	22700	148	16300	772	0.13	877	38650	0.33	1	406	0.28	38.5	301	1.8
Minimum Value	1300	6.2	0.8	41.9	0.37	2.2	14900	14.8	6.4	11.4	2230	5	4400	228	0.11	9.5	2500	0.29	0.88	100	0.13	15	45.6	1.1
Average Value	11318	6.623	4.297	81.63	0.695	25.1	25692	173.2	19.8	37.34	16410	26.99	9047	487.7	0.117	159.4	6818	0.31	0.934	228.1	0.177	28.14	119.8	1.238

Ave. Background	14200	6.725	10.6	107.2	0.81	4.275	36450	26.48	14.85	19.9	16433	45.75	12700	604.8	0.12	18.28	4943	0.315	0.948	282.5	0.208	33.2	96.95	1.2
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Title 22 TTLC	NA	500	500	10000	75	100	NA	2500	8000	2500	NA	1000	NA	NA	20	2000	NA	100	500	NA	700	2400	5000	
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Water Sample ID	Water Analyses (ug/Kg)												Water Analyses (mg/Kg)											
	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	Va	Z	CN
THA-1-2-003	50	28.2	1.3	29.7	0.67	2.4	524	3	9	3.7	40.6	1	607	2.4	0.2	12.7	744	1.3	4	454	0.6	8.6	15.8	10
THA-2-2-003	50	28.2	1.3	29.7	0.67	2.4	524	3	9	3.7	127	1	607	2.4	0.2	28.7	759	1.3	4	454	0.6	8.6	39.4	10

- Notes:
1. Shaded values are greater than or equal to three times the average background values.
 2. BG denotes background samples.
 3. Water samples are equipment decontamination samples.
 4. TTLC denotes Total Threshold Limit Concentration, per California Administrative Code Title 22.

are very close to the results for the primary sample which indicates good laboratory repeatability. The results of the water analyses indicate that the equipment decontamination procedures used by the sampling crew were effective.

4.0 HAZARD RANKING SYSTEM FACTORS

In accordance with the mandates outlined in CERCLA and SARA, the HRS was developed to accurately assess the relative degree of risk to human health and the environment posed by a potential hazardous waste site in order to determine the site's eligibility for the NPL. The HRS addresses four exposure pathways representing means by which hazardous substances may pose a threat to human health and/or the environment. The pathways include three migration pathways (groundwater, surface water, and air) and one exposure pathway (soil). For each pathway, three factors are evaluated: likelihood of release of hazardous substances, targets, and waste characteristics.

This section presents a summary of the potential threats associated with each HRS exposure pathway at the TPC site.

4.1 Sources of Contamination

Analytical results of the samples collected during the SI sampling event indicated the presence of elevated metal concentrations in soil in a few locations onsite. The source for the elevated metals is unknown, but may be related to previous plating operations on the site.

4.2 Groundwater Pathway

This section presents information on the hydrogeologic setting, groundwater targets, and conclusions regarding the groundwater pathway.

4.2.1 Hydrogeologic Setting

The site is located in the San Bernardino Valley which is occupied by alluvial fan sediments consisting of material derived from the San Bernardino Mountains and transported south-southwest by the Santa Ana River and its tributaries. The alluvial fan consists of poorly sorted clay, silt, sand, and gravel. Water well logs within one mile of the TPC site show that the local subsurface sediments consist of sandy clay, silty sand and gravel (1).

Two major clay lenses exist below the surface within three miles of the site. The upper clay lens begins just below the ground surface and is about 100 feet thick (1). The lower clay lens begins at about 250 feet and is about 200 to 300 feet thick in some areas (1). Although the lower clay lens is thick in some areas, it may be discontinuous in other areas, allowing water to move vertically between aquifer zones (12). The San Bernardino Valley has also been known to exhibit artesian conditions, suggesting that some aquifer zones are confined and under hydraulic pressure (12,20).

Groundwater in the vicinity of TPC has historically been encountered at a depth of approximately 20 feet below ground surface. Groundwater flow is interpreted to be to the southwest, based on groundwater contaminant plume maps for the San Bernardino Valley area as well as information taken from United States Geological Survey Water Supply paper #1419 (20). Water wells in the area are commonly screened between 400 and 955 feet below the ground surface (1,20).

4.2.2 Groundwater Targets

Virtually all drinking water for the City of San Bernardino, as well as the surrounding metropolitan areas, is provided by groundwater wells located in and around the four-mile radius target area. The nearest groundwater well is located less than 1/2-mile from the site (7). This is San Bernardino Municipal Water District well number 21 (CA #IS04W10N06) (7).

While there is no release to groundwater that can be attributed to TPC, there is documented contamination by volatile organic compounds, pesticides, nitrates and radioactive materials in drinking water wells within the four-mile radius target area. These wells are located north, east, and southeast of the site (7).

There are 124 drinking water wells within the target area surrounding TPC (7). Of the 124, 26 belong to the San Bernardino Metropolitan Water District (5). The remaining wells are utilized by:

- West San Bernardino Water Department (6 wells)
- East Valley Water District (14 wells)
- Rialto Metropolitan Water District (3 wells)
- Riverside Water Department (32 wells)
- Terrace Water Company (2 wells)
- Riverside Highland Water District (8 wells)
- Loma Linda Water Metropolitan Department (8 wells)
- South San Bernardino County Water Department (5 wells)
- Redlands Metropolitan Water Department (3 wells), and
- Colton Metropolitan Water Department (17 wells) (5).

These 124 municipal groundwater wells provide water to 100% of the population. The target population surrounding the TPC site is 791,560 (8). No single well provides more than 40% of the water needed, so the target population was equally allocated to the wells (6,21,22,23,24,25,26,27,28,29,30).

Population figures for all areas serviced by groundwater wells within the four-mile target area were obtained from the U.S. Bureau of the Census for the census year 1990. The most recent data available for workers, however, was from the census year 1980. Student populations were obtained from the school districts for the year 1990.

Due to the large number of outlying metropolitan areas surrounding the TPC site, workers and students were estimated for these areas based upon percentages for workers and students relative to the total population for the City of San Bernardino. A total of 31 percent of San Bernardino's total population represents the number of workers in the City of San Bernardino. Therefore,

populations of the outlying metropolitan areas were multiplied by 31 percent to estimate the number of workers in those areas. Likewise, a total of 34 percent of San Bernardino's total population represents the number of students (both private and public) in the City of San Bernardino (after removing the 11,927 students enrolled at California State University San Bernardino). Populations of outlying areas were, therefore, multiplied by 34 percent to estimate the number of students in those areas. The target population (total number of residents, workers and students) is 791,560 (8,14,15,16,17,18).

Table 2 shows the proximity of the municipal water wells to the TPC site for all of the pertinent water companies as well as the target populations served.

4.2.3 Groundwater Pathway Conclusion

Although there is no observed release to groundwater for this site, the groundwater pathway is a significant HRS factor because of the shallow depth to groundwater, the heavy reliance on groundwater as a drinking water source in the San Bernardino Basin and the large target population near the TPC site.

4.3 Surface Water Pathway

This section presents information on the hydrogeologic setting, surface water targets, and conclusions for the surface water pathway.

4.3.1 Hydrologic Setting

The surface water nearest to TPC is Warm Creek, located approximately 3/4 miles southeast of the site (9). Warm Creek is lined with concrete and is part of the flood control system for San Bernardino (10). During an initial drive-by investigation, Warm Creek was observed to be dry (3). Another surface water body in the site vicinity is Lytle Creek. This creek is also a concrete lined flood control channel.

Warm Creek discharges into the Santa Ana River, the perennial surface water nearest to TPC (9). The confluence of the two channels is approximately ~~two~~ miles south of TPC (9). Upstream from TPC, the Santa Ana River is unlined and in its natural state. Near the site (both immediately upstream and for the remaining stretch downstream), the Santa Ana River is lined with concrete and serves flood control purposes.

The site is situated in a floodplain that experiences flooding less frequently than once in 500 years (11). No federally endangered species or wetlands are located within the target distance (15 miles downstream of the site) (31).

4.3.2 Surface Water Targets

The number of targets for the Surface Water Pathway is low as there are no surface water intakes utilized for drinking water needs downstream from the site. The Santa Ana River has low potential for recreation or individual sportfishing (13).

Table 2

Summary of Water Service Companies and Estimated Target Populations

Number of People Served Within Each Radius Interval													
Water Company	0-¼ mile	# of wells	¼-½ mile	# of wells	½-1 mile	# of wells	1-2 miles	# of wells	2-3 miles	# of wells	3-4 miles	# of wells	
Terrace Water Company	0	0	0	0	0	0	8,076	2	0	0	0	0	
East Valley Water District	0	0	0	0	0	0	14,793	3	4,931	1	49,310	10	
Rialto Water Department	0	0	0	0	0	0	0	0	0	0	20,034	3	
San Bernardino Water District	0	0	10,414	1	10,414	1	83,312	8	72,898	7	93,726	9	
West San Bernardino Water Department	0	0	0	0	0	0	0	0	9,088	2	18,176	4	
Riverside Highland Water District	0	0	0	0	0	0	6,414	3	2,138	1	8,552	4	
Colton Water Department	0	0	0	0	0	0	50,616	12	21,090	5	0	0	
Riverside Water Department	0	0	0	0	8,125	1	227,500	28	24,375	3	0	0	
Loma Linda Water Department	0	0	0	0	0	0	0	0	24,168	6	8,056	2	
Redlands Water Department	0	0	0	0	0	0	0	0	2,753	1	5,506	2	
South San Bernardino Water Department	0	0	0	0	0	0	2,838	2	4,257	3	0	0	GRAND TOTALS
TOTALS	0	0	10,414	1	18,539	2	393,549	58	165,698	29	203,360	34	791,560 124

4.3.3 Surface Water Pathway Conclusion

There appears to be only a low potential for release to surface water because of minimal potential targets and the site's location within a floodplain that is flooded less frequently than once in 500 years (11). There are no intakes for drinking water within the target distance limit down-stream from the site.

4.4 Soil Exposure and Air Pathway

This section presents information on the physical conditions at the site, the soil and air targets and the conclusions regarding the soil exposure and air pathways.

4.4.1 Physical Conditions

The site is currently surrounded by a barbed-wire fence with a locked gate. Access to the site is prohibited.

4.4.2 Soil and Air Targets

Due to the low mobility factors of the contaminant types detected at TPC, the targets surrounding TPC are not likely to be impacted.

4.4.3 Soil Exposure and Air Pathway Conclusions

The presence of contaminated soil onsite does not impact the soil exposure or air pathways primarily because there are no residents or workers onsite.

5.0 EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415 (b) (2)] authorizes the Environmental Protection Agency to consider emergency response actions at those sites which pose an imminent threat to human health or the environment. A referral to Region IX's Emergency Response Section does not appear to be necessary due to the security barriers surrounding the site.

6.0 SUMMARY

The Trojan Plating Company site consists of a 9800 sq. ft. parcel of land with a single 2800 sq. ft. building on the lot located in San Bernardino, California. The site was formerly the location of a metals plating facility which operated from 1970-1979. In 1979, the company went out of business. Equipment still remains onsite but operation has ceased.

Soil sampling was conducted during this SI to establish waste types. Based on this sampling, there is an observed release of metals to soil onsite. There is no documented release of hazardous substance to the groundwater, surface water, or air pathways. The soil exposure pathway presents only a minimal environmental or health threat due to the lack of a target population on the site and a lack of any public attraction or recreational features on the site.

The pertinent Hazard Ranking System factors for the Trojan Plating Company site are:

- There is an observed release of metals to soil on the site.
- The potential target population within the four-mile target distance limit for the groundwater pathway is 791,560.
- Virtually all of the drinking water needs for the city of San Bernardino and surrounding areas are fulfilled by groundwater wells.

7.0 EPA RECOMMENDATION

	INITIAL	DATE
Site Evaluation Accomplished	_____	_____
Higher Priority for Further Site Assessment	_____	_____
Lower Priority for Further Site Assessment	<u>cyd</u>	<u>9/3/92</u>
Defer to Other Authority (e.g. RCRA, TSCA)	_____	_____

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