

Consulting Engineers and Scientists

3 May 2006

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Subject:

Closure Report

64th Street Properties, Emeryville, California

(Regional Board Case #: SL20259877)

(EKI 990016.05)

Dear Mr. Wolfenden and Ms. Drogos:

On behalf of Simeon Commercial Properties ("Simeon"), Erler & Kalinowski, Inc. is pleased to submit the enclosed report, *Closure Report*, *64th Street Properties*, *Emeryville*, *California* dated 3 May 2006. The 64th Street Properties ("Site") is located at 1480 64th Street, Emeryville, California.

EKI has performed groundwater monitoring on behalf of Simeon for the past five years in accordance with the *Final Risk Management Plan for the 64th Street Properties*, dated 30 August 1999 ("RMP"). The results of a trend analysis of groundwater monitoring from 2001 to 2005 are presented in this report and confirm that concentrations of chemicals of concern in groundwater are stable or decreasing. On the basis of these results and in accordance with the requirements of the RMP, it is our opinion that no further groundwater monitoring is warranted at the Site.

Please call with any questions or comments (650) 292-9100.

Very truly yours,

ERLER & KALINOWSKI, INC.

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cc: Brenda Lewis (3 copies), Simeon Commercial Properties Maurice Kaufman, City of Emeryville



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3 May 2006

Simeon Commercial Properties, Emeryville, California (EKI 990016.05)

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Street Properties, Emeryville, California, dated 30 August 1999



1.0 EXECUTIVE SUMMARY

On behalf of Simeon Commercial Properties ("Simeon"), Erler & Kalinowski, Inc. ("EKI") has prepared this report for submittal to the California Regional Water Quality Control Board, San Francisco Bay Region II ("RWQCB") and the Alameda County Department of Environmental Health ("ACDEH") to request closure for the 64th Street Properties located at 1480 64th Street in Emeryville, California ("Site"). The location of the Site is shown on Figure 1.

In the early 1900s, the Site was the location of a petroleum refinery. Historical records show that the refinery was replaced by a warehouse and vacant paved lot in the late 1940s. In 1990, two underground fuel storage tanks ("Lowenberg tanks") that were encountered were removed. During investigations on Site in 1995 and 1999, soil and groundwater were found to have been impacted by petroleum hydrocarbons in the diesel range ("TEPH") and benzene, toluene, ethylbenzene, and xylene ("BTEX") related to historical Site activities.

In 1999 and 2000, Simeon acquired the Site and redeveloped it for commercial/office uses. During redevelopment, remedial work included covering or removing and disposing of chemically-impacted soil in accordance with the *Final Risk Management Plan for the 64th Street Properties*, dated 30 August 1999 ("RMP") (EKI, 1999b)¹, which was approved by the RWQCB and ACDEH in a letter dated 15 October 1999 (Appendix A).

Post-construction groundwater monitoring at the Site was conducted in accordance with the RMP. The RMP requires the measurement of water levels and the collection of groundwater samples from four monitoring wells (i.e., SMW-1, SMW-2, SMW-3, and SMW-4). Monitoring wells SMW-1, SMW-2, and SMW-3 are located downgradient of the Site and monitoring well SMW-4 is located at the perimeter of the Site, within the footprint of the former refinery. The approximate locations of these wells are shown on Figure 2.

The results of 11 rounds of groundwater sampling, conducted by EKI quarterly in 2001, semi-annually from 2002 to 2004, and annually in 2005, were submitted to RWQCB and ACDEH in reports. Analysis of the sampling results indicates that TEPH concentrations and volatile organic compound ("VOC") concentrations in groundwater on-Site and downgradient of the Site are stable or decreasing.

This request for closure of the Site is based on the following conclusions, which are discussed in this report:

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¹ EKI prepared an addendum to the RMP, Revised Addendum Number 1 to the Final Risk Management Plan for the 64th Street Properties, Emeryville, California, dated 13 April 2001 (EKI, 2001b), on behalf of Simeon due to the hydrogen sulfide gas encountered during redevelopment. The addendum also documented modifications to the cover design implemented at the Site due to physical constraints.



- Chemically-impacted soil from the Site is covered.
- Based on the screening risk assessment calculations performed in the RMP, it was
 concluded that Site COCs detected in groundwater did not pose a significant
 human health risk at the levels detected in the groundwater samples collected
 available at the time. No VOC concentration detected in groundwater samples
 collected from the 2001 to 2005 exceeded its respective maximum concentration
 previously detected and utilized for the screening risk assessment calculation in
 the RMP.²
- The post-construction groundwater monitoring results and statistical trend analysis confirm a stable or decreasing trend of chemical concentrations in groundwater.
- Simeon will continue to perform cover status assessments every other year to help monitor and maintain the cover integrity for continued prevention of human exposure to impacted soil underlying the cover.
- A deed restriction for the Site has been recorded in the Alameda County Recorder's office to help with continued compliance with the Site RMP (Appendix B).

² MTBE was detected in groundwater at 5.1 ug/L two out of five times sampled and was not detected (<5.0 ug/L) the remaining times. MTBE was not included in the screening risk assessment in the RMP. However, the groundwater screening level for evaluation of potential vapor intrusion concerns for MTBE is 80,000 ug/L for high permeability vadose-zone soil type and commercial/industrial land use (RWQCB, 2005). The detected MTBE concentration of 5.1 ug/L is significantly less than the groundwater screening level of 80,000 ug/L.



2.0 BACKGROUND

The Site is located in Emeryville, California and is bounded to the north by a residential complex developed within the past 5 years, to the west by Overland Street and railroad tracks, to the south by 64th Street, and to the east by Hollis Street (see Figure 2).

EKI has been retained by Simeon for environmental services related to the Site since February 1999. The Site was previously studied by EKI on behalf of Sybase, Inc. ("Sybase") in conjunction with a proposed development project that ultimately did not go forward. On Sybase's behalf, EKI performed a site assessment and two rounds of field investigations (EKI, 1995a and 1995b). These investigations were performed under the oversight of RWQCB and ACDEH. On behalf of Sybase, EKI also prepared a risk management plan (EKI, 1995c). Because of the extensive work EKI performed on Sybases's behalf, Simeon retained EKI to update the site assessment (EKI, 1999a), perform additional field investigations (EKI, 1999a), prepare a risk management plan specific to Simeon's planned redevelopment (EKI, 1999b and 2001b), and perform post-construction groundwater monitoring (EKI, 2001a, 2001c, 2001d, 2001e, 2002a, 2002b, 2003a, 2003b, 2004a, 2004b, and 2005).

Simeon eventually acquired and redeveloped the Site. Redevelopment included (1) demolition of the western portion of the warehouse on the Lowenberg property, (2) conversion of the remainder of the warehouse to office/commercial space, and (3) construction of a multi-story office building and a multi-level parking structure in the vicinity of the former Ryerson paved lot property (Figure 3).

Presented below are brief summaries of Site land use history and environmental investigations and remedial actions performed at the Site. More detailed descriptions can be found in the EKI report *Phase I and Phase II Environmental Site Assessment for 64th Street Properties, Emeryville, California*, dated 20 May 1999 ("Phase I&II Report") and the Site RMP (EKI, 1999b). A discussion of the post-construction groundwater monitoring from 2001 to 2005 follows this section in Section 3.0.

2.1 Site Land Use History

According to available historical land use information, a petroleum refinery occupied the western portion of the Site from at least 1903 to 1911 (EKI, 1995b). Since at least 1947 and until redevelopment by Simeon, the eastern portion of the Site (the "former Lowenberg property") had been occupied by a warehouse, while the western portion of the Site ("former Ryerson paved lot property") had been a vacant, asphalt-paved lot (Figure 3).

On Sanborn maps dated 1950 and 1952, the Lowenberg building was occupied by "Bruener's Furniture Warehouse". The western portion of the building was labeled "Furniture Repairing and Refinishing". Also in this area were a "paints and oils vault" and a "metal spray paint booth". An addition on the west side of the Bruener's warehouse was evident on a 1957 aerial photograph.



Upgradient land uses (i.e., to the east across Hollis Street) include a "building materials storage yard", the "Sterling Paint Company", "Sylvania Electric Products, Inc.", and "Detroit Steel Products". The current Federal Express site to the south was occupied in 1950 and 1952 by a "tallow, meat scraps, and fertilizer works" facility.

2.2 Previous Soil and Groundwater Investigations on the Site

In March and July 1995, the 64th and 65th Street properties were investigated by EKI on behalf of Sybase. Results of the investigations are summarized in *Initial Site Investigation Report for the 64th and 65th Street Properties, Emeryville, California* dated 13 June 1995 and *Final Site Investigation Report for the 64th and 65th Street Properties, Emeryville, California* dated 9 September 1995.

In March and April 1999, the 64th Street properties were further investigated by EKI on behalf of Simeon. Results of the 1999 investigation are summarized in the Phasel&II Report.

Investigations performed on the Site in 1995 and 1999 indicate that soil and groundwater in the vicinity of the former petroleum refinery have been impacted by petroleum hydrocarbons. Based on groundwater samples collected downgradient of the Site, significant migration of these petroleum hydrocarbons was not shown to have occurred (EKI, 1999a). Low levels of hydrogen sulfide gas were also detected in the vicinity of the former oil refinery (EKI, 2001b).

In February 1990, two underground fuel storage tanks were removed from the Lowenberg property (the eastern portion of the Site), adjacent to 64th Street (EKI, 1995b). Soil and groundwater in the vicinity of the Lowenberg tanks were found to be impacted by TEPH and total purgeable petroleum hydrocarbons ("TPPH"), as well as BTEX. At the time of tank removal operations, the tanks reportedly showed no signs of leakage (ENSR, 1991). Analytical results for groundwater samples were obtained semi-annually from April 1990 to January 1993 and in March 1995 (SEACOR, 1993; EKI, 1995b). The analytical results indicate that concentrations of TPPH and BTEX in groundwater samples in upgradient and cross-gradient wells were low and decreased or remained stable (EKI, 1995d). TPPH and BTEX were not detected in the downgradient well (EKI, 1999a). The ACDEH issued a no-further-action letter for the Lowenberg tank site in March 1996.

In 1995, EKI collected a shallow soil sample adjacent to the presumed location of the former paint booth and vault. This soil sample was composited with another shallow soil sample collected nearby. The composite soil sample was analyzed for metals, total recoverable petroleum hydrocarbons ("TRPH"), halogenated VOCs, polyaromatic hydrocarbons ("PAHs"), and polychlorinated biphenyls ("PCBs") (EKI, 1995b). No halogenated VOCs, PAHs, PCBs, arsenic, or lead were detected in the composite soil sample (EKI, 1995b). TRPH was detected in the composite sample at a concentration of 87 mg/kg (EKI, 1995b). Background levels of chromium (19 mg/kg) were also detected



(EKI, 1995b). The low chemical concentrations detected do not indicate that a release has occurred from the former paint booth and vault.

Investigations performed on the Site indicate that site groundwater has been impacted by halogenated volatile organic compounds ("HVOCs") at concentrations that exceed drinking water standards. In addition, petroleum hydrocarbons have been detected on the upgradient property boundary. Data collected during these investigations and information available in regulatory agency files indicate that these HVOCs and petroleum hydrocarbons originated from one or more sources upgradient of the Site (EKI, 1995b). The analytical results obtained in 1999 on behalf of Simeon were similar to those obtained in 1995 for Sybase. A tabulated summary of the 1995 and 1999 investigation findings are included in Appendix C.

2.3 Relevant Exposure Pathways

Current populations at the Site are commercial or industrial building occupants. Covered Site soil contains petroleum hydrocarbons. Identified toxic components of petroleum hydrocarbons (e.g., BTEX or PAHs) have not been detected in soil in the vicinity of the former refinery. Low levels of BTEX (e.g., up to 0.73 mg/kg xylenes) have been detected shallow soil samples collected adjacent to the former Lowenberg tanks. No other COCs have been detected in Site soil. Soil pathways are considered incomplete for the following reasons:

- Except for low levels of BTEX detected in the vicinity of the former Lowenberg tanks, no petroleum hydrocarbon components for which toxicity data exist have been detected in Site soil samples analyzed for these components.
- Soil in areas where petroleum-impacted soil is known to exist are covered, preventing contact with this soil by Site workers.
- For maintenance or construction workers who may disturb the cover, protective procedures are specified in the RMP.

Ingestion and dermal contact with COCs in groundwater were not included as complete exposure pathways for the following reasons:

- Groundwater at the Site is generally encountered at depths between 4 and 6 feet below ground surface ("bgs"), but can be as shallow as 2 feet bgs. Therefore, direct exposure to groundwater is only likely to occur during construction/excavation activities, which are likely to be of short duration and frequency and therefore would not likely pose a significant public health concern.
- No drinking water wells have been identified in or immediately downgradient of the Site; and water used on the Site is supplied from off-site sources. A deed restriction for the Site prohibits drilling, boring, or other construction for the



purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the RWQCB (Appendix B). Therefore, exposure to shallow impacted Site groundwater through direct ingestion or dermal contact is unlikely.

Thus, the only potentially complete exposure pathway for the COCs is through inhalation of indoor and outdoor air containing VOCs volatilized from groundwater. Risks from inhalation of outdoor air containing VOCs volatilized from groundwater are typically much lower than risks for inhalation of indoor air containing VOCs volatilized from groundwater. As a result, only the indoor exposure pathway was included in the risk calculations in the RMP. For results of risk calculations, see the RMP. The risk calculations in the RMP were performed using a vapor intrusion model that only considered diffusion to indoor air. Current modeling practice considers both advection and diffusion transport processes. Therefore, to confirm that VOC concentrations in groundwater at the Site would not exceed current groundwater screening levels based on the vapor intrusion pathway, the maximum concentrations of COCs measured previously (see Appendix D) at the Site were compared to RWQCB's groundwater Environmental Screening Levels ("ESLs") for evaluation of potential indoor air impacts. The ESLs for high permeability vadose-zone soil type and commercial/industrial land use (RWQCB, 2005) were used for the comparisons to evaluation of potential indoor air impacts. All maximum COC concentrations were below corresponding groundwater ESLs.

2.4 Remedial Actions Performed at the Site

In February 1990, two underground fuel storage tanks were removed from the former Lowenberg property, adjacent to 64th Street (EKI, 1995b). Soil and groundwater in the vicinity of the Lowenberg tanks were found to be impacted by extractable and purgeable petroleum hydrocarbons, as well as benzene, toluene, ethylbenzene, and xylenes ("BTEX"). Analytical results for groundwater samples collected after removal of the tanks indicate that concentrations of TPPH and BTEX in groundwater samples in upgradient and cross-gradient wells were low and decreased or remained stable (EKI, 1995d). TPPH and BTEX were not detected in the downgradient well (EKI, 1999a). The ACDEH issued a no-further-action letter for the Lowenberg tank site in March 1996.

In 1999 and 2000, Simeon acquired and redeveloped the Site. Redevelopment of the Site included covering chemically-impacted soil. Post-construction groundwater monitoring has also been conducted from 2001 to 2005 in accordance with the RMP.



3.0 GROUNDWATER MONITORING DOWNGRADIENT AND AT THE PERIMETER OF THE SITE

The groundwater monitoring specified in the RMP was required to be performed quarterly for the first year, semi-annually for the second year, and annually thereafter. All groundwater samples were required to be analyzed for TEPH. Annual groundwater samples were required to be analyzed for VOCs for the first three monitoring years.

Groundwater monitoring was actually performed quarterly in 2001, semi-annually from 2002 to 2004, and annually in 2005. Semi-annual groundwater monitoring was performed an additional two years longer than specified in the RMP to verify that downgradient petroleum hydrocarbon concentrations remained stable. As discussed in the July to December 2004 Groundwater Monitoring Report and CAP status report, analytical data from 2001 to 2004 indicated that the water quality conditions had stabilized or improved at the site. This observation was confirmed by groundwater sampling in 2005, which was conducted on an annual schedule.

3.1 Results of Groundwater Monitoring from 2001 to 2005

Per the RMP, monitoring at the Site includes measuring groundwater levels and collecting groundwater samples from Site monitoring wells SMW-1 through SMW-4 (Figure 2).

3.1.1 Groundwater Elevation and Hydraulic Gradient

Groundwater elevation at each of the four monitoring wells was measured 11 times from 2001 to 2005. Groundwater at these four monitoring wells was observed to be shallow and ranged from an average of 2.4 feet below ground surface ("ft bgs") at monitoring well SMW-4 to an average of 5.9, 5.2, and 6.0 ft bgs at monitoring wells SMW-1, SMW-2, and SMW-3, respectively. The estimated groundwater potentiometric surface elevations at the time of the last groundwater monitoring event (August 2005) for the four wells are shown on Figure 2.

Water level data obtained by EKI were used to assess the magnitude and direction of the hydraulic gradient in the shallow water-bearing zone at the Site. The average hydraulic gradient magnitude from 2001 to 2005 was calculated to be 0.008 ft/ft and the direction was found to be westerly in the vicinity of the former petroleum refinery. The groundwater hydraulic gradient magnitude and direction have been consistent throughout 2001 to 2005. For monitoring event specific data, refer to the quarterly, semi-annual, and annual groundwater monitoring reports (see Section 5.0 for References).

3.1.2 <u>TEPH Groundwater Sampling Data</u>

Samples were collected and analyzed for TEPH quarterly in 2001, bi-annually in 2002, 2003, and 2004, and annually in 2005. Historic TEPH data detected in groundwater



samples collected from wells SMW-1, SMW-2, SMW-3, and SMW-4 are summarized in Table 1 and on Figure 3.

Analytical data from downgradient monitoring wells SMW-1, SMW-2, and SMW-3 during these sampling events have shown TEPH concentrations to be consistently low or not detected, indicating that migration of petroleum hydrocarbons from the former oil refinery at the Site has not occurred. In the last five groundwater sample events, starting from February 2003 to August 2005, TEPH has not been detected in any of the groundwater samples collected from the downgradient monitoring wells. This may be due to the covered system performing its function and preventing leaching and transport of chemicals from impacted soil by rainwater.

Monitoring well SMW-4, which is located in the immediate vicinity of the former refinery, was expected to contain residual free phase hydrocarbons that could give rise to significant variation in the groundwater chemical analytical results, as indicated in the RMP (EKI, 1999b). Groundwater samples from this well have been collected through a stilling tube to reduce the likelihood that residual petroleum hydrocarbon would become entrained in the samples. From the last quarterly sampling event in 2001 to the first biannual sample event in 2002, analytical results show an order of magnitude increase in TEPH concentration. These higher concentrations and more variable results were sustained until the 2005 monitoring event (Table 1). This order of magnitude difference in analytical results for samples from well SMW-4 may be evidence of the expected variation or may be an artifact of the change in personnel conducting the sampling, which occurred between the two sampling events. The increase in TEPH concentration could also be evidence of soil disturbance related to construction activities on the Site in 2000 and 2001, which may not have manifested itself until a year after construction completion. TEPH concentrations in samples from well SMW-4 have been stable since February 2002 and concentrations in August 2005 decreased to levels consistent with those observed in 2001. Visible product appeared to have decreased since February 2001. Prior to the 2005 sampling event, the sampling protocol was reviewed and refined so as to reduce the entrainment of free product from samples collected at monitoring well SMW-4.

3.1.3 VOCs Groundwater Sampling Data

Samples were collected and analyzed for VOCs annually in 2001 and 2002, biannually in 2004, and annually in 2005. Historic VOC data detected in groundwater samples collected from wells SMW-1, SMW-2, SMW-3, and SMW-4 are summarized in Table 2 and on Figure 4.

As can be seen in Table 2 of this groundwater monitoring report, except for a few instances, VOCs were generally not detected. Analytical results show methyl tertiary butyl ether ("MTBE"), trans-1,2-dichloroethene ("t-1,2-DCE"), and trichloroethene ("TCE") concentrations were each only detected twice, once in the 2002 sampling event just above the detection limit of 5.0 ug/L and again in 2005 at either the same or lower concentration than previously detected in 2002. Analytical results for groundwater



samples from well SMW-3 show cis-1,2-dichloroethene ("c-1,2-DCE") concentrations stabilizing from 2001 to 2005. Vinyl chloride was detected in monitoring well SMW-3, although it had not been detected in previous years. This may be due to the fact that the detection limit for vinyl chloride was higher in previous analyses. However, it should be noted that vinyl chloride is a breakdown product of perchloroethylene ("PCE") and TCE degradation. Because the parent compounds and c-1,2-DCE have been detected in well SMW-3 and petroleum hydrocarbons are present at the site, it is not surprising to detect vinyl chloride. In fact, vinyl chloride concentrations may show a slight increase over time as a result of on-going biodegradation.

3.2 Evaluation of Trends in Groundwater Monitoring Data

Groundwater samples from three downgradient groundwater monitoring wells (SMW-1 through SMW-3) and one property boundary perimeter groundwater monitoring well (SMW-4) have been collected 11 times for determination groundwater elevation and analysis of TEPH and 5 times for analysis of VOCs. As an example of the observed data trends, TEPH concentrations in groundwater samples collected from wells SMW-1 through SMW-3 and SMW-4 are plotted on Figures 5 and 6, respectively. MTBE concentrations in groundwater samples collected for well SMW-2 and c-1,2-DCE, t-1,2-DCE, and vinyl chloride concentrations in groundwater samples collected for well SMW-3 are plotted on Figure 7 (i.e., VOCs for which at least one concentration is detected above laboratory limits for a well are plotted). This section presents the results of a trend analysis to demonstrate that no significant upward trend exists in the data to show that conditions are stable or improving.

Groundwater data from monitoring wells SMW-3 and SMW-4 were statistically analyzed for a trend using the nonparametric Mann-Kendall test. The Mann-Kendall test is useful for detecting trends because the data do not have to be equally spaced in time and do not need to follow a particular statistical distribution. The null hypothesis tested was "no upward trend exists." The alternative hypothesis was "an upward trend exists." The test was applied at a significance level equal to 0.05. Statistical guidance from the U.S. EPA (April 1994) recommends a significance level of 0.05 to help ensure adequate statistical power, while limiting the number of false positive results.

The Mann-Kendall test was performed on the groundwater monitoring results for TEPH, c-1,2,-DCE, and TCE for monitoring well SMW-3 and TEPH for monitoring well SMW-4. These compounds and wells were selected for the trend analysis because a concentration was detected more than twice. TEPH for monitoring wells SMW-1 and SMW-2; MTBE for monitoring well SMW-2; and t-1,2-DCE and vinyl chloride for monitoring well SMW-3 were not evaluated because they were detected none, once, or twice in the 5 events of VOC and 11 events of TEPH groundwater sampling.

In the Mann-Kendall test, for concentrations not detected above the laboratory method detection limit, one-half of the detection limit value was used. The number of measurements, "n", and the calculated "S" statistic are listed in Table 3 for each compound analyzed for a monitoring well. According to Gilbert (1987), when S is less



than zero, the null hypothesis, "no upward trend exists", is accepted. When S is greater than zero, if the probability associated with S *is greater than* the significance level of 0.05, the null hypothesis, "no upward trend exists", is also accepted.

As shown in Table 3, the S statistic is negative for TEPH, c-1,2-DCE, and TCE for monitoring well SMW-3, indicating that "no upward trend exists" for these compounds. The S statistic for TEPH in well SMW-4 is 5, corresponding to a probability level of 0.381 (for S=5 and n=11) (Hollander and Wolfe, 1973). Because the probability of 0.381 is greater than the significance level of 0.05, the null hypothesis, "no upward trend exists", is accepted.

The results of the Mann-Kendall test indicate that no upward trend exists for TEPH, c-1,2-DCE, and TCE for well SMW-3 and TEPH for SMW-4. Visual observation of the data from Tables 1 and 2 and Figures 5 through 7 corroborates the Mann-Kendall results; shows that no significant upward trend exists for MTBE for well SMW-2 and c-1,2-DCE, t-1,2-DCE, and vinyl chloride for well SMW-3; and actually indicates a downward trend for TEPH at well SMW-3. These results provide evidence of stable or improving groundwater conditions downgradient and on the perimeter of the Site.



4.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the groundwater sampling in the Site vicinity and downgradient indicate the following:

- Chemically-impacted soil is covered and no significant exposure to human health or environment is present as long as the provisions of the RMP are followed.
- Comparison of maximum COC concentrations previously detected at the Site and current groundwater ESLs for evaluation of potential vapor intrusion concerns (potential indoor air impacts) demonstrated that all detected concentrations are below corresponding groundwater ESLs. These results indicate that conditions at the Site as currently known do not pose a significant to risk to on-Site workers.
- Current groundwater conditions downgradient and on the perimeter of the Site indicate that concentrations of petroleum hydrocarbons and VOCs in groundwater are stable or decreasing based on statistical analysis.
- A deed restriction for the Site has been recorded in the Alameda County Recorder's office to help with continued compliance with the Site RMP.

Based on the conclusions discussed above, closure of the Simeon 64th Street properties at 1480 64th Street, Emeryville, California is requested. In accordance with the RMP, Simeon will continue to conduct cap status assessments every other year.



5.0 REFERENCES

EKI, 1995a. Erler & Kalinowski, Inc., 13 June 1995, *Initial Site Investigation Report for the 64th and 65th Street Properties*, Emeryville, California

EKI, 1995b. Erler & Kalinowski, Inc., 9 September 1995, Final Site Investigation Report for the 64th and 65th Street Properties, Emeryville, California

EKI, 1995c. Erler & Kalinowski, Inc., 26 October 1995, Final Risk Management Plan for the 64th and 65th Street Properties, Emeryville, California

EKI, 1995d. Erler & Kalinowski, Inc., 15 November 1995, Closure of the Former Underground Tank Site, 1410 64th Street, Emeryville, California.

EKI, 1999a. Erler & Kalinowski, Inc., 20 May 1999, *Phase I and Phase II Environmental Site Assessment for 64th Street Properties*, Emeryville, California

EKI, 1999b. Erler & Kalinowski, Inc., 30 August 1999, Risk Management Plan for the 64th Street Properties, Emeryville, California

EKI, 2001a. Erler & Kalinowski, Inc., 2 April 2001, Quarterly Groundwater Monitoring Report, January to March 2001, Emeryville, California

EKI, 2001b. Erler & Kalinowski, Inc., 13 April 2001, Revised Addendum Number 1 to the Final Risk Management Plan for the 64th Street Properties, Emeryville, California

EKI, 2001c. Erler & Kalinowski, Inc., 21 June 2001, Quarterly Groundwater Monitoring Report, April to June 2001, Emeryville, California

EKI, 2001d. Erler & Kalinowski, Inc., 5 September 2001, Quarterly Groundwater Monitoring Report, July to September 2001, Emeryville, California

EKI, 2001e. Erler & Kalinowski, Inc., 20 November 2001, Quarterly Groundwater Monitoring Report, October to December 2001, Emeryville, California

EKI, 2002a. Erler & Kalinowski, Inc., 28 March 2002, Groundwater Monitoring Report, January to June 2002, Emeryville, California

EKI, 2002b. Erler & Kalinowski, Inc., 11 October 2002, *Groundwater Monitoring Report, July to December 2002*, Emeryville, California

EKI, 2003a. Erler & Kalinowski, Inc., 6 March 2003, *Groundwater Monitoring Report, January to June 2003*, Emeryville, California



EKI, 2003b. Erler & Kalinowski, Inc., 26 August 2003, *Groundwater Monitoring Report, January to June 2003*, Emeryville, California

EKI, 2004a. Erler & Kalinowski, Inc., 26 February 2004, *Groundwater Monitoring Report, January to June 2004*, Emeryville, California

EKI, 2004b. Erler & Kalinowski, Inc., 7 October 2004, Groundwater Monitoring, July to December 2004, and Cap Status Assessment Report, Emeryville, California

EKI, 2005. Erler & Kalinowski, Inc., 18 October 2005, Groundwater Monitoring Report, January to December 2005, Emeryville, California

ENSR, 1991. ENSR Consulting and Engineering, January 1991, *Tank Closure Report*, Mission Taylor Properties, San Francisco, California.

Gilbert, 1987. Gilbert, R.O., 1987, Statistical Methods for Environmental Pollution Monitoring, Van Nostrand Reinhold, New York.

Hollander and Wolfe, 1973. Hollander, M. and D.A. Wolfe, 1973, *Nonparametric Statistical Methods*, Wiley, New York.

RWQCB, 2005. San Francisco Bay Regional Water Quality Control Board, February 2005, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final, Appendix 1, Table E-1a.

SEACOR, 1993. SEACOR, 21 May 1993, Groundwater Monitoring, 1410 64th Street, Emeryville, California.

U.S. EPA, 1994. U.S. Environmental Protection Agency ("U.S. EPA"), April 1994, *Statistical Training Course for Ground-Water Monitoring Data Analysis*, Solid Waste and Emergency Response, EPA 530-R-93-003.

TABLE 1 SUMMARY OF GROUNDWATER CHEMICAL ANALYTICAL DATA - TEPH

64th Street Properties, Emeryville, California

Date	TEPH (ug/L) (1)						
Date	SMW-1	SMW-2	SMW-3	SMW-4			
1-Feb-01	<50	<50	140	360			
24-May-01	<50	< 50	74	300			
7-Aug-01	<50	< 50	140	280			
2-Nov-01	<50	< 50	<50	260			
5-Feb-02	<50	84	100	3,600			
21-Aug-02	<50	69	<50	8,000			
6-Feb-03	<50	< 50	<50	2,100			
7-Aug-03	<50	< 50	<50	1,100			
4-Feb-04	<50	< 50	<50	900			
4-Aug-04	<50	<50	<50	1,600			
12-Aug-05	<50	<50	<50	330			

Notes and abbreviations:

(1) TEPH is quantified as diesel. Samples were analyzed by EPA Method 8015M after performance of a silica gel cleanup in the laboratory.

TEPH = total extractable petroleum hydrocarbons ug/L = micrograms per liter (ppb)

<50 = not detected at laboratory detection limit of 50 ug/L

TABLE 2 SUMMARY OF GROUNDWATER CHEMICAL ANALYTICAL DATA - VOCs

64th Street Properties, Emeryville, California

Cample		VOC Concentrations (ug/L) (1)							
Sample	Date (2)	MTBE	t-1,2-DCE	c-1,2-DCE	TCE	Vinyl Chloride			
SMW-1	1-Feb-01	<5	<5	<5	<5	<10			
	5-Feb-02	<5	<5	<5	<5	<10			
	4-Feb-04	<5	<5	<5	<5	<10			
	4-Aug-04	<5	<5	<5	<5	<10			
	12-Aug-05	<0.5	<0.5	<0.5	<0.5	<0.5			
SMW-2	1-Feb-01	<5	<5	<5	<5	<10			
	5-Feb-02	5.1	<5	<5	<5	<10			
	4-Feb-04	<5	<5	<5	<5	<10			
	4-Aug-04	<5	<5	<5	<5	<10			
	12-Aug-05	5.1	<0.5	<0.5	<0.5	<0.5			
SMW-3	1-Feb-01	<5	<5	14	<5	<10			
	5-Feb-02	<5	5.6	13	9	<10			
	4-Feb-04	<5	<5	5.8	<5	<10			
	4-Aug-04	<5	<5	5.9	<5	<10			
	12-Aug-05	< 0.5	5.0	9.7	1.8	0.8			
SMW-4	1-Feb-01	<5	<5	<5	<5	<10			
	5-Feb-02	<5	<5	<5	<5	<10			
	4-Feb-04	<5	<5	<5	<5	<10			
	4-Aug-04	<5	<5	<5	<5	<10			
	12-Aug-05	<0.5	<0.5	<0.5	<0.5	<0.5			

Notes and abbreviations:

- (1) VOCs not listed were not detected using EPA Method 8260B.
- (2) Groundwater samples for VOC analysis were inadvertently not collected in 2003.

VOC = volatile organic compound

MTBE = methyl tertiary-butyl ether

t-1,2-DCE = trans-1,2-dichloroethene

c-1,2-DCE = cis-1,2-dichloroethene

TCE = trichloroethene

ug/L = micrograms per liter (ppb)

< 0.5 =not detected at laboratory detection limit of 0.5 ug/L.

TABLE 3 RESULTS OF TREND ANALYSIS OF GROUNDWATER DATA FROM MONITORING WELLS SMW-3 AND SMW-4 (1)

64th Street Properties, Emeryville, California

		Well SMW-4		
Statistical Parameters	ТЕРН	c-1,2-DCE	TCE	ТЕРН
n (2)	11	5	5	11
S (3)	-27	-4	-5	5
Mann-Kendall Probability (4)	NA (5)	NA	NA	0.381
Significance Level (6)	0.05	0.05	0.05	0.05
Result (7)	No upward trend	No upward trend	No upward trend	No upward trend

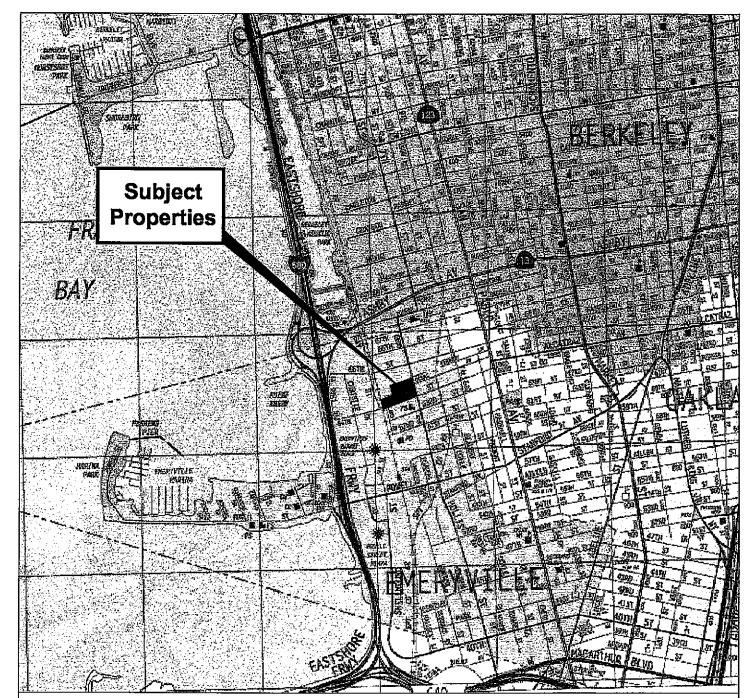
Notes and abbreviations:

- (1) The TEPH data from Table 1 for wells SMW-3 and SMW-4 and c-1,2-DCE and TCE data from Table 2 for well SMW-3 were evaluated using the Mann-Kendall test. A value equal to half the detection limit was used for concentrations less than laboratory reporting limits. Data from Tables 1 and 2 that were not evaluated using the Mann-Kendall test were not evaluated because concentrations were detected two or fewer times.
- (2) "n" is the number of sampling events.
- (3) "S" is the Mann-Kendall statistic calculated using the methodology described in Gilbert (1987).
- (4) Mann-Kendall probability is related to the values of S and n, and was obtained from Table A21 in Hollander & Wolfe (1973).
- (5) A negative S value indicates that the data are clearly not increasing and a Mann-Kendall probability is not applicable ("NA").
- (6) A significance level of 0.05 is recommended by U.S. EPA (1994).
- (7) A negative S value or a Mann-Kendall probability greater than the significance level indicates that there is no upward trend in the data (Gilbert, 1987).

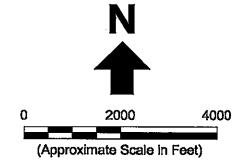
c-1,2-DCE = cis-1,2-dichloroethene

TCE = trichloroethene

TEPH = total extractable petroleum hydrocarbons quantified as diesel



Basemap Source: Thomas Guide Maps.



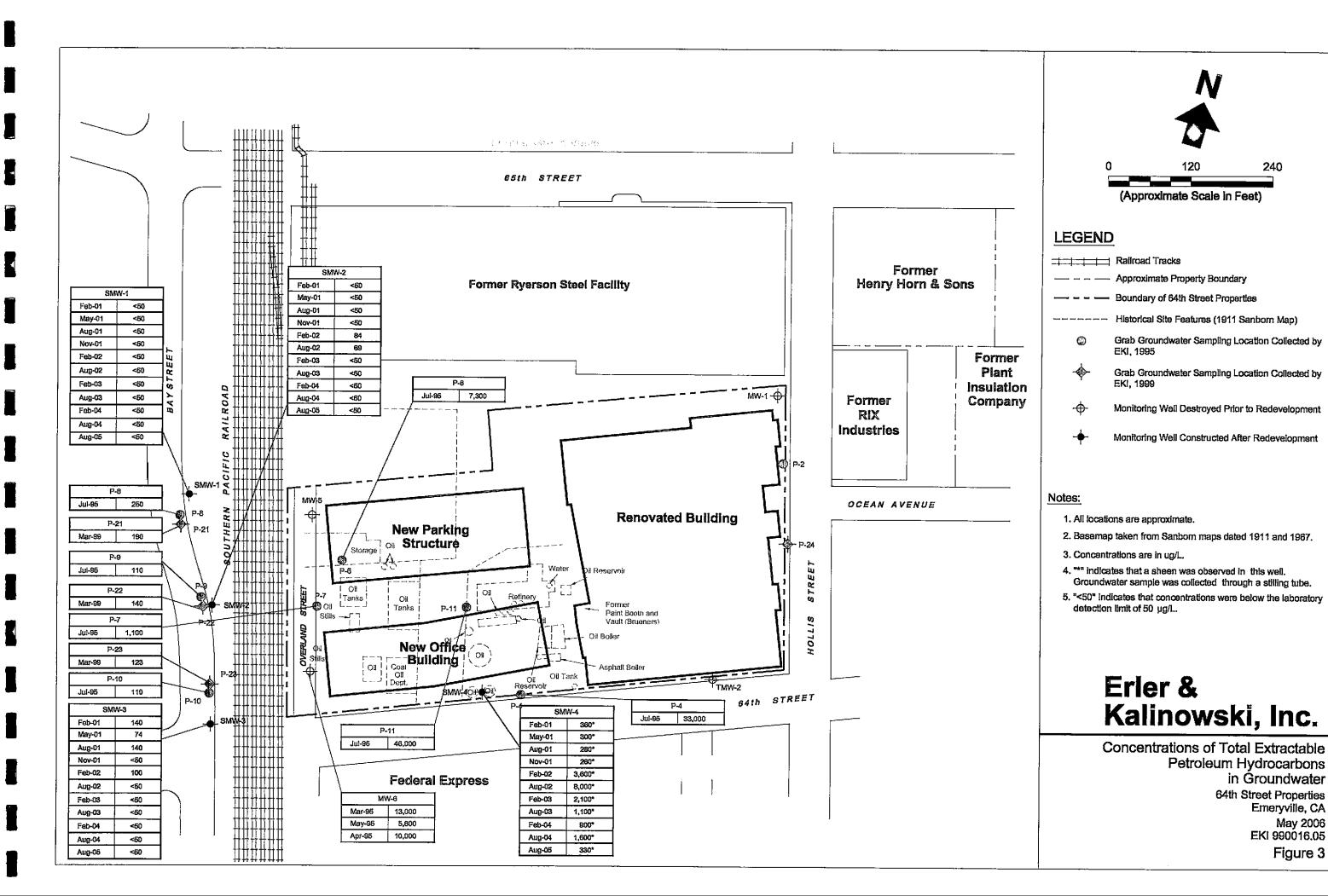
Erler & Kalinowski, Inc.

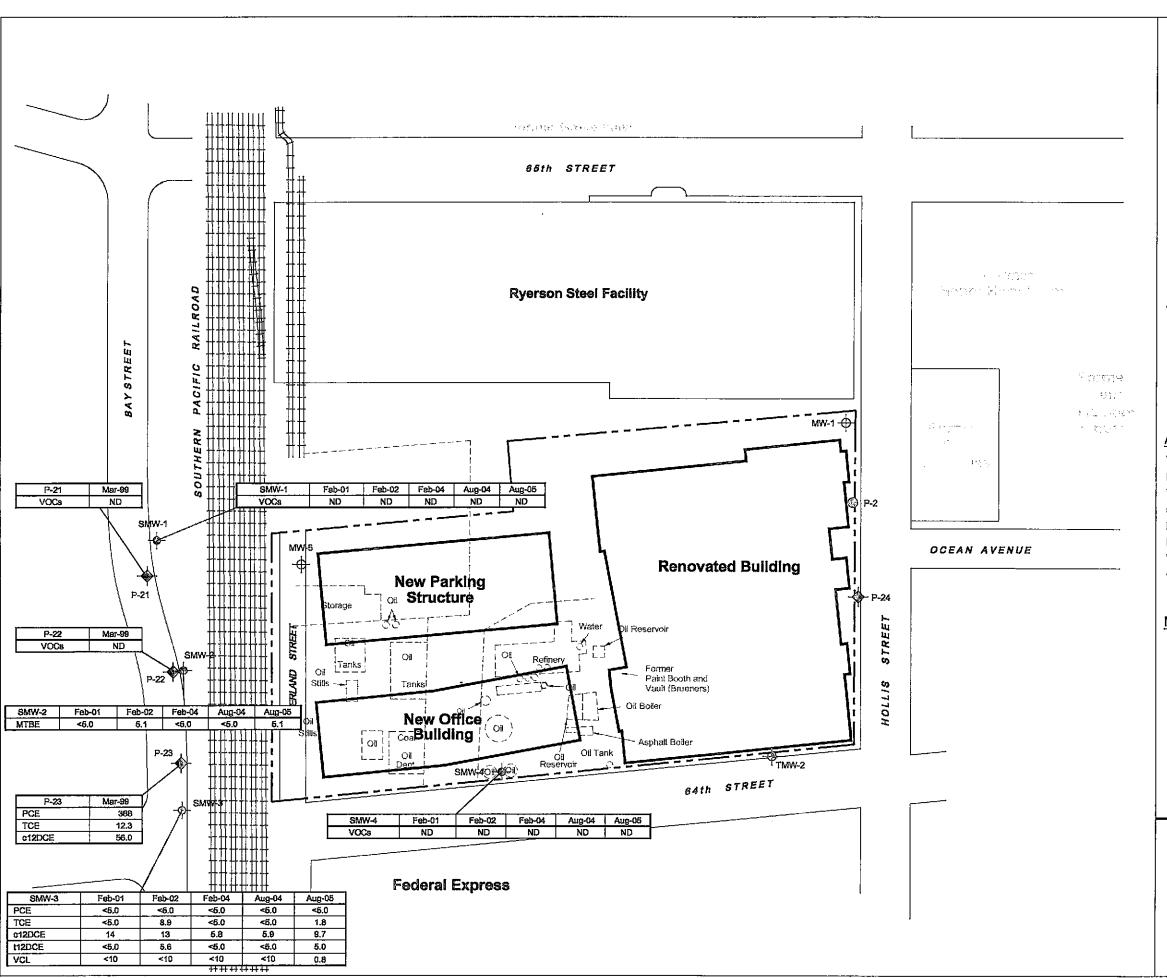
Site Location

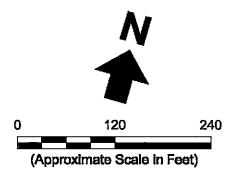
Notes:

1. All locations are approximate.

64th Street Properties Emeryville, CA May 2006 EKI 990016.05 Figure 1







LEGEND

Railroad Tracks
Approximate Property Boundary

Boundary of 64th Street Properties
Historical Site Features (1911 Sanborn Map)
Grab Groundwater Sampling Location Collected by EKI, 1999
Monitoring Well Constructed After Redevelopment

Abbreviations:

VOCs = Volatile Organic Compounds

PCE = Tetrachloroethene
TCE = Trichloroethene
c12DCE = cis-1,2-Dichloroethene

ND = Not Detected at Laboratory Detection Limit

MTBE = Methyl Tertiary-Butyl Ether

VCL = Vinyl Chloride

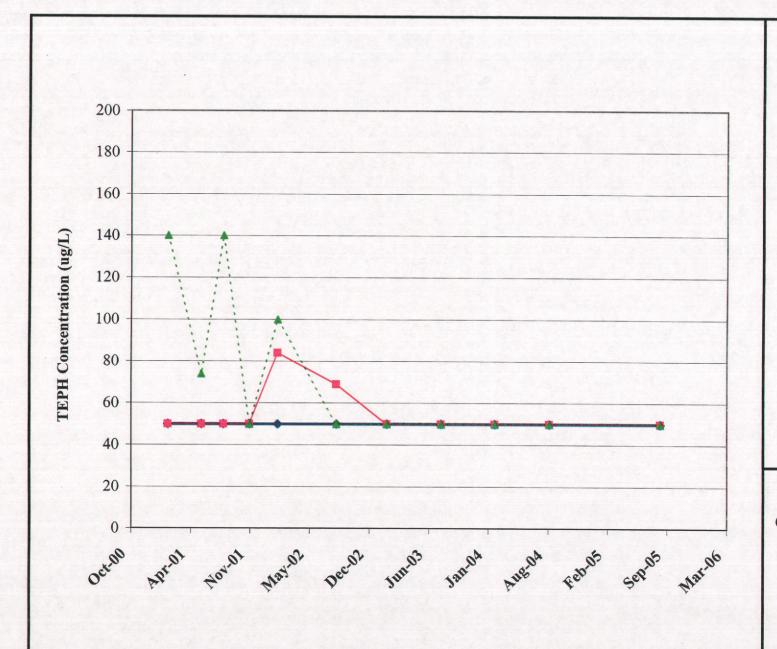
<10 = Not detected at laboratory detection limit of 10 µg/L</p>

Notes:

- 1. All locations are approximate.
- 2. Basemap taken from Sanborn maps dated 1911 and 1967.
- Concentrations are in ug/L. Only those VOCs detected in the current or previous sampling rounds are posted.

Erler & Kalinowski, Inc.

Concentrations of Detected Volatile
Organic Compounds in
Groundwater
64th Street Properties
Emeryville, CA
May 2006
EKI 990016.05



LEGEND

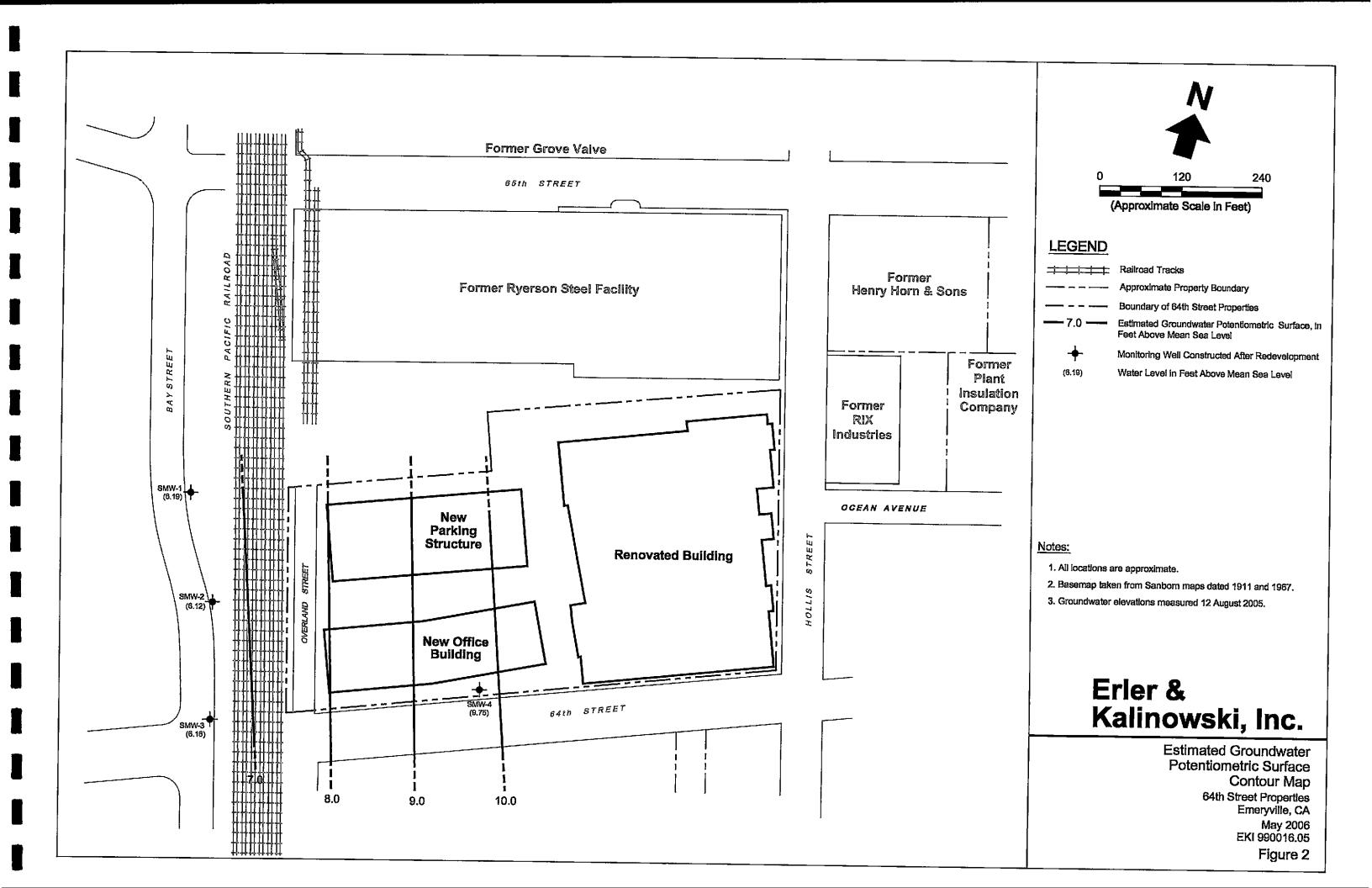
Notes:

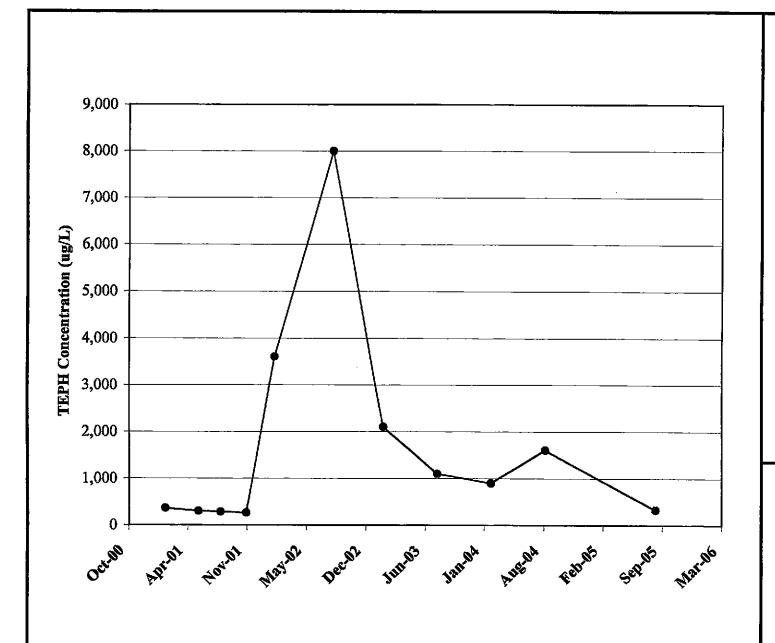
- TEPH= total extractable petrolum hydrocarbon ug/L= micrograms per liter
- The laboratory detection limit for TEPH was 50 ug/L.

Erler & Kalinowski, Inc.

TEPH Concentrations in Groundwater Samples Collected from Monitoring Wells SMW-1 through SMW-3

> 64th Street Properties Emeryville, California May 2006 EKI 990016.05





LEGEND

--- SMW-4

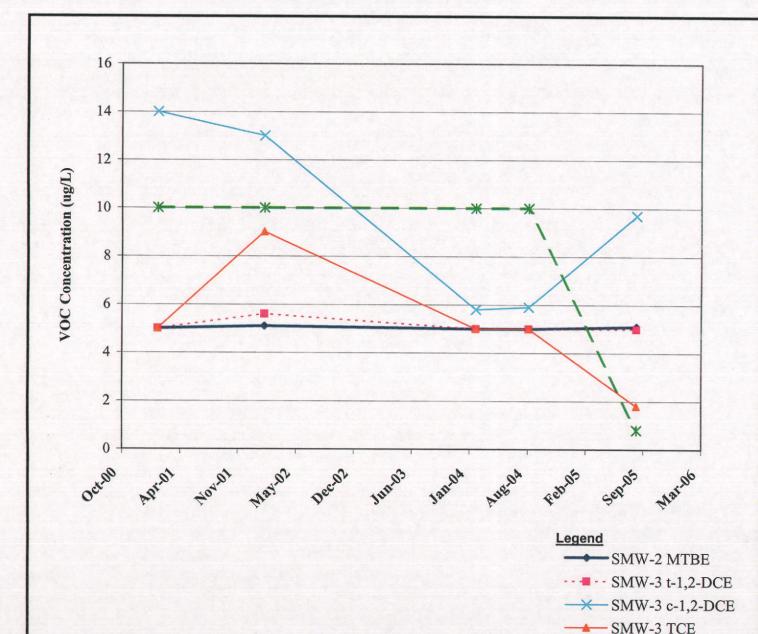
Notes:

- TEPH= total extractable
 petrolum hydrocarbon
 ug/L= micrograms per liter
- 2. The laboratory detection limit for TEPH was 50 ug/L.

Erler & Kalinowski, Inc.

TEPH Concentrations in Groundwater Samples Collected from Monitoring Well SMW-4

> 64th Street Properties Emeryville, California May 2006 EKI 990016.05



Notes:

- c-1,2-DCE= cis-1,2-dichloroethene
 DL= detection limit
 MTBE= methyl tertiary butyl
 ether
 t-1,2-DCE= trans-1,2 dichloroethene
 TCE= trichloroethene
 - ug/L= micrograms per liter VCI= vinyl chloride VOC= volatile organic compound
- The laboratory DLs for MTBE, c-1,2-DCE, t-1,2-DCE, and TCE were 5 ug/L for all analyses except the last, which is 0.5 ug/L.
- The laboratory DL for VCI was 10 ug/L for all analyses except the last, which was 0.5 ug/L.

Erler & Kalinowski, Inc.

-*-SMW-3 VC1

Detected VOC Concentrations in Groundwater Samples Collected from Monitoring Wells SMW-2 and SMW-3

> 64th Street Properties Emeryville, California May 2006 EKI 990016.05



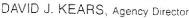
APPENDIX A

Letter from Alameda County Department of Environmental Health to Simeon Commercial Properties dated 15 October 1999

ALAMEDA COUNTY

HEALTH CARE SERVICES









October 15, 1999

RECEIVED OCT 19 to 1

ENVIRONMENTAL HEALTH SERVICES

1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 (510) 337-9335 (FAX)

Mr. Pierson Forbes
Simeon Commercial Properties FRIER & KALLANDERSON STREET, Suite 1 190
San Francisco, CA 94111- 2630

Subject: Ryerson / Lowenberg (64th and Hollis Streets, Emeryville, CA) (STID# 3789)

Dear Mr. Forbes:

The Alameda County Department of Environmental Health ("ACDEH") and the Regional Water Quality Control Board for the San Francisco Bay Region ("Regional Board") have reviewed the "Final Risk Management Plan (RMP) for the 64th Street Properties", dated August 30, 1999, prepared by Erler & Kalinowski, Inc. ("EKI"), in connection with the above-referenced properties at 64th and Hollis Street in Emeryville, California (the "Site"). The RMP describes the short-term and long-term risk management plans to be taken, during and after Simeon Commercial Properties' ("Simeons") planned redevelopment of the Site, for the mitigation of potential risks to human health and the environment associated with residual pollution on the Site. During a meeting on July 28, 1999, ACDEH and the Regional Board staff have discussed with you and EKI the various components of the RMP and issues of concern both agencies have regarding the draft RMP dated July 2, 1999.

A risk management plan dated August 9, 1999 included a child day care facility as one of the potential uses at the Site. Based on the review of the Site data, additional investigation, such as soil gas survey, would be required to determine that the child care facility is an acceptable use for the subject property. Therefore, the child care facility as a potential use for the Site was removed from the final RMP dated August 30, 1999. If a child care facility is to be added in the future, then additional collection of data and risk assessment will be necessary to validate that such a child care scenario is an acceptable use at the site.

ACDEH and Regional Board staffs concur with the general scope of the RMP. Based on the information provided to both agencies, it appears that the RMP comprehensively addresses the human health and the environmental issues during construction and after completion of the planned development (commercial /office uses) of the subject site.

A deed restriction must be recorded for the Site, which requires property owner/s complying with the approved RMP. In addition, the Regional Board and ACDEH will be notified if land use changes from the intended commercial use. The deed restriction must be recorded prior to completion of Site redevelopment. It is our understanding that Simeon will ensure that their contractors implement the RMP during redevelopment of the site and that ACDEH and the Regional Board will be notified when redevelopment begins.

Mr. Pierson Forbes

RE: Ryerson / Lowenburg Properties, Emeryville, CA

October 15, 1999

Page 2 of 2

If you have any questions regarding this letter or the subject site, please contact me at (510 567-6780, e-mail: shugo@co.alameda.ca.us or Ravi Arulanantham at (510) 622-2308, e-mail: ra@rb2swrcb.ca.gov.

Sincerely,

Susan L. Hugo

Hazardous Materials Specialist

Ravi Arulanantham, Ph.D.

Staff Toxicologist, Cal-EPA / S.F. Bay RWQCB

Concur:

Stephen Morse, P.E. Chief

Toxics Cleanup Division, Cal-EPA / S.F. Bay RWQCB

c: Mee Ling Tung, Director, Environmental Health Claudia Cappio / Ignacio Dayrit, City of Emeryville, 2200 Powell St., 12th Floor, Emeryville, CA 94608 Margaret Rosegay, Pillsbury, Madison & Sutro, LLP, 235 Montgomery Street, San Francisco, CA 94104 Michelle Kriegman King, EKI, 1730 South Amphlett Boulevard, Suite 320, San Mateo, CA 94402 SH / files



APPENDIX B

Covenant and Environmental Restriction on Real Property, 64th and Hollis Street Properties, Emeryville, California dated 6 October 1999

Recording Requested By:

SIMEON COMMERCIAL PROPERTIES

When Recorded, Mail To:
Loretta K. Barsamian, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street
Oakland, California 94612

COVENANT AND ENVIRONMENTAL RESTRICTION ON REAL PROPERTY

64TH AND HOLLIS STREET PROPERTIES/EMERYVILLE, CALIFORNIA

This Covenant is made as of the haday of letober, 1999 by HOLLIS STREET INVESTORS, LLC ("Covenantor") who is the Owner of record of that certain property located at 64th and Hollis Streets in the City of Emeryville, County of Alameda, State of California (A.P.N. 049-1500-001-03 and 049-1500-001-04), more particularly described in Exhibit A, attached hereto and incorporated herein by this reference (hereinafter referred to as the "Burdened Property" or "Property"), for the benefit of the California Regional Water Quality Control Board for the San Francisco Bay Region (the "Board"), with reference to the following facts:

- A. The Burdened Property and groundwater underlying the property contain hazardous materials.
- B. <u>Contamination of the Burdened Property</u>. Soil and groundwater at the Burdened Property is contaminated with weathered, heavy petroleum hydrocarbons as the result of historical petroleum refinery operations on the Property in the early 1900's. In addition, the groundwater beneath the Burdened Property is contaminated with chlorinated volatile organic compounds ("VOCs") that are migrating onto the property from several upgradient sources.

There are no known sources of VOCs on the Burdened Property. Petroleum hydrocarbons and VOCs constitute hazardous materials as that term is defined in Health & Safety Code Section 25260. With the implementation of a Risk Management Plan and the execution of this Covenant, remediation of the soil and groundwater at the Burdened Property has been determined by the Board to be unnecessary at this time. A Risk Management Plan for the Property, attached as Exhibit B and incorporated herein by reference, will become effective for purposes of this agreement upon its approval by the Board and by the County of Alameda, Department of Environmental Health ("County").

- C. Exposure Pathways. The contaminants addressed in this Covenant are present in soil and groundwater on the Burdened Property. Without compliance with the Risk Management Plan, exposure to petroleum hydrocarbons in the soils at the Burdened Property could take place via in-place contact and wind dispersal, resulting in potential dermal contact or inhalation by humans. The risk of public exposure to the contaminants will be minimized and controlled through implementation of the Risk Management Plan. The purpose of the restrictions on the use of the Burdened Property contained in this Covenant is to eliminate any significant risks to human health posed by exposure to the remaining hazardous materials.
- D. Adjacent Land Uses and Population Potentially Affected. The Burdened Property is used for office, commercial and/or industrial purposes and is adjacent to industrial and commercial land uses. High-rise residential property is located in the vicinity of the Burdened Property.
- E. Full and voluntary disclosure to the Board and to the County of the presence of hazardous materials on the Burdened Property has been made and extensive sampling of the Burdened Property has been conducted.

F. Covenantor desires and intends that in order to benefit the Board, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that may result from hazardous materials that may have been deposited on portions of the Burdened Property.

ARTICLE I

GENERAL PROVISIONS

- I.1. Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. The restrictions set forth in Article III are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence on the land of hazardous materials. Each and all of the Restrictions shall run with the land, and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors in interest thereof, for the benefit of the Board and all Owners and Occupants. Each and all of the Restrictions are imposed upon the entire Burdened Property unless expressly stated as applicable to a specific portion of the Burdened Property. Each and all of the Restrictions run with the land pursuant to section 1471 of the Civil Code. Each and all of the Restrictions are enforceable by the Board.
- 1.2. Concurrence of Owners and Occupants Presumed. All purchasers, lessees, or possessors of any portion of the Burdened Property shall be deemed by their purchase, leasing, or possession of such Burdened Property, to be in accord with the foregoing and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees

of such owners, heirs, successors, and assignees, that the Restrictions as herein established must be adhered to for the benefit of the Board and the future Owners and Occupants of the Burdened Property and that the interest of the future Owners and Occupants of the Burdened Property shall be subject to the Restrictions contained herein.

I.3. Incorporation into Deeds and Leases. Recordation of this covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant and Agreement has been attached to or incorporated into any given deed or lease.

ARTICLE II

DEFINITIONS

- II.1. Board. "Board" shall mean the California Regional Water Quality Control Board for the San Francisco Bay Region and shall include its successor agencies, if any.
- II.2. <u>Improvements</u>. "Improvements" shall mean all buildings, roads, driveways, regradings, and paved parking areas, constructed or placed upon any portion of the Burdened Property.
- II.3. Occupants. "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the exclusive right to occupy any portion of the Burdened Property.
- II.4. Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and/or its successors in interest, who hold title to all or any portion of the Burdened Property.

ARTICLE III

DEVELOPMENT, USE AND CONVEYANCE OF THE BURDENED PROPERTY

III.1. <u>Restrictions on Development and Use</u>. Covenantor promises to restrict the use of the Burdened Property as follows:

- Development of the Burdened Property shall be restricted to industrial,
 commercial or office space;
- b. The Covenantor shall notify the Board and the County of any planned change in the type of use of the Burdened Property (e.g., from commercial to residential), and shall not change the type of use of the Burdened Property unless expressly permitted in writing by the Board;
- c. No Owners or Occupants of the Property or any portion thereof shall conduct any excavation work on the Property, except in accordance with the Risk Management Plan. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed by Covenantor or his agent in accordance with the Risk Management Plan and all applicable provisions of local, state and federal law;
- d. All uses and development of the Burdened Property shall be consistent with any applicable Board Order or Risk Management Plan, each of which is hereby incorporated by reference including future amendments thereto. All uses and development of the Burdened Property shall preserve the integrity of any cap and any groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the Board, unless otherwise expressly permitted in writing by the Board.
- e. As specified in the Risk Management Plan, no Owners or Occupants of the Property or any portion thereof shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Board.
- f. The Owner shall notify the Board of each of the following: (1) The type, cause, location and date of any disturbance to any cap which could affect the ability of such cap to

perform its function and (2) the type and date of repair of such disturbance. Notification to the Board shall be made by registered mail within ten (10) working days of both the discovery of such disturbance and the completion of repairs;

- g. The Covenantor agrees that the Board, and/or any persons acting pursuant to Board orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring, as provided for in Division 7 of the Water Code.
- h. No Owner or Occupant of the Burdened Property shall act in any manner that will aggravate or contribute to the existing environmental conditions of the Burdened Property. All use and development of the Burdened Property shall preserve the integrity of any capped areas.
- III.2. Enforcement. Failure of an Owner or Occupant to comply with any of the restrictions, as set forth in paragraph III.1, shall be grounds for the Board, by reason of this Covenant, to have the authority to require that the Owner modify or remove any improvements constructed in violation of that paragraph. Violation of the Covenant shall be grounds for the Board to file civil actions against the Owner as provided by law.

The Covenantor plans to lease portions of the Burdened Property to space or office tenants who will have no rights under their leases to alter the property in any fashion. The Covenantor intends to assume all responsibility for compliance by such lessees with the Restrictions contained in this Covenant. Absent any indication of such lessee's active involvement in violations of the Restrictions contained in this Covenant, the Board will look first to the Owner of the Burdened Property for compliance with the terms of this Covenant. So long as the Owner is responsive and has the capacity to address compliance issues, the Board will not look beyond the Owner to such lessees.

III.3. Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to the property. Any such instrument shall contain the following statement:

The land	described herein contains hazardous	materials in soils and in the
ground water un	der the property, and is subject to a de	eed restriction dated as of
-	, 199_, and recorded on	, 199, in the Official
Records of	County, California, as Do	cument No.
which Covenant	and Restriction imposes certain cover	nants, conditions, and
restrictions on us	age of the property described herein.	This statement is not a
declaration that a	hazard exists.	

ARTICLE IV

VARIANCE AND TERMINATION

IV.1. <u>Variances</u>. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or any portion thereof may apply to the Board for a written variance from the provisions of this Covenant. <u>Termination</u>. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or a portion thereof may apply to the Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property. <u>Term.</u> Unless terminated in accordance with paragraph IV-2 above, by law or otherwise, this Covenant shall continue in effect in perpetuity.

ARTICLE V

MISCELLANEOUS

- V.1. <u>No Dedication Intended</u>. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.
- V.2. <u>Notices</u>. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (a) when delivered, if

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 7-

personally delivered to the person being served or official of a government agency being served, or (b) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested:

If To: "Covenantor"

Mr. Russell Pitto Simeon Commercial Properties 655 Montgomery Street, Suite 1190 San Francisco, CA 94111-2630

If To: "Board"

Regional Water Quality Control Board San Francisco Bay Region Attention: Executive Officer 1515 Clay Street Oakland, California 94612

- V.3. <u>Partial Invalidity</u>. If any portion of the Restrictions or terms set forth herein is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if the invalid portion had not been included herein.
- V.4. Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.
- V.5. Recordation. This instrument shall be executed by the Covenantor and by the Executive Officer of the Board. This instrument shall be recorded by the Covenantor in the County of Alameda within ten (10) days of the date of execution.
 - V.6. <u>References</u>. All references to Code sections include successor provisions.
- V.7. <u>Construction</u>. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed to effect the purpose of this instrument and the policy and purpose of the Water Code. If any provision of this instrument is found to be ambiguous, an

interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

Covenantor:	
Ву:	
Title:	
Date:	
Agency:	State of California Regional Water Quality Control Board, San Francisco Bay Region
By: Auto Loret	ta K. Barsamian

Title: Executive Officer

Date: October 6,199

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California	
County of ALAMEDA	
Cn October 6, 1999 before me, Li	nda A. Sabau, Notary Public NAME, TITLE OF OFFICER - E.G., JANE DOE, NOTARY PUBLIC.
personally appeared Loretta K. Barsamia Quality Control Board, San Francisco B	n, Executive Officer, California Regional Water ay Region (NAME(S) OF SIGNER(S)
LINDA A. SABAU C auth COMM. # 1208248 NOTARY PUBLIC - CALIFORNIA SAN FRANCISCO COUNTY My Comm. Expires January 16, 2003 exec	to me on the basis of satisfactory evidence the person(s) whose name(s) is/are subscribed he within instrument and acknowledged to me that he/they executed the same in his/her/their orized capacity(ies), and that by his/her/their ature(s) on the instrument the person(s), or the ty upon behalf of which the person(s) acted, uted the instrument.
WITN	ESS my hand and official seal.
	Linds Co. Salvan SIGNATURE OF NOTARY
	OFTIONAL
Though the data below is not required be on the document and could prevent frau	y law, it may prove valuable to persons relying dulent reattachment of this form.
CAPACITY CLAIMED BY SIGNER	DESCRIPTION OF ATTACHED DOCUMENT
☐ INDIVIDUAL ☐ CORPORATE OFFICER	COVENANT AND ENVIRONMENTAL RESTRICTION ON REAL PROPERTY TITLE OR TYPE OF DOCUMENT
TITLE(S)	
TITLE(S)	9
☐ PARTNER(S) ☐ LIMITED	NUMBER OF PAGES
☐ ATTORNEY-IN-FACT	
☐ TRUSTEE(S) ☐ GUARDIAN/CONSERVATOR	October 6, 1999
OTHER: Executive Officer	DATE OF DOCUMENT
	SIGNER(S) OTHER THAN NAMED ABOVE
SIGNER IS REPRESENTING: NAME OF PERSON(S) OR ENTITY(IES)	
California Regional Water Quality	COURT (CL. OMITTE MINAT NAMED ADOLE
Control Board	SIGNER(S) OTHER THAN NAMED ABOVE



APPENDIX C

Tables 1 and 2 from *Phase I and Phase II Environmental Site Assessment for* 64th Street Properties, Emeryville, California, dated 20 May 1999

TABLE 1 TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS DETECTED IN GROUNDWATER SAMPLES

64th Street Properties, Emeryville, California

Sample Location	Date	Concentrations (ug/L) (a)		
MW-1	23-Mar-95	5,500		
	27-Apr-99	1,100		
MW-5	27-Mar-95	29,000		
	04-May-95	130,000		
	27-Apr-99	6,500		
MW-6	27-Mar-95	13,000		
(duplicate)	27-Mar-95	5,600		
	04-May-95	5,800		
	27-Apr-99	10,000		
P-8	07-Jul-95	250		
P-21	29-Mar-99	190		
P-9	07-Jul-95	110		
P-22	29-Mar-99	140		
P-10	07-Jul-95	110		
P-23	29-Mar-99	123		
P-24	29-Mar-99	59.7		

Notes:

(a) Groundwater samples were analyzed using EPA Method 8015M, quantified against a diesel standard. Concentrations were quantified in the hydrocarbon chain length range of approximately 10 to 24. The laboratory indicated that the hydrocarbons detected often did not match the diesel standard and that longer chain lengths were also present on the chromatogram.

TABLE 2 VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUNDWATER SAMPLES

64th Street Properties, Emeryville, California

Sample						Conce	entrations (ug/	/L) (a)				
Location	Date	Acetone	Chloro- ethane	11DCA	11DCE	c12DCE	t12DCE	PCE	111TCA	TCE	VC	Freon 113
MW-1	23-Mar-95	NA	<5.0 (b)	<2.5	<2.5	39 (c)	9.9	<2.5	<2.5	170	<5.0	9
	27-Apr-99	<20	<10	<5.0	<5.0	51	54	<5.0	<5.0	170	<10	<5.0
MW-5	27-Mar-95	NA	18	5.8	<0.5	8.5	9.6	<0.5	<0.5	<0.5	10	<1.0
	27-Apr-99	<20	<10	<5.0	<5.0	<5.0	16	<5.0	<5.0	<5.0	<10	<5.0
MW-6	27-Mar-95	NA	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0
(duplicate)	27-Mar-95	NA	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0
	27-Apr-99	<20	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<5.0
P-21	29-Mar-99	NA	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA
P-22	29-Mar-99	NA	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NA
P-23	29-Mar-99	NA	<25	<10	<10	56	<10	388	<10	12.3	<10	NA
P-2	06-Jul-95	10	<2.0	4	42	2.8	<2.0	<2.0	7.4	6.4	<2.0	NA
P-3	06-Jul-95	<10	<2.0	<2.0	<2.0	11	<2.0	<2.0	<2.0	68	<2.0	NA
P-24	29-Mar-99	NA	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	11.5	<2.0	NA
M	CLs	-	-	5	6	6	10	5	200	5	0.5	1,200

Notes:

- (a) Samples from 1995 were analyzed using EPA Method 8010 or 8240. Samples from 1999 were analyzed using EPA Method 8260. Only compounds detected are listed.
- (b) Less than symbol ("<") indicates that the compound was not detected above the laboratory reporting limit indicated.
- (c) Compounds indicated in bold exceed the California Maximum Contaminant Levels ("MCLs") (Section 64431, Title 22, California Code of Regulations).

11DCA = 1,1-dichloroethane

t12DCE = trans-1,2-dichloroethene

VC = vinyl chloride

12DCA = 1,2-dichloroethane

PCE = tetrachloroethene

Freon 113 = 1,1,2-trichloro-1,2,2-trifluoroethane

11DCE = 1,1=dichloroethene

111TCA = 1,1,1-trichloroethane

NA = not analyzed

c12DCE = cis-1,2-dichloroethene

TCE = trichloroethene



APPENDIX D

Table D-1 from Appendix D of Risk Management Plan for the 64th Street Properties, Emeryville, California, dated 30 August 1999

TABLE D-1 CHEMICALS OF CONCERN OF VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

64th Street Properties, Emeryville, California

Compound	Maximum Concentration (a) (μg/L)	Sample Location	Sample Date
Acetone	23	P-7	7/5/1995
Benzene	26	TMW-2	1/4/1993
Chloroethane	34	P-6	7/5/1995
1,1-Dichloroethane	5.6	P-6	7/5/1995
1,1-Dichloroethene	42	P-2	7/6/1995
cis-1,2-Dichloroethene	51	MW-1	4/27/1999
trans-1,2-Dichloroethene	54	MW-1	4/27/1999
Ethylbenzene	19	P-11	7/6/1995
1,1,1-Trichloroethane	7.4	P-2	7/6/1995
Trichloroethene	170	MW-1	4/27/1999
Vinyl Chloride	6.1	P-6	7/5/1995
Xylenes	42.5	P-11	7/6/1995

Notes:

(a) Maximum concentrations are obtained from the most recent data at a particular sampling location on the Lowenberg Property or the Ryerson Paved Lot Property.