

Five-Year Review Report

Third Five-Year Review

for

Liquid Gold Oil Corporation Site

Richmond, California

September 2010

PREPARED BY:

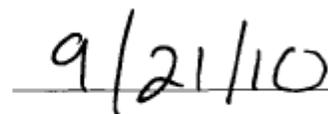
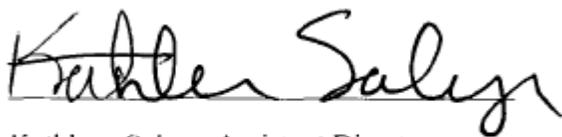
U.S. Environmental Protection Agency

Region IX

San Francisco, CA

Approved By:

Date:



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LIST OF ACRONYMS

bgs	Below ground surface
CTR	California Toxics Rule
DTSC	California Department of Toxic Substances Control
EPA	United States Environmental Protection Agency
MCL	Maximum Contaminant Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priority List
O&M	Operation and Maintenance
PAHs	Polycyclic Aromatic Hydrocarbons
RI/FS	Remedial Investigation/Feasibility Study
RAP	Remedial Action Plan (State of California decision document)
ROD	Record of Decision (EPA decision document)
RWQCB	San Francisco Bay Regional Water Quality Control Board
SPTCo	Southern Pacific Transportation Company
TPH	Total petroleum hydrocarbons
TPH-D	Diesel range total petroleum hydrocarbons
TPH-G	Gasoline range total petroleum hydrocarbons
TPH-O/G	Oil and gas range total petroleum hydrocarbons
UPRR	Union Pacific Railroad Company

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Executive Summary

The remedy for the Liquid Gold Site in Richmond, California included removal of debris, installation of a vegetated soil cover (cap) to prevent contact with impacted soils and to control runoff patterns, excavation of sediments from two drainage channels leading to the adjacent marsh and consolidation of those sediments under the cap, access controls (fencing), institutional controls to prevent residential development, and ground water monitoring for a minimum of 5 years. The site achieved construction completion with the signing of the Preliminary Close-Out Report on September 27, 1995, and was deleted from the National Priorities List on September 11, 1996. The trigger for this Five-Year Review is the completion date for the second Five-Year Review, September 28, 2005.

The technical assessment performed during this Five-Year Review determined that the remedy was constructed in accordance with the requirements of the Record of Decision (ROD), and is functioning as designed, although a few issues need to be addressed. This report establishes milestones for addressing the following issues:

- The fence does not completely enclose the vegetated cap
- The parcel numbers in the deed restriction are ambiguous, and the deed restriction is not consistent with current California regulations

The remedy at the Liquid Gold Oil Corp Site currently protects human health and the environment, because all immediate threats at the site have been addressed through the removal and off-site disposal of contaminated debris, stabilization and capping of on-site contaminated soils, excavation of suspect sediments from two drainage channels and consolidation of those sediments under the vegetated cap, access restrictions (fencing, warning signs), regular maintenance of engineered control structures, and institutional controls (deed restriction) that restrict land uses. However, in order to ensure long-term protection of human health and the environment, Union Pacific Railroad must complete the fence realignment project to completely enclose the vegetated cap within the fence, and revise the deed restriction to ensure that it is consistent with California regulations and covers the appropriate site area.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Liquid Gold Oil Corporation		
EPA ID (from WasteLAN): CAT000646208		
Region: 9	State: CA	City/County: Richmond/Contra Costa
SITE STATUS		
NPL status: Final <input checked="" type="radio"/> Deleted <input type="radio"/> Other (specify)		
Remediation status (choose all that apply): Under Construction <input type="radio"/> Operating <input type="radio"/> Complete <input checked="" type="radio"/>		
Multiple OUs?* YES <input type="radio"/> NO <input checked="" type="radio"/>	Construction completion date: <u>9 / 27 / 1995</u>	
Has site been put into reuse? YES <input type="radio"/> NO <input checked="" type="radio"/>		
REVIEW STATUS		
Lead agency: EPA <input checked="" type="radio"/> State <input type="radio"/> Tribe <input type="radio"/> Other Federal Agency <input type="radio"/>		
Author name: Rachelle Strickfaden		
Author title: Environmental Engineer	Author affiliation: Environmental Protection Agency	
Review period: <u>3 / 1 / 2010</u> to <u>8 / 31 / 2010</u>		
Date(s) of site inspection: <u>3 / 2 / 2010</u>		
Type of review: <input checked="" type="radio"/> Post-SARA <input type="radio"/> Pre-SARA <input type="radio"/> NPL-Removal only <input type="radio"/> Non-NPL Remedial Action Site <input type="radio"/> NPL State/Tribe-lead <input type="radio"/> Regional Discretion		
Review number: 1 (first) <input type="radio"/> 2 (second) <input type="radio"/> 3 (third) <input checked="" type="radio"/> Other (specify)		
Triggering action: Actual RA On-site Construction at OU #___ Actual RA Start at OU# ___ Construction Completion <input checked="" type="radio"/> Previous Five-Year Review Report <input type="radio"/> Other (specify) <input type="radio"/>		
Triggering action date (from WasteLAN): <u>9 / 28 / 2005</u>		
Due date (five years after triggering action date): <u>9 / 28 / 2010</u>		

* ["OU" refers to operable unit.]

Five-Year Review Summary Form, continued

Issues:

Issue 1 The fence does not completely contain the vegetated cap.

Issue 2 The parcel numbers in the deed restriction are ambiguous, and the deed restriction is not consistent with current California regulations.

Recommendations and Follow-up Actions:

Issue 1 Complete the fence realignment project, fully enclosing the vegetated cap within the site fencing

Issue 2 Investigate why the legal description of the deed restricted area, specifically the parcel numbers, are unclear in the Covenant to Restrict Use of Property. Provide an analysis of this issue to EPA. The EPA will determine, after reviewing this analysis, whether follow-up actions are needed. Update the deed restriction to be consistent with current California regulations.

Protectiveness Statement:

The remedy at the Liquid Gold Site currently protects human health and the environment, because all immediate threats at the site have been addressed through the removal of contaminated material, stabilization and capping of on-site contaminated soils, access restrictions (fencing, warning signs), regular maintenance of engineered control structures, and institutional controls (deed restriction) that restrict land uses. However, in order to ensure long-term protection of human health and the environment, Union Pacific Railroad must complete the fence realignment project to completely enclose the vegetated cap within the fence, and revise the deed restriction to ensure that it is consistent with California regulations and covers the appropriate site area.

Other Comments:

No further comments

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I. INTRODUCTION

The purpose of a Five-Year Review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and recommendations to address them.

The Agency is preparing this Five-Year Review pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The agency interpreted this requirement further in the National Contingency Plan (NCP); 40 CFR §300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

The United States Environmental Protection Agency (EPA) Region 9, together with the California Department of Toxic Substances Control (DTSC), has conducted a Five-Year Review of the remedial actions implemented at the Liquid Gold Site in Richmond, California. This review was conducted from March 2010 through July 2010. This report documents the results of the review.

This is the third Five-Year Review for the Liquid Gold Site. The triggering action for this statutory review is the completion of the second Five-Year Review Report on September 28, 2005. The Five-Year Review is required because hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

II. SITE CHRONOLOGY

Table 1: Chronology of Site Events

Event	Date
Removal activities – storage tanks and contents removed and disposed off-site	1982-1983
Site listed on the California State Superfund List	January 1983
Sited listed on the EPA National Priority List	September 1983
Removal activities - drums of hazardous waste removed and disposed off-site	1984
Removal activities - 760 cubic yards contaminated soil and demolition debris removed and disposed off-site	1985
Removal activities - site buildings demolished and debris disposed off-site	1989
Remedial Investigation/Feasibility Study conducted	1988-1992
Remedial Action Plan signed by DTSC	June 8, 1993
Record of Decision signed by EPA	June 21, 1993
On Site Mobilization	July 7, 1994
Marsh channel sediment excavated and soil cap installed	July 1994
Final cap installation inspection conducted	February 1995
Deed restriction recorded	September 1995
Operation and Maintenance Plan finalized	September 1995
Site deleted from EPA National Priority List	September 1996
Five-year Review Report completed by EPA	September 2000
Five-year Review Report completed by DTSC	June 2003
2005 Biennial Groundwater Monitoring Report completed	March 2006
Second Five-year Review Report completed	September 2005
2006 Annual Inspection completed by DTSC	September 2006
2006 Annual Inspection Report by DTSC	October 2006
Draft Liquid Gold Fence Realignment Work Plan	February 2007
Installation of new chain-linked fence along the southern and southwestern perimeters of the Liquid Gold cap partially completed	Spring 2007
UPRR initiated easement request process with East Bay Regional Park District (EBRPD) in order to complete fence realignment	Spring 2007
EBRPD indicates they would prefer a land swap (or lot line adjustment) rather than an encroachment permit to complete fence realignment around the Liquid Gold cap	January 2008
UPRR submits the Site Security Plan and initiates site control inspections every 2 weeks	December 2008
2007 Biennial Groundwater Monitoring Report completed	March 2008
2009 Biennial Groundwater Monitoring Report completed	November 2009

III. BACKGROUND

PHYSICAL CHARACTERISTICS

The site consists of an approximately 2.1-acre capped area within a 7.5 acre deed restriction area. The site is part of an approximately 40-acre parcel that was owned by Southern Pacific Transportation Company (SPTCo) and is now owned by Union Pacific Railroad Company (UPRR). The site is located in the City of Richmond, Contra Costa County, California (Figure 1) and is adjacent to the San Francisco Bay, west of Interstate 580, and south of the Bayview Avenue highway overpass. The site is bounded by Hoffman Marsh to the east and southeast, by Baxter Creek to the west, and by drainage channels connecting to San Francisco Bay to the southwest.

The depth to shallow groundwater varies from approximately 2 to 5 feet below ground surface (bgs). Groundwater in the deeper wells rises within the well casings to approximately the same elevation as that of the shallow groundwater zone wells. Groundwater flow direction in the shallow zone varies due to tidal and seasonal influences. In the deep groundwater zone, the apparent groundwater flow direction is to the southwest and is independent of seasonal water level variations.

LAND AND RESOURCE USE

The site is currently unoccupied and is surrounded by a fence to restrict access onto the property. A deed restriction was recorded for the site in 1995 that restricts future use of the site to park land, open space, commercial, or industrial use. Residential development of the site is prohibited. Due to the proximity of the site to the San Francisco Bay, site groundwater is naturally saline and is therefore not a current or potential source of drinking water.

HISTORY OF CONTAMINATION

The site was formerly owned by SPTCo, who leased the site to an asphalt manufacturing facility from approximately the 1940s to 1965 and to a waste oil storage and transfer facility (Liquid Gold) during the 1970s to early 1980s. The site is currently owned by UPRR. During Liquid Gold's operations, waste oils, solvents, and tank bottom sediments were stored in storage tanks on site.

Investigations conducted in the 1970s by the California Department of Health Services (now the State of California Department of Toxic Substances Control [DTSC]) and the San Francisco Bay Regional Water Quality Control Board (RWQCB) documented releases of hazardous substances onto the ground and into ponds, sumps, and ditches. Consequently, the site was listed on the California State Superfund List in January 1983. The United States Environmental Protection Agency (EPA) also listed the site on the National Priority List (NPL) in September 1983. The DTSC assumed lead responsibility for overseeing environmental investigations and cleanup actions at the site.

Soil and Sediment

The soil at the site consists of fill material over bay mud. The fill thickness ranges from 5 to 10 feet, and the bay mud thickness ranges from 7 to 19 feet. The bay mud is underlain by sandy alluvium.

Approximately 500 soil samples were collected from surface and subsurface soils (to depths of 30 feet) and over 60 sediment samples were collected from the marsh. Samples were analyzed for metals, polycyclic aromatic hydrocarbons (PAHs), and oil and grease. The results of these analyses are summarized below:

- Metals - Elevated concentrations of lead, copper, and mercury were found at the site. Copper and mercury appear randomly distributed and did not appear to have a source area. Elevated concentrations of lead were detected primarily in a 5-acre area in the central portion of the site. The average lead concentration in soil in this area was approximately 1,000 milligrams per kilogram (mg/kg). The highest concentrations of lead were detected within the fill material at depths between 5 to 6.5 feet below ground surface (bgs).
- PAHs - PAHs were detected in five surface samples. PAHs in the subsurface were primarily confined to the same 5-acre area in the central portion of the site. Levels of total PAHs varied from 0.4 to 14 mg/kg.
- Oil and Grease - Soil samples were analyzed for total petroleum hydrocarbons (TPH) as oil and grease (TPH-O/G) as an indicator of the amount of petroleum products in the soil. Elevated levels of TPH-O/G appeared to be randomly distributed throughout the site and obvious sources did not appear to exist.

Ground Water and Surface Water

Two permeable ground water zones have been investigated at the site:

- The shallow groundwater zone is within the fill material above the bay mud. This fill unit ranges in thickness from ground surface to between approximately 5 to 10 feet below ground surface (bgs).
- The deep groundwater zone, separated from the shallow zone by bay mud which serves as an aquitard, is in a sandy alluvial unit, the upper limit of which is encountered at depths of 17 feet bgs or greater.

Sixteen groundwater monitoring wells were installed during or prior to the RI. The monitoring well network at that time consisted of 7 deep wells (MW-1, MW-2, MW-3, MW-6, MW-9, MW-16, and MW-18) and 9 shallow wells (MW-4, MW-5, MW-7, MW-8, MW-11, MW-12, MW-13, MW-15, and MW-17). Locations of these wells are shown on Figure 2.

Quarterly sampling of the monitoring wells was conducted between October 1988 and October 1989, in accordance with the RI/FS Work Plan (K/J 1988). Additional quarterly groundwater monitoring began in October 1990. The major constituents analyzed in groundwater were metals (specifically, chromium, copper, lead, mercury, nickel, and zinc) and TPH (specifically, as diesel

[TPH-D], as gasoline [TPH-G], and TPH-O/G). Historical groundwater analytical data collected from 1988 through 1992 are presented in Appendix A.

Surface water is present in two tidally influenced channels that receive freshwater runoff from the site. These channels drain to San Francisco Bay. Soil and sediment activities, including grading, removal and capping, eliminated the potential for future surface runoff contamination.

INITIAL RESPONSE

Prior to 1982, Liquid Gold performed some limited cleanup during its site operations, but these actions are not well documented. Between 1982 and 1989, SPTCo performed the following removal measures:

- Twenty five storage tanks were removed and disposed off-site in 1982 and 1983;
- More than 70 drums of hazardous waste were removed and disposed off-site in 1984;
- Approximately 760 cubic yards of contaminated soil were excavated and disposed off-site in 1985 from the former east tank farm, former asphalt facility, areas near the former asphalt facility, and the former west tank farm;
- A wooden building in the former asphalt facility was removed in 1985, resulting in an additional 65 cubic yards of wood and metal debris that were disposed off-site; and
- Remaining site buildings were demolished and the resulting debris was disposed off-site in 1989.

BASIS FOR TAKING ACTION

The human health risk assessment determined that the only significant potential exposure pathway was contact with soil (groundwater is not a potential drinking water source due to its high salinity). The assessment found that the levels of metals, PAHs, and TPH remaining in the site soil after the completion of the removal measures exceeded levels protective for residential use. Specifically, soils with lead concentrations greater than 370 mg/kg posed an unacceptable level of non-carcinogenic risk to a hypothetical child resident. However, the levels of carcinogenic and noncarcinogenic chemicals of concern were acceptable for commercial or industrial uses.

The ecological risk assessment activities concluded that adverse impacts to aquatic organisms were possibly occurring in the drainage channels leading from the site into San Francisco Bay. This was based on the observation that the species composition of sediment-dwelling organisms was typical of a community subject to petroleum contamination. In addition, sediment toxicity to bivalve larvae was observed in laboratory bioassays.

IV. REMEDIAL ACTIONS

REMEDY SELECTION

The removal activities addressed the principal human health and environment threats at the site. The Record of Decision, which concurred with and selected the remedy chosen in the State's Remedial Action Plan (RAP), addressed the residual sediment, soil and groundwater impacts remaining at the site. Remedial Action Objectives were not explicitly stated in the ROD, but can be inferred to include:

- Improve the ecological value of the sediments in the drainage channels leading into Hoffman Marsh to mitigate any adverse impacts which may have resulted from past Site activities
- Prevent offsite migration of contaminated soils and/or groundwater
- Prevent exposure to residual contaminated soils

The major components of the selected remedy include:

- Removal and offsite disposal of debris
- Excavation of sediments from two drainage channels leading to the adjacent marsh
- Grading, consolidation of excavated sediments, addition of a soil cap, and seeding to control runoff patterns
- Groundwater monitoring for a minimum of five years
- A deed restriction prohibiting residential development,

EPA signed the Record of Decision (ROD) on June 21, 1993, and the deed restriction was signed into effect in September 1995.

REMEDY IMPLEMENTATION

Drainage Channel Excavations

In 1994, sediments were excavated from two channels in the marsh to a depth of 1 foot at the channel center. Confirmation sampling, which included chemical analysis and bioassay testing, was performed to evaluate the impact of remaining sediment on aquatic receptors. Sediments from the middle of one of the channels (Transect 6) were toxic to bivalve larvae, prompting additional sampling in February 1995. The February 1995 data confirmed that some sediments were toxic to bivalve larvae, although the data indicated that the toxicity was probably due to factors unrelated to the site contaminants. Naturally occurring ammonia was found to be at least a partial cause of the toxicity. Additional tests were performed in August 1995, and the results indicated that the toxicity associated with the sediments in the middle of Transect 6 did not appear to be related to site contaminants and that additional marsh sediment sampling was not warranted. In a letter dated November 22, 1995, DTSC concurred that additional marsh sediment sampling was not necessary.

Vegetated Soil Cover

The vegetated soil cover was installed over contaminated soils in July 1994 and included the placement of 2 feet of clean imported fill, graded to maximize site drainage and prevent ponding. Following grading, the area was seeded with native plants, and a fence was erected to prevent unauthorized access to the site. The initial cap installation inspection by regulators in February 1995 resulted in additional sampling and minor cap repairs. The final cap installation inspection occurred in July 1995, and DTSC certified the remedial action as complete in August 1995.

OPERATIONS AND MAINTENANCE

Operations and maintenance (O&M) activities conducted at the site after completion of the remedial activities are outlined in the following documents:

- *Operations and Maintenance Plan, Liquid Gold Site, Richmond, California* (O&M Plan) (K/J 1995b)
- *Draft Remedial Action Plan* (K/J1993)
- *Groundwater Monitoring Plan, Liquid Gold Site, Richmond, California* (Monitoring Plan) (K/J, 1995a)

The O&M activities included marsh sediment deposition monitoring, groundwater monitoring; and site inspections. Additional information regarding these O&M activities is provided in the following sub-sections.

Marsh Sediment Deposition Monitoring

After the marsh channel excavations and confirmation sampling were completed, the channels were allowed to accumulate sediment naturally. The height of the sediments in each channel was recorded annually until the sediment height returned to pre-excavation levels (July 1994 levels). Measurements made during a December 1997 site inspection revealed that 1 foot of sediment had been deposited in both the remediated channels, and channel sediment monitoring was discontinued at that time.

Groundwater Monitoring

The six remaining monitoring wells at the site, MW-4R, MW-7R, MW-8, MW-11, MW-12R, and MW-13, have been monitored biannually since the last five year review in 2005 for chromium, copper, lead, mercury, nickel, zinc, and TPH-D. Based on the recommendations in the 2005 Five Year Review, groundwater samples are filtered in the field and analyzed for dissolved metals.

Site Inspections

Two biennial site inspections have been conducted since the 2005 Five-Year Review Report, on August 21, 2007 and September 14, 2009. These site inspections resulted in minor maintenance and repairs to the cap and perimeter fence. They did not indicate any significant site security problems, although occasional trespassing and illegal dumping has been observed. There have

also been site inspections performed every two weeks since 2008 by United Pumping Service, Inc. on behalf of UPRR to improve site security.

V. PROGRESS SINCE PREVIOUS FIVE-YEAR REVIEW

The previous Five Year Review determined that:

The remedy at Liquid Gold Oil Superfund Site currently protects human health and the environment, because all immediate threats at the site have been addressed through the removal of contaminated material, stabilization and capping of on-site contaminated soils, access restrictions (fencing, warning signs), regular maintenance of engineered control structures, and institutional controls (deed restriction) that restrict land uses. However, in order to ensure long-term protection of human health and the environment, the UPRR must investigate whether the boundaries of the vegetative cap, fencing and deed restriction are the same, and resolve any discrepancies that may exist.

The following table summarizes the issues identified in the previous Five Year Review and the actions taken to address them.

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
Fencing around the vegetated cap may not completely enclose the cap area, based on an overlay of maps of the vegetated cap and the deed restricted area.	Investigate why the area of the vegetated cap and the deed restricted area do not exactly coincide along the southwest boundary and the southern tip.	UPRR	1/15/06	UPRR completed a partial installation of a new fence, and initiated an easement request process with the East Bay Regional Park District in order to fully complete the realignment to enclose the vegetated cap.	February 2007

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
The parcel numbers for the deed restricted area are ambiguous.	Investigate why the legal description of the deed restricted area, specifically the parcel number(s) are unclear in the Covenant to Restrict Use of Property. Provide an analysis of this issue to the EPA Project Manager. The EPA Project Manager and Assistant Regional Counsel will determine, after reviewing this analysis, whether follow-up actions are needed.	UPRR	1/15/06	UPRR is currently investigating the parcel numbers and property boundary as part of process for obtaining the easement or lot line adjustment with EBRPD.	ongoing
Future groundwater sampling should measure dissolved concentrations of metals, in addition to total concentrations.	Groundwater samples collected during future monitoring events will be field-filtered and analyzed for dissolved metals. Future groundwater monitoring reports will reflect this change in methodology.	UPRR	Next monitoring event	Groundwater samples were field filtered during the 2005, 2007, and 2009 biennial groundwater monitoring events.	2005, 2007, 2009

During the summer of 2007, UPRR completed a partial installation of a new chain-linked fence as part of a fence realignment project for the site. This installation was initially conducted along the southern and southwestern sides of the deed restricted area, outside of the vegetated cap, in accordance with the Draft Liquid Gold Fence Realignment Work Plan, dated February 1, 2007 (CH2M HILL 2007). The new fence was aligned with the legal boundaries of the deed restriction established in the mid-1990s, except along the Point Isabel Regional Shoreline parcel owned by East Bay Regional Park District (EBRPD). UPRR initiated an easement (encroachment permit) request process with EBRPD, although EBRPD requested a land swap (or lot line adjustment) rather than an encroachment permit. When the land swap agreement is in place between EBRPD and UPRR, the remaining section of new fencing should be installed to fully complete the realignment.

VI. FIVE-YEAR REVIEW PROCESS

ADMINISTRATIVE COMPONENTS

EPA conducted this Five Year Review in conjunction with DTSC. Sections of the report were submitted to EPA and DTSC by CH2MHill, consultant to Union Pacific Railroad.

COMMUNITY INVOLVEMENT

In July 2005, DTSC assisted with the formation of the Richmond Southeast Shoreline Citizen's Advisory Group to DTSC (RSSCAG), which focuses on issues related to multiple cleanup sites in the Richmond area. A fact sheet announcing that DTSC and EPA would be conducting a Five Year Review for the Liquid Gold site was sent to the site mailing list in March 2010. The RSSCAG submitted comments to EPA on August 31, 2010, including concerns and questions about potential lead exposure of vulnerable visitors to the site and the surrounding area, sampling since the last Five Year Review, the scope of the Five Year Review, and the standards for lead exposure. EPA responded on September 14, and will also be attending one of the RSSCAG's meetings. This Five Year Review report, once completed and signed, will be made available for public review and comment by publishing a Public Notice in a local newspaper.

DOCUMENT REVIEW

As part of this Five-Year Review, the following documents were reviewed:

- Final Remedial Investigation Report (Kennedy/Jenks/Chilton, 1990);
- DTSC Remedial Action Plan (DTSC, 1993)
- EPA Superfund Record of Decision (EPA, 1993);
- Covenant to Restrict Use of Property, The Former "Liquid Gold" Site Richmond, California, recorded September 13, 1995 (Contra Costa Records, 1995);
- Remedial Action Documentation Report (Kennedy/Jenks, 1995c);
- Remedial Action Effectiveness Report (ERM, 1998);
- Five-Year Review for the Liquid Gold Superfund Site, Richmond CA (EPA, 2000a);
- 2001 Annual Groundwater Monitoring and Site Inspection Report (ERM, 2002);
- 2002 Annual Groundwater Monitoring and Site Inspection Report (ERM, 2003);
- Five-Year Review (DTSC, 2003);
- Title Report (First American Title Company, 2003); and
- 2003 Annual Groundwater Monitoring and Site Inspection Report (ERM, 2004).
- Second Five-Year Review (EPA, 2005).
- 2005 Biennial Groundwater Monitoring Report (ERM 2006);
- 2007 Biennial Groundwater Monitoring Report (CH2M HILL 2008); and
- 2009 Biennial Groundwater Monitoring and Site Inspection Report (CH2M HILL, 2009).
- Memorandum- Evaluation of ecological risk for the 2010 Five Year Review of Liquid Gold, EPA ID#CAT000646208 (Ned Black, Ph. D., 29 April 2010)

DATA REVIEW

Groundwater analytical results collected over the previous five years were reviewed to determine if groundwater concentrations at the site are stable or if increasing/decreasing concentration trends are occurring. Because DTSC previously approved the abandonment of all site monitoring wells except MW-4R, MW-7R, MW-8, MW-11, MW-12R, and MW-13, the groundwater concentration trends presented in the following subsections utilize data from these six monitoring wells.

Metals Concentrations

During the 2005, 2007, and 2009 biennial groundwater monitoring events, chromium, lead, nickel, and zinc were analyzed using EPA Method 6010B which slightly differs from the methods originally listed in the January 1995 Groundwater Monitoring Plan. Mercury was still analyzed using EPA Method 7470. The 2005 Five Year Review specified that ground water samples for metals analyses should be field-filtered prior to preservation. Field filtration is used to remove suspended sediment particles from groundwater and provides a more accurate measurement of the concentration of dissolved metals. Due to the different sampling procedures, the recent monitoring results are not directly comparable to the historical data. Thus, since samples were field-filtered prior to preservation during the 2005, 2007 and 2009 biennial groundwater monitoring events, only these data are used in this technical analysis. The data from these monitoring events are shown in Table 2.

Well	Date	Chromium µg/L	Copper µg/L	Lead µg/L	Mercury µg/L	Nickel µg/L	Zinc µg/L
<i>Marine Chronic Criteria</i>		50 ^a	3.1	8.1	0.94	8.2	81
MW-4R	Sep-05	< 5	< 5	< 5	< 0.2	25	< 10
MW-4R	Jan-08	< 5	< 10	< 5	< 0.2	< 10	52
MW-4R	Oct-09	< 10	< 20	9.5	< 0.2	15	23
MW-7R	Sep-05	< 5	< 5	< 5	< 0.2	23	< 10
MW-7R	Jan-08	< 5	< 10	< 5	< 0.2	< 10	< 20
MW-7R	Oct-09	< 10	37	16	< 0.2	<5	< 20
MW-8	Sep-05	10	< 5	< 5	< 0.2	<5	< 10
MW-8 DUP	Sep-05	11	< 5	< 5	< 0.2	<5	< 10
MW-8	Jan-08	< 5	< 10	< 5	< 0.2	< 10	< 20
MW-8 DUP	Jan-08	< 5	< 10	< 5	< 0.2	< 10	< 20
MW-8	Oct-09	18	< 20	< 5	< 0.2	< 10	150 ^J
MW-8 DUP	Oct-09	15	< 20	< 5	< 0.2	< 10	< 20 ^{UJ}
MW-11	Sep-05	< 5	< 5	< 5	< 0.2	24	< 10
MW-11	Jan-08	< 5	< 10	< 5	< 0.2	< 10	< 20
MW-11	Oct-09	68	63	32	< 0.2	94	120
MW-12R	Sep-05	21	< 5	< 5	< 0.2	5.8	< 10
MW-12R	Jan-08	< 5	< 10	< 5	< 0.2	< 10	< 20
MW-12R	Oct-09	27	31	< 5	< 0.2	< 10	< 20
MW-13	Sep-05	7.2	< 5	< 5	< 0.2	5.5	< 10
MW-13	Jan-08	< 5	< 10	< 5	< 0.2	< 10	< 20
		^a for Chromium (VI)					

Results obtained during 2005, 2007, and 2009 biennial groundwater monitoring events showed chromium, copper, lead, nickel, and zinc detected in select monitoring wells. Mercury was not detected above the laboratory reporting limit (<0.2 µg/L). In some cases the metals were detected above their respective Marine Chronic Criteria (MCC, or CCC) from EPA's National Recommended Water Quality Criteria (2004). The MCCs are listed in Table 2 for reference purposes, but were not adopted as cleanup standards in the ROD because the groundwater did not appear to be transporting contaminants offsite and there were no other exposure pathways. The analyses recently used for copper and nickel had inadequate detection limits, so a comparison with MCCs is not possible for any of the copper data and about half of the nickel data. In the future, samples will be analyzed using detection limits less than the MCCs.

The three years of field filtered data in Table 2 are not yet sufficient to detect trends. Monitoring Well MW-11 exhibited the highest chromium, copper, lead, nickel, and zinc concentrations detected in 2009. This monitoring well is located in the northeast corner of the site, near Interstate Highway 580, and was at one point considered to be a background well. The dissolved metals concentrations at MW-11 from the 2009 sampling are high compared to the results from previous years of comparable data (2005, 2007), which were mostly non-detect. If subsequent sampling shows similarly high dissolved metal concentrations, then EPA and DTSC will further evaluate the potential impact of these levels on surface waters at the Site.

Total Petroleum Hydrocarbons

TPH-D has historically been detected in all groundwater monitoring wells except for MW-1 and MW-16, as summarized in Tables 2 and 3. Silica gel cleanup (SGCU) was performed on the samples collected in 1999, 2000, 2001, 2003, and 2005. SGCU is used to remove polar organic compounds, such as naturally occurring biogenic compounds. All detectable concentrations of TPH-D decreased with the SGCU procedure. TPH-D concentrations are generally stable, or consistent with historical concentrations, in the site monitoring wells since 2005, as shown in Appendix C.

Review of Institutional Controls

The Covenant to Restrict Use of Property (Appendix E), recorded on September 13, 1995, was reviewed by EPA. A preliminary title report from 2010 noted the 1995 Covenant to Restrict Use of Property. The issue of ambiguous parcel numbers in the deed restriction from the previous Five Year Review has not been resolved. The deed restriction also needs to be updated to comply with California Civil Code Section 1471 and California Code of Regulations Section 67391.1.

SITE INSPECTION

A Site Inspection, attended by David Hodson of CH2M HILL, consultant to UPRR, and Rachelle Strickfaden, EPA Project Manager was conducted on March 3, 2010, as a part of the 2010 Five-Year Review Process. The results of this inspection are recorded in a checklist included in Appendix F. The inspection revealed that the vegetated cap is generally in good condition, with no signs of erosion or ponding of water on the capped area. At the time of inspection, fencing

was in good condition, though large, dense pampas grass plants near the southeastern perimeter made a thorough inspection of portions of the cap and fencing difficult. A small portion of the vegetated cap was not enclosed within the fencing.

INTERVIEWS

Phone interviews were conducted with Bob Rico and Daniel Perry of United Pumping Service, Inc., on March 5, 2010 and March 8, 2010 respectively. United Pumping Service, Inc. conducts the site inspections at the Liquid Gold site every two weeks. Both Mr. Rico and Mr. Perry indicated that they had no major concerns regarding the Liquid Gold site. Both mentioned that minor maintenance related to trespassing, such as fixing holes cut in the fence or removing trash, is performed as necessary. Documentation of the interviews is included in Appendix F.

VII. TECHNICAL ASSESSMENT

As outlined in the *Comprehensive Five-Year Review Guidance* (EPA 2001), the following questions shall be addressed during the Five-Year Review process:

- Is the remedy functioning as intended by the decision documents?
- Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection still valid?
- Has any other information come to light that could call into question the protectiveness of the remedy?

QUESTION A: Is the remedy functioning as intended by the decision documents?

The implied remedial objectives established for this site included improving the ecological value of the sediments in the drainage channels leading to Hoffman Marsh, preventing offsite migration of contaminated soils and/or groundwater, and preventing exposure to residual contaminated soils.

Marsh channel sediment monitoring indicates that the drainage channels have been restored to pre-impact ecological values. Site inspections indicate that the vegetative soil cover (cap) and perimeter fencing reduce the potential for off-site migration of soils, as well as human exposure to residual contaminated soils. The existing deed restriction provides further protection from human exposure to residual soil contamination by restricting residential development of the site.

The following specific conclusions can be made from the available data:

- The marsh channels have been restored.
- There has not been any significant disturbance to site soils.
- Site security, accomplished by fencing and locked gate, has been adequately maintained, although some trespassing occurs between inspections. The fence has been mostly realigned with the capped area, although a small portion of the cap still extends outside of the fence.

- The concentrations of dissolved metals in on-site monitoring wells fluctuate, but there are currently not sufficient dissolved metals data to determine long-term trends.
- Petroleum hydrocarbon detections in the deep zone monitoring wells have remained relatively stable.
- Petroleum hydrocarbon detections in the shallow zone monitoring wells have been relatively stable or declining. Concentration increases have not occurred in the past five years.
- The deed restriction has effectively prevented residential development of the site.

There are a few steps that should be taken to optimize the groundwater monitoring, which was designed to detect any significant changes in groundwater quality. The chemical detection limits for copper and nickel are above the Marine Chronic Criteria. Analysis of long-term trends requires consistent and adequate detection limits. Even though the ROD did not adopt the MCCs as cleanup standards for the groundwater because the groundwater did not appear to be transporting contaminants offsite and there were no other exposure pathways, the MCCs have been used historically as a reference point.

The groundwater monitoring plan specified that groundwater concentrations should be compared to upgradient or background well locations. Consistent upgradient or background well locations cannot be established because groundwater at the site is tidally influenced. Accordingly, future sampling events will be timed to occur during a specific phase of the tidal cycle to minimize variability caused by tidal influence. Additionally, in the most recent groundwater monitoring event, certain monitoring wells had anomalous water levels and failure to recharge. These wells should be evaluated, and if necessary redeveloped, to improve the quality of the data obtained from those wells.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection still valid?

Most of the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection are still valid. However, the toxicity levels for lead in soil, which are currently being re-evaluated by EPA, may change in the future.

The remedy for the Liquid Gold site was risk-based, as no Applicable or Relevant and Appropriate Regulations (ARARs) were identified for soil or groundwater contaminant levels. The RI found that groundwater did not meet the definition of a potential drinking water source due to elevated salinity caused by the Site's proximity to the Bay. Therefore, drinking water Maximum Contaminant Levels (MCLs) do not apply. The human health risk assessment found that the carcinogenic risks at the site were within EPA's acceptable risk range. However, the non-carcinogenic risks due to lead levels in a limited subsurface portion of the site posed an unacceptable risk to hypothetical child residents, so the selected remedy required the prohibition of residential use.

The cleanup level for lead in residential soils is currently being re-evaluated by EPA, and may be revised to a significantly more stringent level than the risk-based soil cleanup level at the site (370 mg/kg). However, the current deed restriction at Liquid Gold prevents residential use, and

there is a cap in place at the site that prevents exposure to the contaminated soils. Thus, future revision will not likely affect protectiveness at the Liquid Gold Site. Any new information on lead cleanup levels will need to be evaluated during the next Five Year Review.

ARARs identified in the ROD as relevant and appropriate in carrying out remedial actions (site capping, grading, sediment excavation) were the closure requirements of the California Hazardous Waste Control Law and the Coastal Zone Management Act. Compliance with these ARARs was achieved during construction and the ARARs are no longer applicable. The only additional ARAR identified during this Five Year Review is California Code of Regulations Section 67391.1, subsections (a), (d), and (e), which are relevant and appropriate requirements for the deed restriction at the property.

The Remedial Investigation (RI) for this site occurred before the California Department of Toxic Substances Control (DTSC) or the US EPA Superfund program produced guidance documents for ecological risk assessment. Nonetheless, the Ecological Investigation and Environmental Evaluation described in the RI were thorough and included most of the sorts of studies which satisfy the current guidance. DTSC concluded that risks from site contaminants in the marsh were acceptable. Regardless of the RI finding of acceptable risk in the marsh, the Remedial Action Documentation Report and the Remedial Action Effectiveness Report from June 1998 both indicate that the sediments which were most suspect were removed, and the excavated areas were successfully revegetated to promote natural sediment deposition. The 2005, 2007, and 2009 site inspection reports submitted by CH2M Hill on behalf of the Union Pacific Railroad Company document the integrity of the vegetated earthen cap at the site. In light of these biennial site inspection reports, the statement that the remedy is protective of the environment can be supported. However, future monitoring and evaluation of groundwater trends will provide an additional basis for documenting the protectiveness of the remedy.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified that would call into question the protectiveness of the remedy.

TECHNICAL ASSESSMENT SUMMARY

According to the data reviewed, the remedy is functioning as intended by the ROD. There have been no changes in the physical condition of the site that would affect the protectiveness of the remedy. Occasional trespassing occurs at the site, but the increased frequency of site inspections has improved site security. The fencing around the vegetated cap should be extended to completely enclose the cap. The groundwater monitoring should be improved, by lowering detection limits for copper and nickel and taking samples at a consistent phase in the tidal cycle. These improvements will enable a more sensitive trend analysis. Based on current data there have not been significant changes in groundwater quality. There have been no changes to the exposure assumptions, toxicity standards, cleanup levels or remedial action objectives used at the time of remedy selection, although the cleanup standards for lead are currently being re-evaluated and will need to be addressed in the future. The deed restriction should be updated to

reflect current California regulations, but has effectively prohibited residential use of the site. No other information has been identified that would call into question the protectiveness of the remedy.

VIII. PROTECTIVENESS ISSUES

Issue	Affects Protectiveness (Y/N)	
	Current	Future
The fence alignment issue identified in the last five year review has been partially resolved. However, a small portion of the vegetated cap is still not enclosed within the fence.	N	Y
The parcel numbers in the deed restriction are ambiguous, and the deed restriction is not consistent with current California regulations. This issue does not affect current protectiveness, but could affect future protectiveness if the property is transferred.	N	Y

IX. RECOMMENDATIONS AND FOLLOW-UP ACTIONS

The following table summarizes recommendations and follow-up actions for each issue, as well as the party responsible for implementation, the agency with oversight authority, a recommended schedule for implementation and completion, and the impact, if any, on current or future protectiveness.

Recommendation	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
				Current	Future
Complete the fence realignment project, fully enclosing the vegetated cap within the site fencing.	UPRR	EPA	2011	N	Y

Investigate why the legal description of the deed restricted area, specifically the parcel numbers are unclear in the Covenant to Restrict Use of Property. Provide an analysis of this issue to EPA. EPA will determine, after reviewing this analysis, whether follow-up actions are needed. Update the deed restriction to comply with current California regulations.	UPRR	EPA	2011	N	Y
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Additionally, several follow-up actions will optimize the groundwater monitoring aspect of the remedy and improve the quality of site inspections. Future groundwater monitoring events should use laboratory methods with chemical detection limits that are below the Marine Chronic Criteria. Future sampling events should also be timed to occur during a consistent phase of the tidal cycle, to distinguish any groundwater flow gradient at the site from the variable tidally influenced flow. Any wells exhibiting failure to recharge or anomalous water levels should be evaluated, and if necessary redeveloped. Additionally, large pampas grass plants, preventing access to the fence and an adequate inspection of the cap, should be cut back or removed. These actions will improve the operation and maintenance of the remedy, but do not affect current or future protectiveness.

X. PROTECTIVENESS STATEMENT

The remedy at the Liquid Gold Oil Corp Site currently protects human health and the environment because all immediate threats at the site have been addressed through the removal of contaminated material, stabilization and capping of on-site contaminated soils, access restrictions (fencing, warning signs), regular maintenance of engineered control structures, and institutional controls (deed restriction) that restrict land uses.

However, in order to ensure long-term protection of human health and the environment, Union Pacific Railroad must complete the fence realignment project to completely enclose the vegetated cap within the fence, and revise the deed restriction to ensure that it is consistent with California regulations and covers the appropriate site area.

XI. NEXT REVIEW

The next Five Year Review for the Liquid Gold Site is required in 2015, five years from the completion of this report.

XII. REFERENCES

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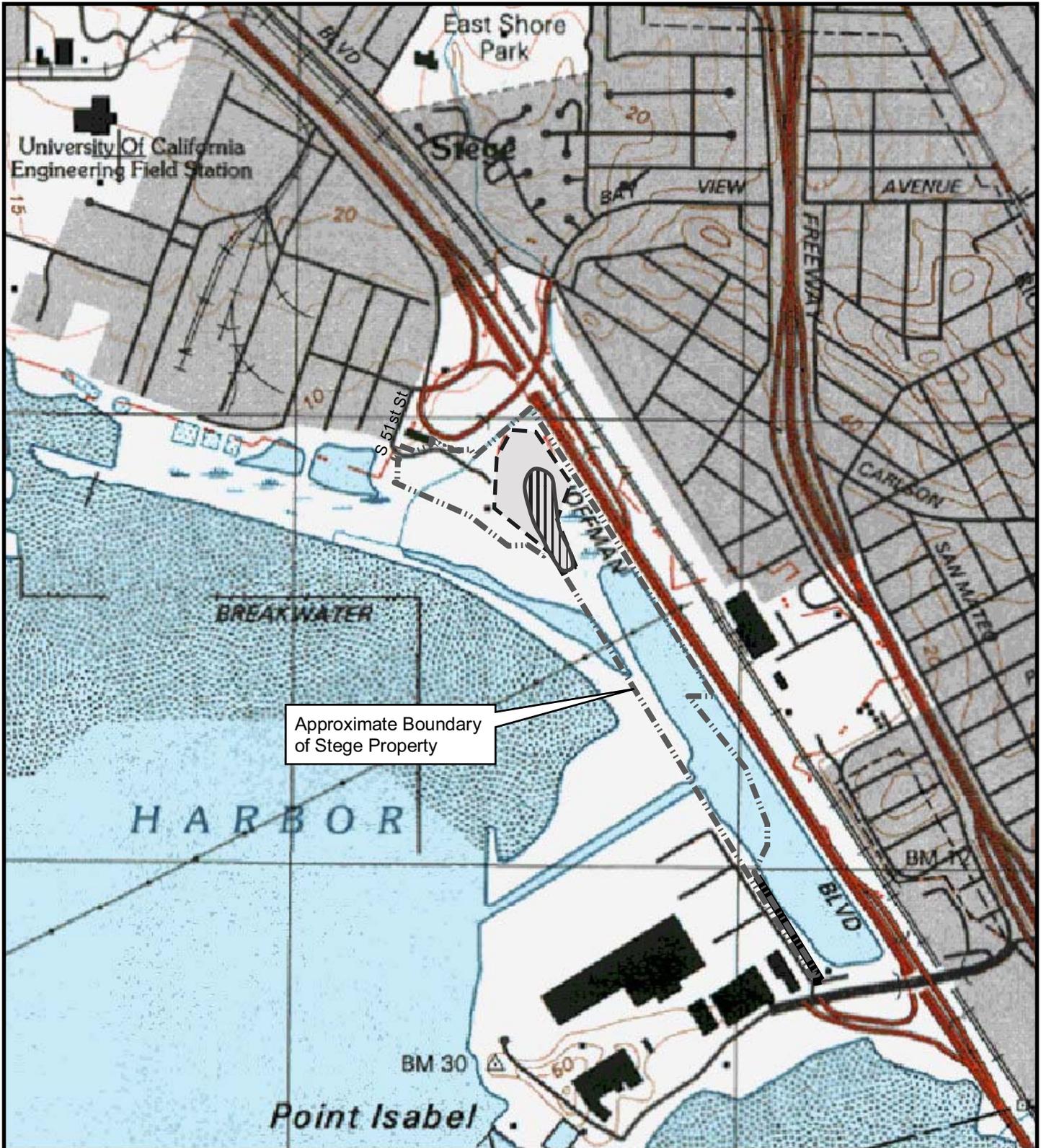
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LEGEND

-  Liquid Gold Deed Restriction Area
-  Liquid Gold Cap

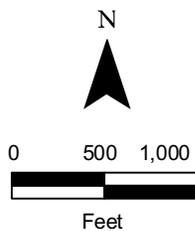


FIGURE 1
SITE LOCATION MAP
 LIQUID GOLD SITE
 UNION PACIFIC RAILROAD COMPANY
 RICHMOND, CALIFORNIA

LEGEND



Monitoring Well

Existing Fence

Vegetated cover



Liquid Gold Deed Restriction Area

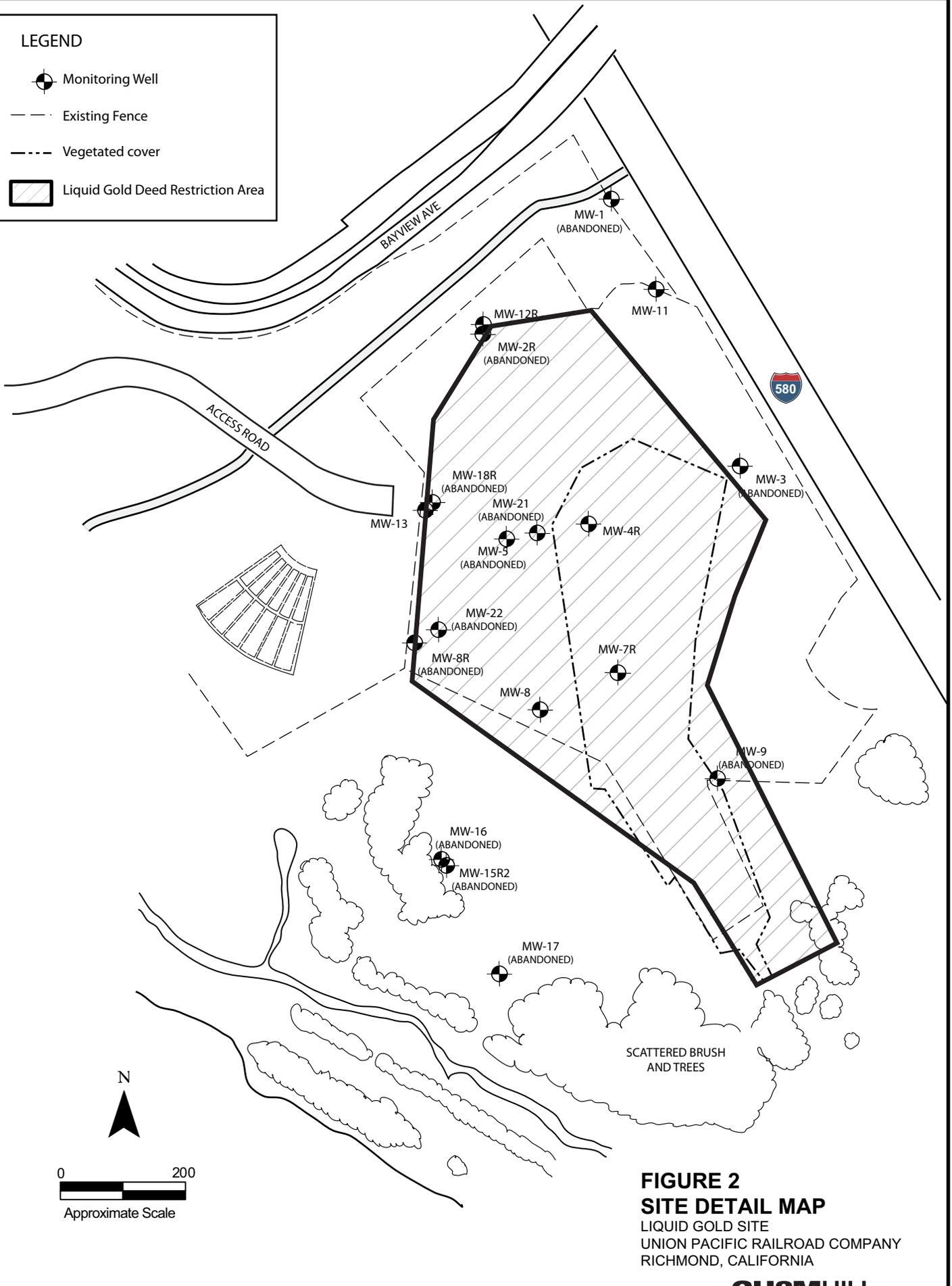


FIGURE 2
SITE DETAIL MAP
LIQUID GOLD SITE
UNION PACIFIC RAILROAD COMPANY
RICHMOND, CALIFORNIA

Appendix A
Historical Groundwater Analytical Data
(1988-1992)

Table 18
Groundwater Analytical Results 1988-1992
Liquid Gold Site, Richmond, California
K/J 855018.14

Well ¹	Well Depth ²	Sampling Date	Chromium ³ (mg/L)	Copper ³ (mg/L)	Lead ³ (mg/L)	Manganese ³ (mg/L)	Mercury ³ (mg/L)	Nickel ³ (mg/L)	Zinc ³ (mg/L)	TDS ⁴ (mg/L)	Nitrate (mg/L)	Oil & Grease (mg/L)	pH (units)	Specific Conductivity (umhos/cm)	Coliform ⁵	TPH ⁶ (mg/L)	TPH ⁶ (mg/L)
MW-01	D	Nov88	0.024	<0.008	<0.010	8.100	<0.0002	0.02	0.003	12000	<0.03	<2.00	7.6	33000	<5.0	<0.06	<0.06
MW-01DUP	D	Nov88	0.026	0.008	<0.010	8.600	<0.0002	0.03	<0.003	12000	<0.03	<2.00	7.6	33000	<5.0	<0.06	<0.06
MW-01	D	Jan89	<0.001	<0.006	<0.010	10.000	<0.0002	<0.01	0.005	11000	<0.03	<2.00	6.9	15000	17.0	<0.05	<0.05
MW-01	D	Apr89	<0.001	<0.006	<0.010	10.000	<0.0002	<0.01	<0.020	12000	0.07	<2.00	7.0	27000	300.0	<0.05	<0.05
MW-01	D	Jul89	0.018	<0.008	<0.009	8.300	<0.0002	<0.01	0.020	12000	0.08	<5.00	7.0	20000	2.0	<0.05	<0.05
MW-01DUP	D	Jul89	0.025	<0.008	<0.009	8.500	<0.0002	<0.01	<0.020	12000	0.09	<5.00	7.0	20000	<2.0	<0.05	<0.05
MW-01	D	Oct89	<0.001	0.048	<0.010	9.600	<0.0002	0.03	<0.020	13000	0.04	<5.00	7.0	17000	170.0	<0.05	<0.05
MW-01	D	Oct90	<0.005	<0.008	<0.003	9.400	<0.0002	0.01	<0.020	11000	0.03	<5.00	7.0	19000	36.0	<0.05	<0.05
MW-01	D	Feb91	<0.010	<0.020	<0.0500	8.700	<0.0002	<0.04	0.028	12200	<0.50	<5.00	7.0	18970	4.0	<0.50	<0.050
MW-01	D	May91	<0.0010	<0.002	<0.0100	8.300	<0.0200	<0.005	<0.020	11500	<0.50	6.70	7.2	11120	<2.0	<0.050	<0.050
MW-01	D	Aug91	<0.0010	0.0027	<0.0200	9.200	<0.0004	<0.005	<0.020	11700	<0.50	20.00	7.2	16300	<2.0	<0.050	<0.050
MW-01	D	Nov91	<0.0010	0.0052	<0.1000	12.200	<0.0002	<0.005	<0.080	12300	<0.50	<5.00	7.1	15430	<2.0	<0.050	<0.050
MW-01	D	Feb92	<0.0010	0.013	<0.0050	8.200	<0.0002	<0.005	<0.020	12000	<5.00	<5.00	6.9	1530	170.0	<0.050	0.0520
MW-01	D	May92	<0.0010	0.0044	<0.0050	8.1	<0.0002	<0.005	<0.020	12200	<0.05	<5.00	6.9	1584	11.0	<50.00	<50.00
MW-01	D	Aug92	<0.0010	0.029	<0.02	9.3	<0.0002	<0.005	<0.10	12000	<5.00	<5.00	6.8	19530	<2.0	<50.00	<50.00
MW-02	D	Oct88	<0.001	0.030	<0.010	34.000	<0.0002	0.05	0.220	54000	0.41	<2.00	6.6	96000	<2.2	<0.05	<0.05
MW-02	D	Jan89	<0.001	0.007	<0.010	31.000	<0.0002	0.06	0.012	53000	<0.15	<2.00	6.5	50000	4.0	<0.05	<0.05
MW-02	D	Apr89	0.004	0.008	<0.010	34.000	0.0006	0.05	0.035	54000	0.65	<2.00	6.7	38000	<2.0	<0.05	<0.05

Table 16
Groundwater Analytical Results 1988-1992
Liquid Gold Site, Richmond, California
K/J 855018.14

Well ¹	Well Depth ²	Sampling Date	Chromium ³ (mg/L)	Copper ³ (mg/L)	Lead ³ (mg/L)	Manganese ³ (mg/L)	Mercury ³ (mg/L)	Nickel ³ (mg/L)	Zinc ³ (mg/L)	TDS ⁴ (mg/L)	Nitrate (mg/L)	Oil & Grease (mg/L)	pH (units)	Specific Conductivity µmhos/cm	Coliform ⁵	TPH ⁶ µg/L	TPH ⁶ mg/L
MW-02	D	Jul89	0.038	<0.006	<0.009	25.000	0.0018	0.02	<0.020	55000	0.15	<5.00	6.7	67000	<2.0	<0.05	<0.05
MW-02	D	Oct89	<0.001	0.009	<0.010	3.200	0.0022	0.05	0.030	56000	<0.02	<5.00	6.8	55000	<2.0	<0.05	<0.05
MW-02	D	Oct90	<0.005	<0.006	<0.012	29.000	<0.0002	0.08	<0.020	54000	0.88	<5.00	6.8	66000	<2.0	<0.05	<0.05
MW-02DUP	D	Oct90	<0.005	<0.006	<0.012	28.000	0.0008	0.07	<0.020	55000	0.49	<5.00	6.8	67000	<2.0	<0.05	<0.05
MW-02	D	Feb91	<0.050	<0.1	<0.25	27.000	<0.0002	<0.2	<0.1	78600	<0.50	5.70	6.5	<20000	130.0	<0.50	<0.050
MW-02	D	May91	<0.0010	<0.012	<0.0500	25.000	<0.0200	0.042	<0.05	60800	<5.00	6.60	7.7	<20000	<2.0	<0.050	<0.050
MW-02	D	Aug91	0.0016	0.012	<0.1000	29.500	0.0002	0.058	<0.100	59900	<5.00	<5.00	7.3	<20000	<2.0	<0.050	<0.050
MW-02	D	Nov91	<0.0010	0.0033	<0.0500	31.600	0.00074	0.057	<0.020	53800	<5.00	<5.00	6.8	<20000	<2.0	<0.050	<0.050
MW-02	D	May92	<0.0010	0.014	<0.0050	28.600	0.00057	0.056	<0.020	52000	<0.05	<5.00	6.8	1092	7.0	<50.00	<50.00
MW-02	D	Aug92	<0.0010	0.0085	<0.10	27.300	0.00034	0.11	<0.10	60000	<5.00	<5.00	6.9	14500	<2.0	<50.00	<50.00
MW-03	D	Oct88	<0.001	<0.010	<0.010	13.000	<0.0002	<0.01	0.080	12000	0.20	<2.00	6.8	37000	17.0	<0.05	<0.05
MW-03	D	Jan89	0.001	<0.005	<0.010	26.000	<0.0002	0.03	0.055	11000	0.05	<2.00	6.5	15000	4.0	<0.05	<0.05
MW-03	D	Apr89	<0.001	<0.005	<0.010	15.000	<0.0002	0.01	0.025	11000	0.20	<2.00	6.8	21000	<2.0	<0.05	<0.05
MW-03	D	Jul89	0.024	0.008	<0.009	13.000	<0.0002	0.02	0.040	12000	0.10	<5.00	6.9	20000	<2.0	<0.05	<0.05
MW-03	D	Oct89	<0.001	0.008	0.020	13.000	<0.0002	0.06	0.030	12000	0.15	<5.00	6.8	16000	<2.0	<0.05	<0.05
MW-03	D	Oct90	<0.005	<0.006	<0.0030	13.000	<0.0002	0.01	<0.020	11000	0.05	<5.00	6.9	19000	<2.0	<0.05	<0.05
MW-03	D	Feb91	<0.010	<0.0200	<0.0500	12.000	<0.0002	<0.04	<0.020	13800	<0.50	<5.00	5.7	17030	<2.0	<0.50	<0.050
MW-03	D	May91	<0.0010	<0.0010	<0.0100	11.400	<0.0200	0.013	<0.020	13100	<5.00	5.90	7.5	11440	<2.0	<0.050	<0.050

Table 16
Groundwater Analytical Results 1988-1992
Liquid Gold Site, Richmond, California
K/J 855018.14

Well ¹	Well Depth ²	Sampling Date	Chromium ³ (mg/L)	Copper ³ (mg/L)	Lead ³ (mg/L)	Manganese ³ (mg/L)	Mercury ³ (mg/L)	Nickel ³ (mg/L)	Zinc ³ (mg/L)	TDS ⁴ (mg/L)	Nitrate (mg/L)	Oil & Grease (mg/L)	pH (units)	Specific Conductivity (umhos/cm)	Coliform ⁵	TPH ⁶ Gas (mg/L)	TPH ⁶ Diesel (mg/L)
MW-03	D	Aug91	<0.0010	0.016	<0.0200	11.600	<0.0002	0.012	<0.020	12000	<0.50	16.00	7.5	18690	<2.0	<0.050	<0.050
MW-03	D	Nov91	<0.0010	0.014	<0.0500	12.600	<0.0002	0.011	<0.100	12700	<0.50	<5.00	6.9	14010	<2.0	<0.050	<0.050
MW-03	D	Feb92	<0.0010	0.0074	<0.0050	11.200	<0.002	0.012	<0.020	13300	<5.00	<5.00	6.7	20100	170.0	<0.050	<0.050
MW-03	D	May92	<0.0010	0.0045	<0.0050	11.500	<0.002	0.011	0.023	12100	<0.05	<5.00	6.8	1472	8-17	<0.050	<0.050
MW-03	D	Aug92	<0.0010	0.014	<0.0200	13.800	<0.002	0.012	<0.100	13700	0.56	<1.00	6.5	19600	≥1600	<50.00	0.440 ⁷
MW-04R	S	Jan89	<0.001	<0.005	0.050	4.600	<0.0002	0.12	0.350	6600	0.35	<2.00	6.6	7500	13000.0	<0.05	<0.05
MW-04R	S	Apr89	<0.001	0.007	0.020	2.900	0.0002	0.08	0.037	4400	0.25	<2.00	6.9	7500	900.0	<0.05	<0.05
MW-04R	S	Jul89	0.011	<0.006	0.012	2.000	<0.0002	0.07	0.020	5400	0.35	<5.00	7.2	9900	30.0	<0.05	<0.05
MW-04R	S	Oct89	0.001	<0.006	0.020	1.300	<0.0002	0.07	0.080	NA	0.30	NA	6.5	NA	7000.0	<0.05	<0.05
MW-04R	S	Dec90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-04R	S	Feb91	<0.010	0.022	<0.0500	3.000	<0.0002	0.12	0.230	7940	<0.50	<5.00	5.5	12020	17.0	<0.50	<0.050
MW-04R	S	May91	<0.010	<0.001	0.0068	1.700	<0.0200	0.073	<0.020	4160	<0.50	6.70	7.2	5330	8.0	<0.050	0.0690
MW-04R	S	Aug91	NA	NA	NA	NA	NA	NA	NA	6770	<0.50	37.00	6.9	1167	2.0	<0.050	<0.090
MW-04R	S	Nov91	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10220	<2.0	<0.050	NA
MW-04R	S	Feb92	<0.0010	0.0048	0.0100	1.900	<0.002	0.077	<0.020	6140	<5.00	<5.00	6.8	10500	<2.0	<0.050	<0.050
MW-04R	S	May92	<0.0010	0.0056	0.0050	1.800	<0.002	0.078	<0.020	6650	<0.05	<5.00	7.0	1672	14.0	<50.00	0.920 ⁷
MW-04R	S	Aug92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.5	16510	NA	NA	NA

Table 16
Groundwater Analytical Results 1988-1992
Liquid Gold Site, Richmond, California
K/J 855018.14

Well ¹	Well Depth ²	Sampling Date	Chromium ³ (mg/L)	Copper ³ (mg/L)	Lead ³ (mg/L)	Manganese ³ (mg/L)	Mercury ³ (mg/L)	Nickel ³ (mg/L)	Zinc ³ (mg/L)	TDS ⁴ (mg/L)	Nitrate (mg/L)	Oil & Grease (mg/L)	pH (units)	Specific Conductivity (microhos/cm)	Coliform ⁵	TPH ⁶ Gas (mg/L)	TPH ⁶ Diesel (mg/L)
MW-05	S	Oct88	<0.001	<0.0050	<0.010	13.000	0.0003	0.04	0.090	53000	0.81	<2.00	6.8	73000	<2.0	<0.05	<0.05
MW-05DUP	S	Oct88	<0.001	<0.0050	<0.010	12.000	<0.0002	0.03	0.090	52000	0.24	<2.00	7.8	79000	<2.0	<0.05	<0.05
MW-05	S	Jan89	0.003	<0.0050	<0.010	14.000	<0.0002	0.05	0.017	51000	0.14	<2.00	6.5	50000	<2.0	<0.05	<0.05
MW-05	S	Jan89	0.003	0.0120	<0.010	13.000	0.0003	0.06	0.030	52000	0.13	<2.00	NA	NA	<2.0	<0.05	<0.05
MW-05	S	Apr89	0.001	<0.0050	<0.010	13.000	0.0002	0.05	<0.020	52000	0.26	<2.00	6.8	38000	<2.0	<0.05	<0.05
MW-05	S	Jul89	0.024	0.0610	<0.009	11.000	0.0006	0.03	0.050	52000	2.40	<5.00	6.8	68000	<2.0	<0.05	<0.05
MW-05	S	Oct89	0.01	<0.0050	<0.010	9.000	<0.0002	0.02	<0.020	53000	0.21	<5.00	7.3	61000	<2.0	<0.05	<0.05
MW-05DUP	S	Oct89	0.003	<0.0050	<0.010	9.500	<0.0002	0.04	<0.020	53000	0.14	<5.00	7.1	56000	<2.0	<0.05	<0.05
MW-05	S	Oct90	<0.005	<0.0050	<0.012	9.300	<0.0002	0.04	<0.020	52000	0.11	<5.00	6.8	64000	<2.0	<0.05	<0.05
MW-05	S	Feb91	<0.050	<0.1000	<0.25	10.900	<0.0002	<0.2	<0.100	52900	<0.50	<5.00	6.9	<20000	<2.0	<0.50	<0.050
MW-05	S	May91	<0.010	<0.0050	<0.0500	8.700	<0.0200	0.038	<0.040	49900	<5.00	8.10	6.9	<20000	<2.0	<0.050	<0.050
MW-05	S	Aug91	0.0011	0.0071	<0.010	11.900	<0.0002	0.016	<0.020	55200	<5.00	NA	8.8	<20000	<2.0	<0.050	<0.050
MW-05	S	Nov91	<0.0010	0.0380	<0.0500	11.400	0.00029	0.05	<0.040	48100	<5.00	<5.00	6.9	<20000	<2.0	<0.050	<0.050
MW-05	S	Feb92	<0.0010	0.0110	<0.0050	11.000	<0.0002	0.028	<0.020	53600	<5.00	<5.00	6.7	20000	<2.0	<0.050	<0.050
MW-05	S	May92	<0.0010	0.0022	<0.0050	10.300	<0.0002	0.030	<0.020	48400	<0.05	<5.00	6.8	920	<2.0	<50.00	<50.00
MW-05	S	Aug92	<0.0025	0.0160	<0.0500	11.500	<0.0002	0.045	<0.010	53000	<5.00	<5.00	6.5	10030	<2.0	<50.00	<50.00
MW-06	D	Oct88	0.001	<0.0050	<0.010	15.000	<0.0002	<0.01	0.020	10000	0.50	<2.00	8.8	15000	<2.0	<0.05	<0.05
MW-06	D	Jan89	0.002	0.0150	<0.010	13.000	<0.0002	<0.01	<0.005	8600	0.06	<2.00	6.7	11000	<2.0	<0.05	<0.05

Table 16
Groundwater Analytical Results 1988-1992
Liquid Gold Site, Richmond, California
K/J 855018.14

Well ¹	Well Depth ²	Sampling Date	Chromium ³ (mg/L)	Copper ³ (mg/L)	Lead ³ (mg/L)	Manganese ³ (mg/L)	Mercury ³ (mg/L)	Nickel ³ (mg/L)	Zinc ³ (mg/L)	TDS ⁴ (mg/L)	Nitrate (mg/L)	Oil & Grease (mg/L)	pH (units)	Specific Conductivity (µmhos/cm)	Coliform ⁵	TPH ⁶ Gas (mg/L)	TPH ⁶ Diesel (mg/L)
MW-06	D	Apr89	0.002	<0.0050	<0.010	18.000	<0.0002	<0.01	0.054	9500	0.34	<2.00	6.9	23000	<2.0	<0.05	<0.05
MW-06	D	Jul89	0.03	<0.0080	<0.009	14.000	0.0002	<0.01	0.060	10000	<0.02	<5.00	6.9	18000	<2.0	<0.05	<0.05
MW-06	D	Oct89	0.003	<0.0060	<0.010	17.000	<0.0002	<0.01	<0.020	13000	0.18	<5.00	6.9	17000	<2.0	<0.05	<0.05
MW-07R	S	Oct88	<0.001	<0.005	<0.010	0.750	0.0002	<0.01	0.010	5800	0.10	<2.00	7.2	8200	240.0	<0.05	<0.05
MW-07R	S	Jan89	<0.001	<0.005	<0.010	0.650	<0.0002	0.02	<0.006	3200	0.13	<2.00	6.9	2400	8000.0	<0.05	<0.05
MW-07R	S	Apr89	<0.001	<0.005	<0.010	2.200	0.0002	0.01	0.027	3000	0.21	<2.00	7.0	8600	50000.0	<0.05	<0.05
MW-07R	S	Jul89	0.009	<0.006	<0.009	0.810	<0.0002	0.01	<0.020	4600	<0.02	<5.00	7.1	7800	22000.0	<0.05	<0.05
MW-07RDUP	S	Jul89	0.011	<0.006	<0.009	0.700	<0.0002	<0.01	<0.020	3900	<0.02	<5.00	7.2	6900	30000.0	<0.05	<0.05
MW-07R	S	Oct89	<0.001	0.010	<0.010	1.100	<0.0002	0.04	<0.020	4600	<0.02	<5.00	7.1	6400	30000.0	<0.05	<0.05
MW-07R	S	Oct90	<0.005	<0.006	<0.003	1.000	<0.0002	0.01	<0.020	6100	0.23	<5.00	7.2	11000	50.0	<0.05	<0.05
MW-07R	S	Feb91	<0.010	<0.0200	<0.0500	0.370	<0.0002	<0.04	0.024	2150	<0.50	7.10	5.4	2740	30.0	<0.50	<0.050
MW-07R	S	May91	0.0012	<0.0010	<0.0050	1.600	<0.0200	0.015	0.020	4520	<0.50	6.90	6.9	2900	2.0	<0.050	<0.030
MW-07R	S	Aug91	0.0016	0.0150	<0.0100	1.600	<0.0002	0.016	<0.020	4670	<0.50	16.00	6.8	9680	2.0	<0.050	<0.150
MW-07R	S	Nov91	<0.0010	0.0110	<0.1000	1.500	<0.0002	0.012	<0.020	3950	<0.50	9.40	7.2	6070	<2.0	<0.050	<0.050
MW-07R	S	Feb92	0.0026	0.0170	0.0053	0.580	<0.0002	0.012	<0.020	3280	<5.00	<5.00	7.0	5980	1800.0	<0.050	<0.080
MW-07R	S	May92	<0.0010	0.0055	<0.005	3.800	<0.0002	0.012	0.0220	3860	<0.05	8.40	6.9	670	54.0	<50.00	1.500 ⁷
MW-07R	S	Aug92	0.0011	0.0074	<0.020	1.500	<0.0002	0.016	<0.020	5950	<0.05	7.30	7.2	6820	2.0	<50.00	1.300 ⁷

Appendix B
Site Inspection Forms
(2007 & 2009)

Site Inspection Report – Former Liquid Gold Site, Richmond, CA

1.0 Background

On behalf of the Union Pacific Railroad Company (UPRR), CH2M HILL conducted the biannual cap inspection at the former Liquid Gold Site (Site) on August 21, 2007. This report presents the results of the inspection of the vegetative cover and fence at the Site. The purpose of this inspection is to assess the integrity of the landfill cover and site security in accordance with the *Operations and Maintenance Plan* (O&M Plan) (Kennedy/Jenks, 1995). The Site is located west of Interstate 580 and south of the Bayview avenue overpass in Richmond, California. The Site was formerly used as an asphalt manufacturing facility and later an oil-storage and transfer facility known as the Liquid Gold Oil Corporation. All operations ceased in 1980 and the Site is presently inactive. A remedial action was performed at the Site by Southern Pacific Transportation Company (SPTCo) under the lead supervision of the Department of Toxic Substances Control (DTSC). The remedy at the Site included the removal of material containing constituents of concern (COCs), stabilization and capping of onsite soil containing COCs, access restrictions (fencing, warning signs), maintenance of the cap, institutional controls (deed restriction) that restricts land uses, and post-remedy groundwater monitoring. The cap consists of a vegetated cover that includes 2 feet of clean import fill to drain rain water and prevent ponding, top soil to a depth of 4 inches, and vegetation consisting of hydroseeding and native shrubs. The Site achieved construction completion with the signing of the Preliminary Close Out Report on September 27, 1995, and was deleted from the National Priorities List on September 11, 1996.

2.0 Inspection Overview

In accordance with the O&M Plan for the Site, the vegetative cover and perimeter fence will be inspected semi-annually for the first two years and then annually thereafter. The inspection is currently conducted on a biannual basis, in accordance with the O&M Plan and DTSC approved modifications to the O&M Plan (ERM, 2005). The previous landfill cap inspection was conducted in April 2005.

The site inspection consisted of the following:

- Examining the cap and adjacent area for evidence of wind and/or water erosion on the cover, ponding water, stressed vegetation, signs of animal burrowing, and other physical deterioration.
- Visual inspection for the presence of chemicals, based on soil discoloration and/or chemical-type odors.
- Inspection of site security features, including fencing, gates, and locks.

- Examining the condition of monitoring wells within the Site.

3.0 Inspection Details

The observations recorded during the site inspection are presented below. Specific locations where observations were recorded are presented on Figure C-1. Table C-1 presents the inspection record for the vegetation cover. Table C-2 presents the inspection record for the site monitoring wells. A photo log documenting the observations is included in Attachment C-2.

3.1 Erosion and Ponding

No sign of erosion of the landfill cap were observed. The well established vegetative cover limited the inspection.

There were tire tracks (Photos 1 and 11) north and northeast of the landfill cap and a low spot (Photo 2) on the west side of the landfill cap boundary area.

3.2 Animal Burrowing

No rodent holes were observed on the landfill cap. The well established vegetative cover limited the inspection.

Potential rodent holes (Photo 3) were observed in areas along the east perimeter of the landfill cap boundary area.

3.3 Vegetative Cover

Well established vegetation (Photo 4), including tall bushes and pompous grass was observed on and around the landfill cap during the site inspection. The vegetation does not show visual indications of plant deterioration (wilted or change in color).

3.4 Site Security

The fence gates are locked and the chains and locks are in good condition. The fence posts are also in good condition. Perimeter signs (Photo 8) were observed on the fence around the Site except for the northeast side of the Site adjacent to Highway 580.

Several broken sections of the Site fence, which encircles the landfill cap boundary and surrounding area, were observed during the site inspection. Approximately 2-3 linear feet of the fence facing the access road which leads to the Site from S 51st street is broken (Photo 5). Approximately 5 to 6 linear feet of the fence on the east side of the property adjacent to Interstate 580 are also damaged (Photo 6). New fencing installed in 2007 along the southeast side of the Site is 6 to 12 inches higher than ground level (Photo 7).

3.5 Monitoring Well Inspection

Site monitoring wells (Photos 12-16) were also visually inspected for damage during this site inspection. The locations of the monitoring wells are shown on Figure 2 of main text. No damage was noted and all wells were secured with locks. Three monitoring wells (MW-8, MW-12R, and MW-13) have identification marks. The other wells were located with well

location maps. Well MW-11 is located outside the fence on the northeast side of the Site. Monitoring wells MW-11 and MW-4R (based on well location maps) did not have protective bollards around the well or identification marking. All wells were secured with locks. The inspection record for the site monitoring wells is presented in Table C-2.

3.6 Other Features

Trash (Photo 9 and 10) was observed on the north side of the landfill cap boundary area.

4.0 Recommendation

CH2M HILL recommends that the openings in the fence be repaired. The repairs will be completed in 2008.

5.0 Reference

Kennedy/Jenks Consultants (Kennedy/Jenks). 1995. *Operations and Maintenance Plan, Liquid Gold Site, Richmond, CA*. July 1.

TABLE C-1

Inspection Record for Vegetated Cover

Site Inspection Report – Former Liquid Gold Site, Richmond, California

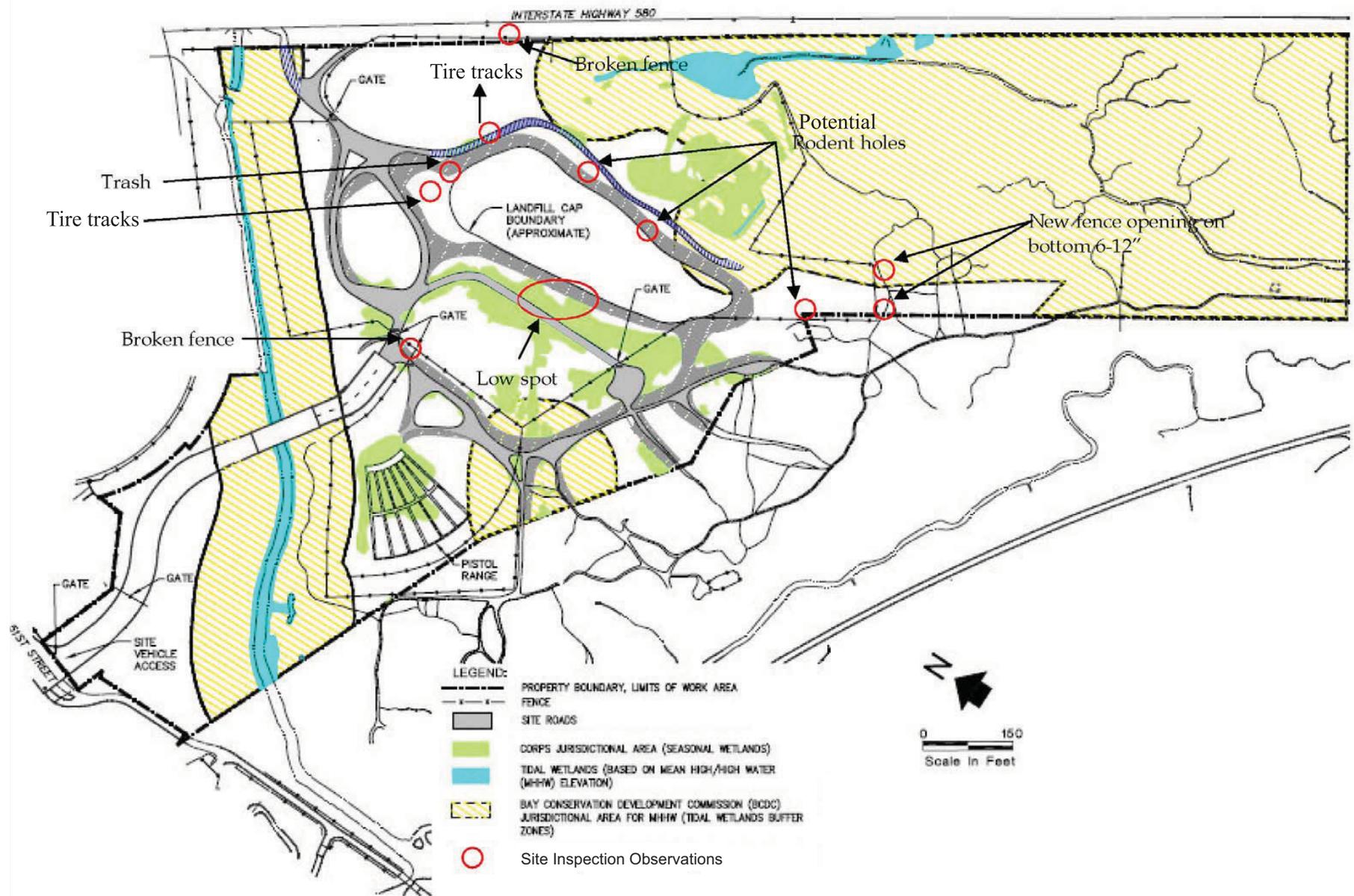
ITEM	YES	NO	COMMENTS
VEGETATED COVER INTEGRITY			
Are there signs of erosion on the cover?		√	See Section 3.1
Is there ponding on the cover, or are there indications of ponding?		√	See Section 3.1
Does the vegetation on the cover appear stressed?		√	
Are there signs of animals burrowing in the cover?	√		See Section 3.2
SITE SECURITY			
Are the gates shut and locked?	√		
Are the chains and locks in good condition?	√		
Are the fences intact and free of holes or tears?		√	See Sections 3.4 and 4
Are the fence posts in good condition?	√		See Section 3.4
Are the site perimeter signs intact and legible?	√		See Section 3.4
OTHER			
Are there indications of the presence of chemicals (e.g.; Soil discoloration, odor, etc)?		√	See Section 3.3
Is there debris or trash onsite?	√		See Section 3.6
Additional observations?			
MONITORING WELLS			
Well identification markings intact?		√	See Section 3.5
Protective well cover in good condition?	√		
Well cap present?	√		
Casing and screen undamaged?			Will be inspected during sampling of monitoring wells
Bollards in good condition?		√	See Section 3.5
Other			No other issues
PLANNED MAINTENANCE WORK			
Vegetation maintenance moving	√		Conducted in December 2007
Repair fence	√		Planned for 2008

TABLE C-2

Inspection Record for Groundwater Monitoring Wells

Site Inspection Report – Former Liquid Gold Site, Richmond, California

ITEM	YES	NO	COMMENTS
Well identification markings intact?	√		See Section 3.5
Protective well cover in good condition?	√		
Well cap present?	√		
Casing and screen undamaged?	√		
Bollards in good condition?		√	See Section 3.5
Other			No other issues



Note: Site inspection at Liquid Gold Site conducted on August 21, 2007.
 Figure edited by CH2M HILL, March 10, 2008.

FIGURE C-1
 Liquid Gold Site Inspection
 2007 Biannual Groundwater Monitoring Event
 Former Liquid Gold Site
 Richmond, California

Figure source: Kennedy/Jenks Consultants.

Attachment C-2



Photo 1: Tire tracks north of landfill cap



Photo 2: Low spot area west of landfill cap



Photo 3: Potential rodent hole along perimeter fence.



Photo 4: Typical Vegetation



Photo 5: Broken fence facing access road on west side of the site



Photo 6: Broken fence on north east side of the property facing Highway 580



Photo 7: Opening on bottom of new fence



Photo 8: Sign on Fence



Photos 9 and 10 (left to right): Trash located near north side of Landfill Cap boundary



Photo 11: Tire tracks northeast of the landfill cap



Photo 12: Monitoring Well - 8



Monitoring Well -11



Monitoring Well -12R



Monitoring Well -13



Monitoring Well -4R

Photo 13, 14, 15, and 16 (clockwise): Monitoring Wells (Not photograph of Monitoring Well - 7)

Site Inspection Report – Former Liquid Gold Site, Richmond, CA

1.0 Background

On behalf of the Union Pacific Railroad Company (UPRR), CH2M HILL conducted the biennial cap inspection at the former Liquid Gold Site (site) on September 14, 2009. This report presents the results of the inspection of the vegetative cover and fence at the site. The purpose of this inspection is to assess the integrity of the landfill cover and site security in accordance with the *Operations and Maintenance Plan, Liquid Gold Site, Richmond, CA* (O&M Plan) (Kennedy/Jenks, 1995). The site is located west of Interstate 580 and south of the Bayview Avenue overpass in Richmond, California. The site was formerly used as an asphalt manufacturing facility and later an oil-storage and transfer facility known as the Liquid Gold Oil Corporation. All operations ceased in 1980, and the site is presently inactive. A remedial action was performed at the site by Southern Pacific Transportation Company under the lead supervision of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC).

The remedy at the site included:

- Removing material containing constituents of concern.
- Stabilizing and capping onsite soil containing constituents of concern.
- Implementing access restrictions (fencing, warning signs).
- Performing cap maintenance.
- Implementing institutional controls (deed restriction) that restrict land uses.
- Performing post-remedy groundwater monitoring.

The cap consists of a vegetated cover that includes:

- Two feet of clean import fill to drain rain water and prevent ponding.
- Top soil to a depth of 4 inches.
- Vegetation consisting of hydroseeding and native shrubs.

The site achieved construction completion with the signing of the Preliminary Close Out Report on September 27, 1995 and was deleted from the National Priorities List on September 11, 1996.

2.0 Inspection Overview

In accordance with the O&M Plan for the site, the vegetative cover and perimeter fence will be inspected semiannually for the first 2 years and then annually thereafter. The inspection is currently conducted biennially, in accordance with the O&M Plan and DTSC-approved

modifications to the O&M Plan (ERM, 2005). The previous landfill cap inspection was conducted in August 2007.

The site inspection consisted of:

- Examining the cap and adjacent area for evidence of wind and/or water erosion on the cover, ponding water, stressed vegetation, signs of animal burrowing, and other physical deterioration.
- Performing a visual inspection for the presence of chemicals, based on soil discoloration and/or chemical-type odors.
- Performing an inspection of site security features, including fencing, gates, and locks.
- Examining the condition of monitoring wells within the site.

In accordance with the *Site Security Plan for the Stege Property, Richmond, California* (CH2M HILL, 2008), biweekly site inspection and maintenance are ongoing at the Liquid Gold Site.

3.0 Inspection Details

The observations recorded during the site inspection are presented below. Specific locations where observations were recorded are presented in Figure 3A-1. Table 3A-1 presents the inspection record for the vegetation cover. Table 3A-2 presents the inspection record for the site monitoring wells. A photo log documenting the observations is included in Attachment 3B.

3.1 Erosion and Ponding

No indication of erosion of the landfill cap was observed. A low spot (Photo 1) was observed on the west side of the landfill cap.

3.2 Animal Burrowing

No rodent holes were observed on the landfill cap. The well-established vegetative cover limited the inspection.

3.3 Vegetative Cover

Well-established vegetation (Photo 2), including tall bushes and pampas grass, was observed on and around the landfill cap during the site inspection. The vegetation does not show visual indications of plant deterioration (no observed wilting or changes in color).

3.4 Site Security

The fence gates are locked and the chains and locks are in good condition. The fence posts are also in good condition. Perimeter signs (Photo 3) were observed on the fence around the site.

3.5 Monitoring Well Inspection

Site monitoring wells were also visually inspected for damage during this site inspection. The locations of the monitoring wells are shown in Figure 2 of the letter report. No damage was noted, and all wells have identification marks.

The well cap for monitoring well MW-12R was found broken but was repaired on October 2, 2009. One of the four protective bollards for monitoring well MW-8 was found broken. Four monitoring wells (MW-4R, MW-7R, MW-8, and MW-13) were not secured with locks; although, the site is secured with fencing and locks. The inspection record for the site monitoring wells is presented in Table 3A-2.

3.6 Other Features

Trash (Photo 4) was observed near the east side of the landfill cap boundary area.

4.0 Recommendations

CH2M HILL recommends removing the trash from the surface of the landfill cap and repairing the broken bollard at monitoring well MW-8. Although the site is secured with a permanent fenced that remains locked, CH2M HILL recommends that locks be placed on the four monitoring wells that currently are not secured with locks.

5.0 References

- CH2M HILL. 2008. *Site Security Plan for the Stege Property, Richmond, California*. December 10.
- Environmental Resources Management (ERM). 2005. *2005 Biannual Ground Water Monitoring Report*. March 17.
- Kennedy/Jenks Consultants (Kennedy/Jenks). 1995. *Operations and Maintenance Plan, Liquid Gold Site, Richmond, CA*. July 1.

TABLE 3A-1
 Inspection Record for Vegetated Cover
Site Inspection Report – Former Liquid Gold Site, Richmond, California

ITEM	YES	NO	COMMENTS
VEGETATED COVER INTEGRITY			
Are there signs of erosion on the cover?	√		See Section 3.1
Is there ponding on the cover, or are there indications of ponding?	√		See Section 3.1
Does the vegetation on the cover appear stressed?	√		
Are there signs of animals burrowing in the cover?	√		
SITE SECURITY			
Are the gates shut and locked?	√		
Are the chains and locks in good condition?	√		
Are the fences intact and free of holes or tears?	√		See Section 3.4
Are the fence posts in good condition?	√		See Section 3.4
Are the site perimeter signs intact and legible?	√		See Section 3.4
OTHER			
Are there indications of the presence of chemicals (e.g.; Soil discoloration, odor, etc)?	√		
Is there debris or trash onsite?	√		See Section 3.6
Additional observations?	√		
PLANNED MAINTENANCE WORK			
Vegetation maintenance	√		
Site security inspection and maintenance	√		Bi-weekly site inspection and maintenance conducted at the Site in accordance with the December 10, 2008 <i>Revised Site Security Plan for the Stege Property, Richmond, California.</i>

TABLE 3A-2
 Inspection Record for Groundwater Monitoring Wells
Site Inspection Report – Former Liquid Gold Site, Richmond, California

ITEM	YES	NO	COMMENTS
Well identification markings intact?	√		
Protective well cover in good condition?	√		
Well cap present?	√		
Casing and screen undamaged?	√		
Bollards in good condition?	√		See Section 3.5
Wells secured	√		See Section 3.5

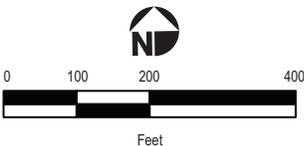
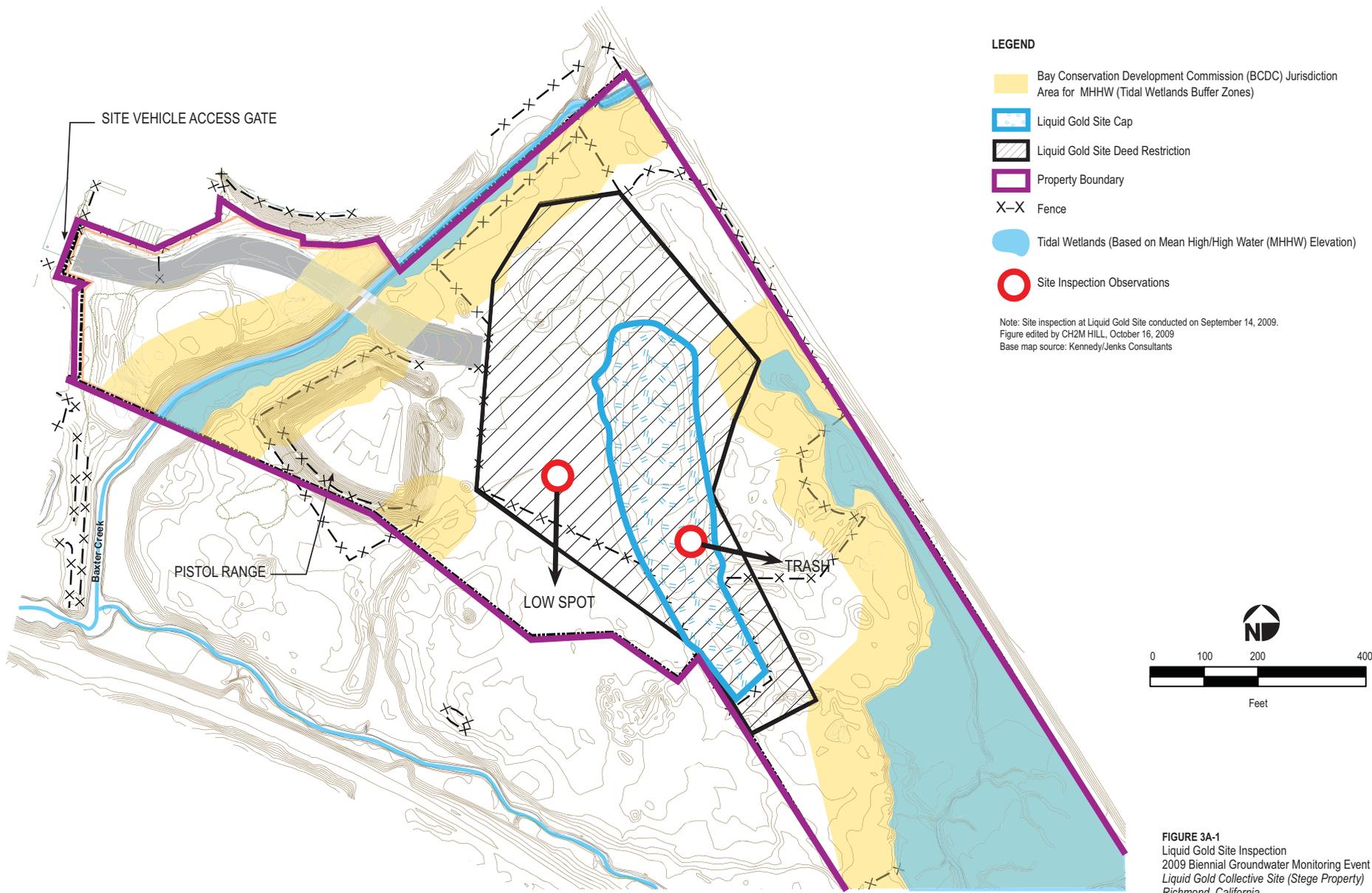


FIGURE 3A-1
 Liquid Gold Site Inspection
 2009 Biennial Groundwater Monitoring Event
 Liquid Gold Collective Site (Stege Property)
 Richmond, California



Photo 1: Low spot area west of landfill cap (looking north)



Photo 2: Typical Vegetation (looking north)



Photo 3: Sign on perimeter fence



Photo 4: Trash located within east side of Landfill Cap boundary



Photo 5: Site Entrance Gate (looking southeast)

Appendix C
Groundwater Concentration Trend
Graphs

Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

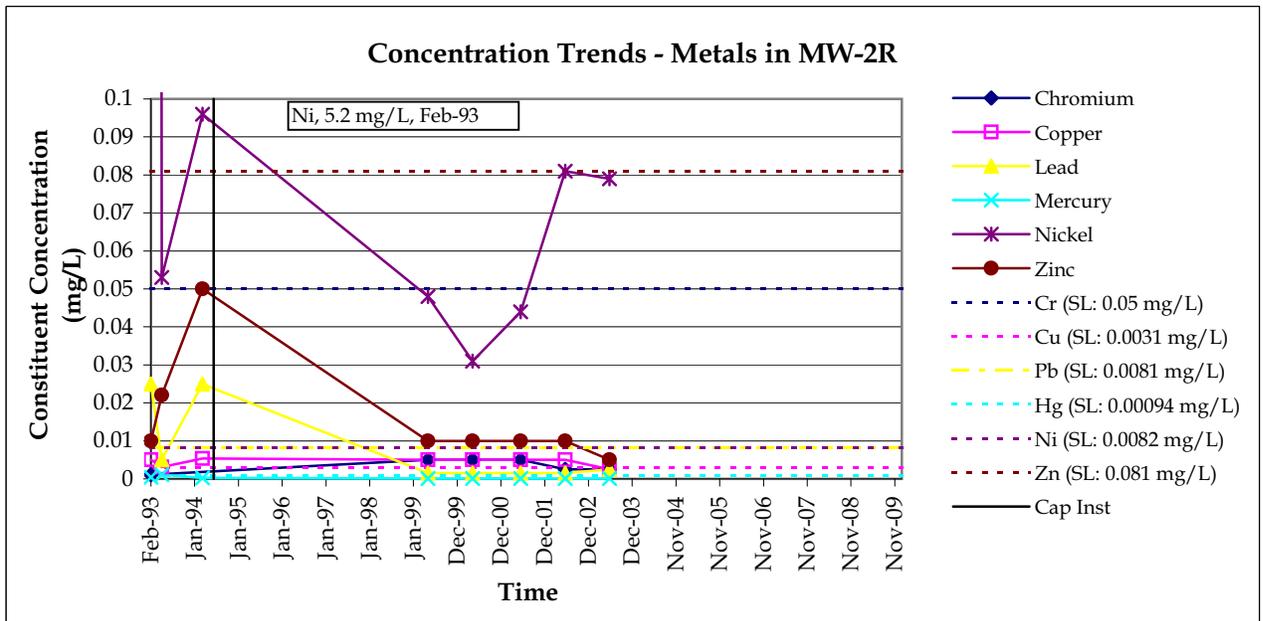
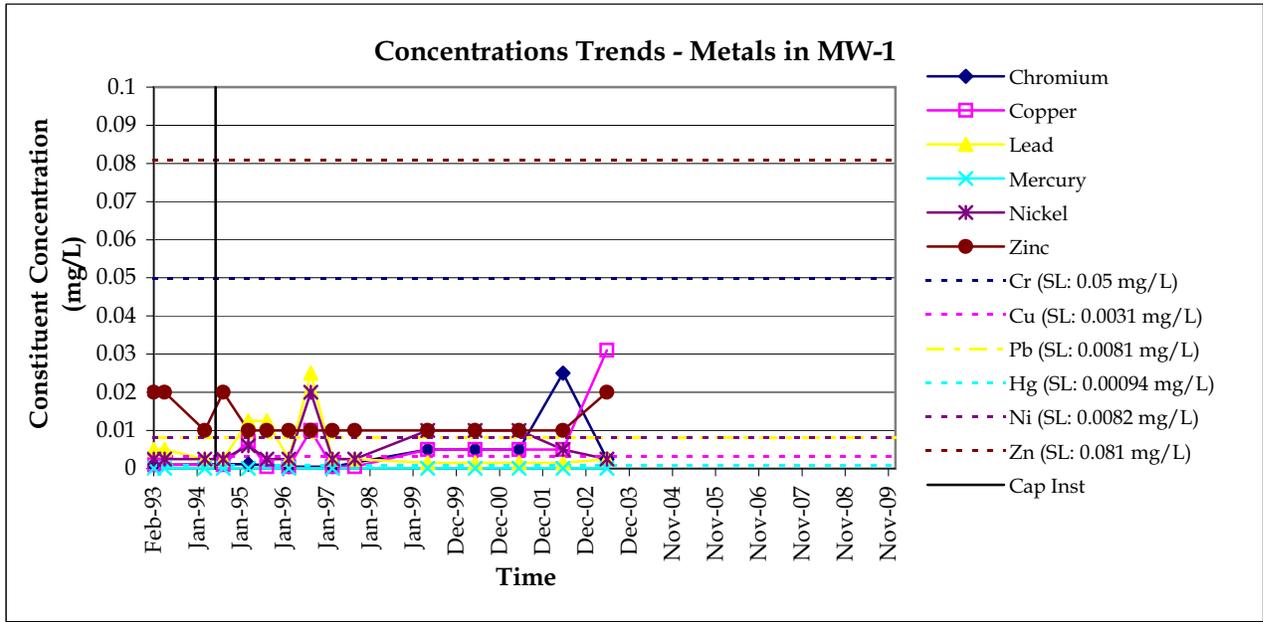


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

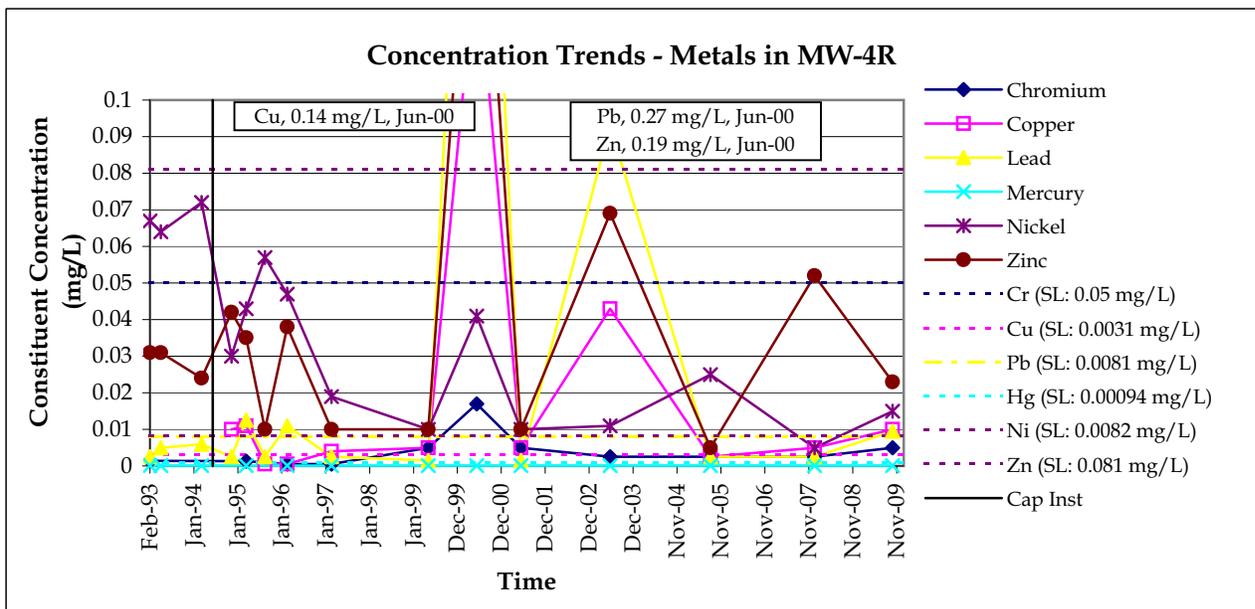
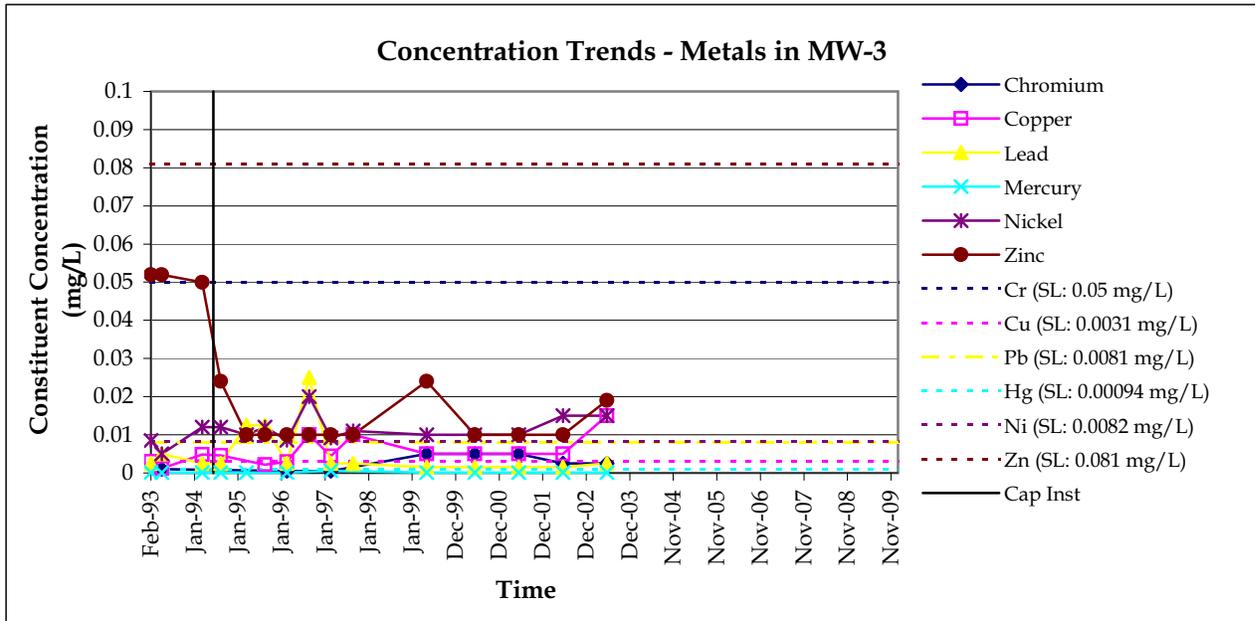


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

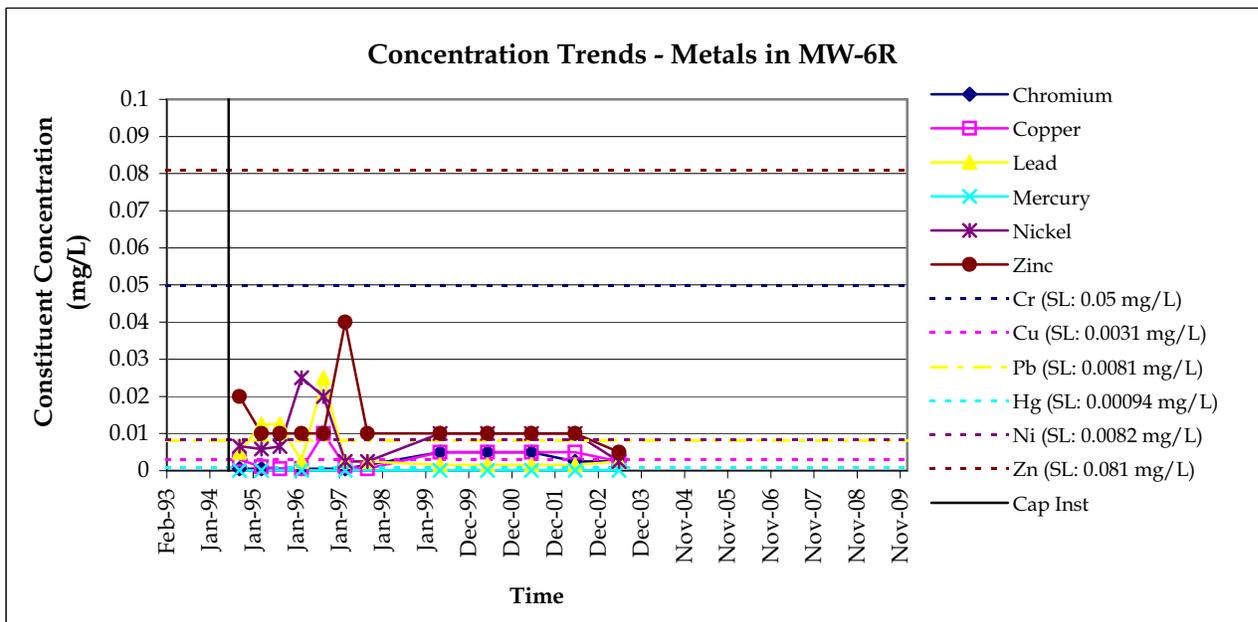
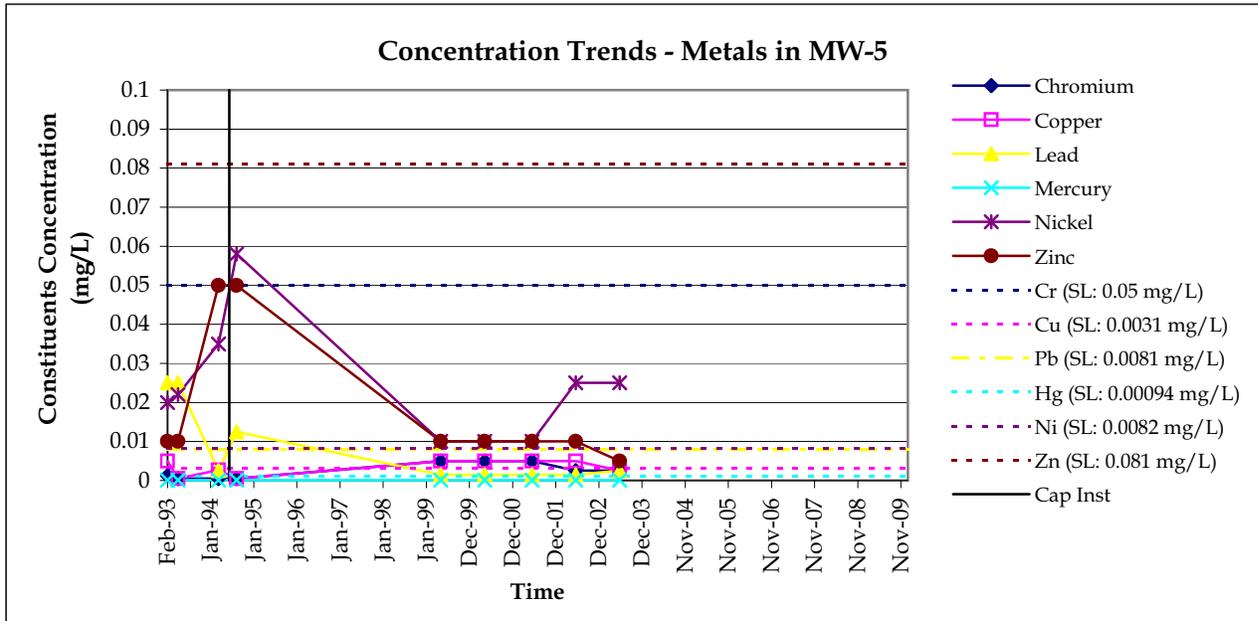


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

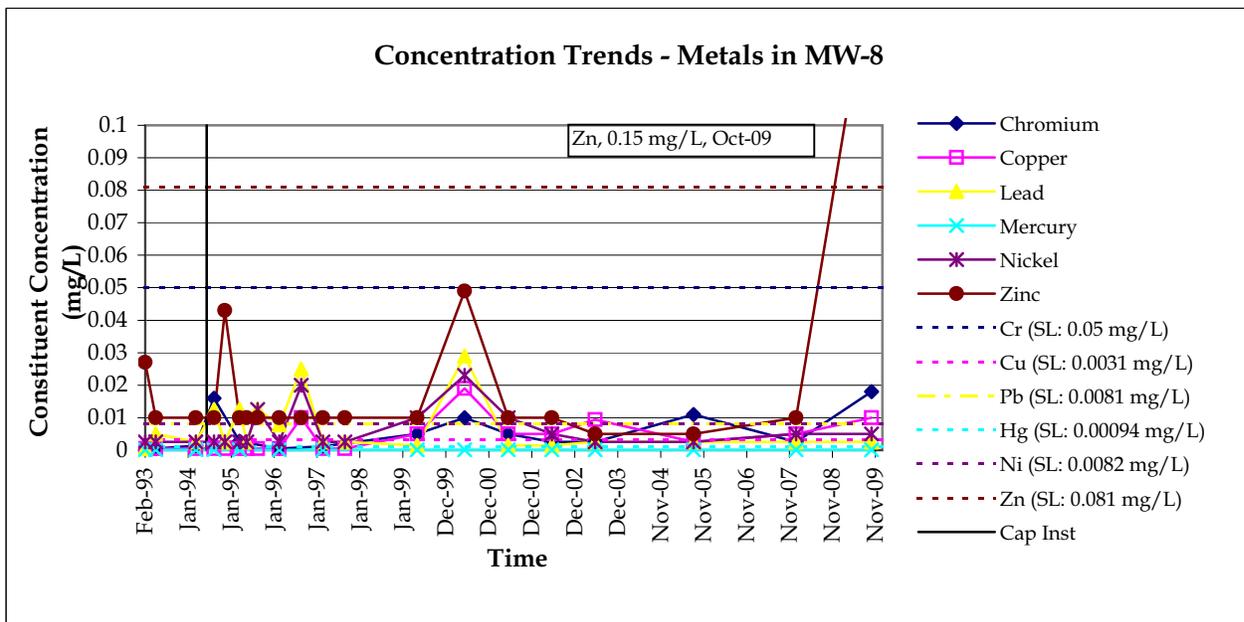
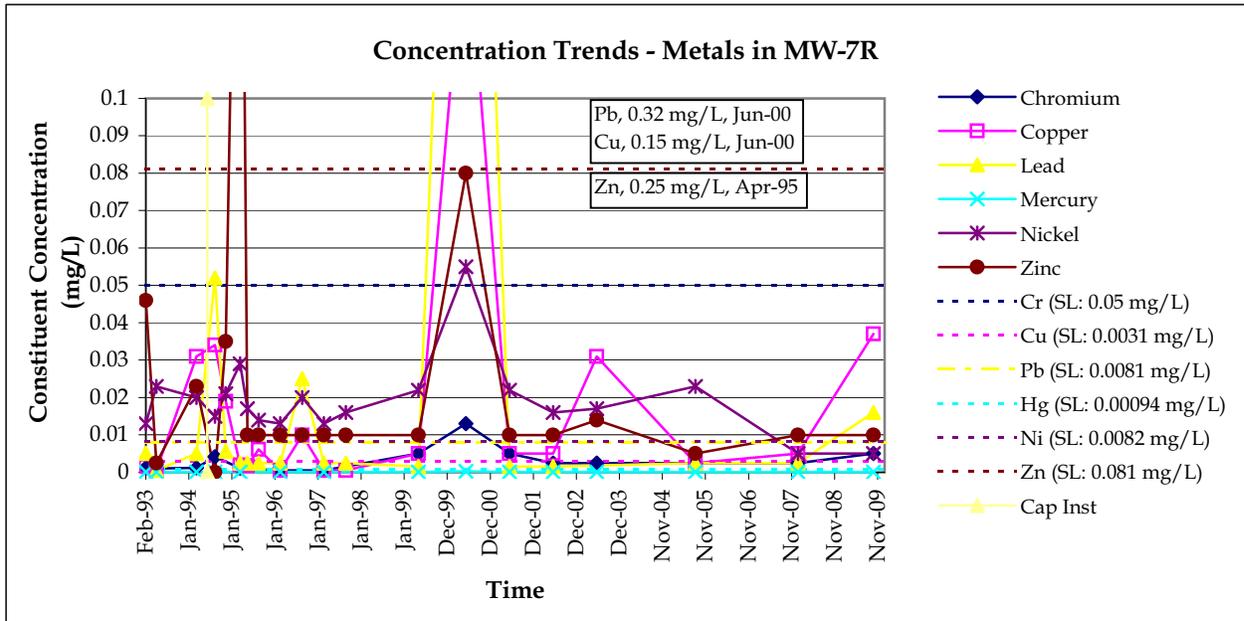


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

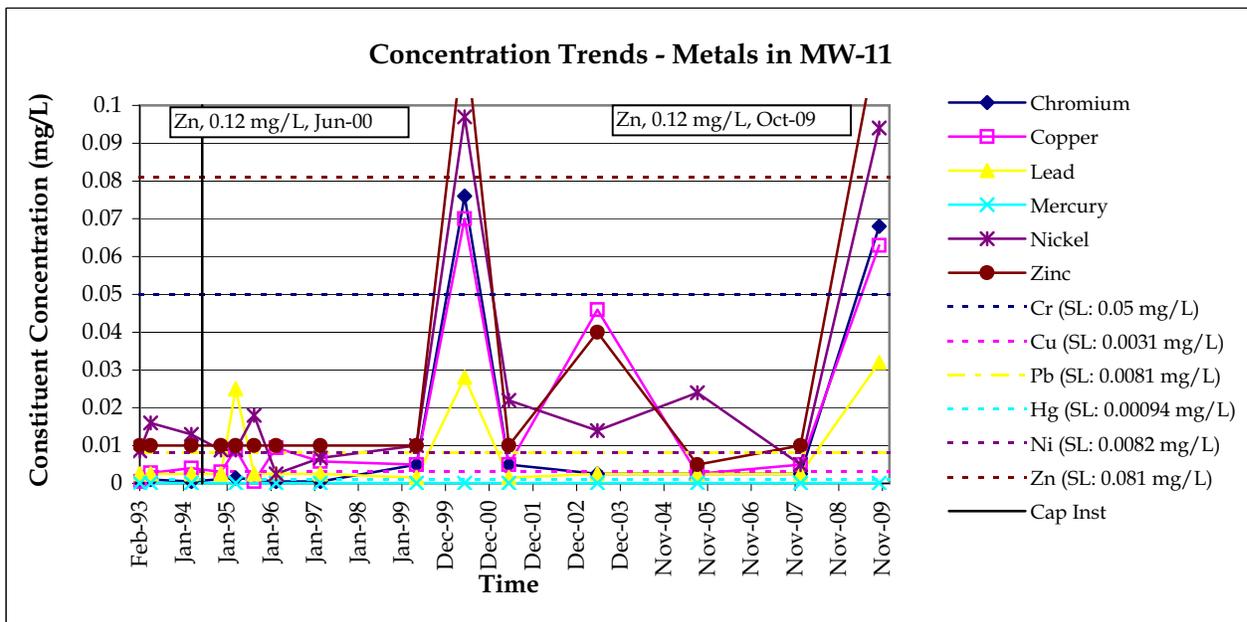
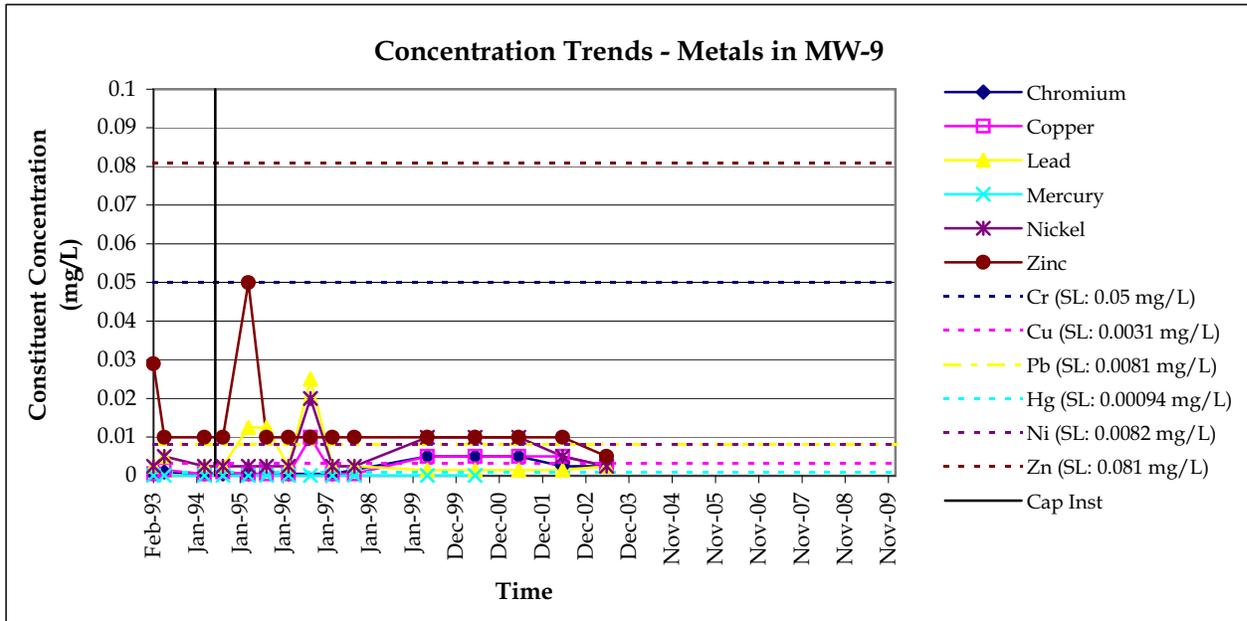


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

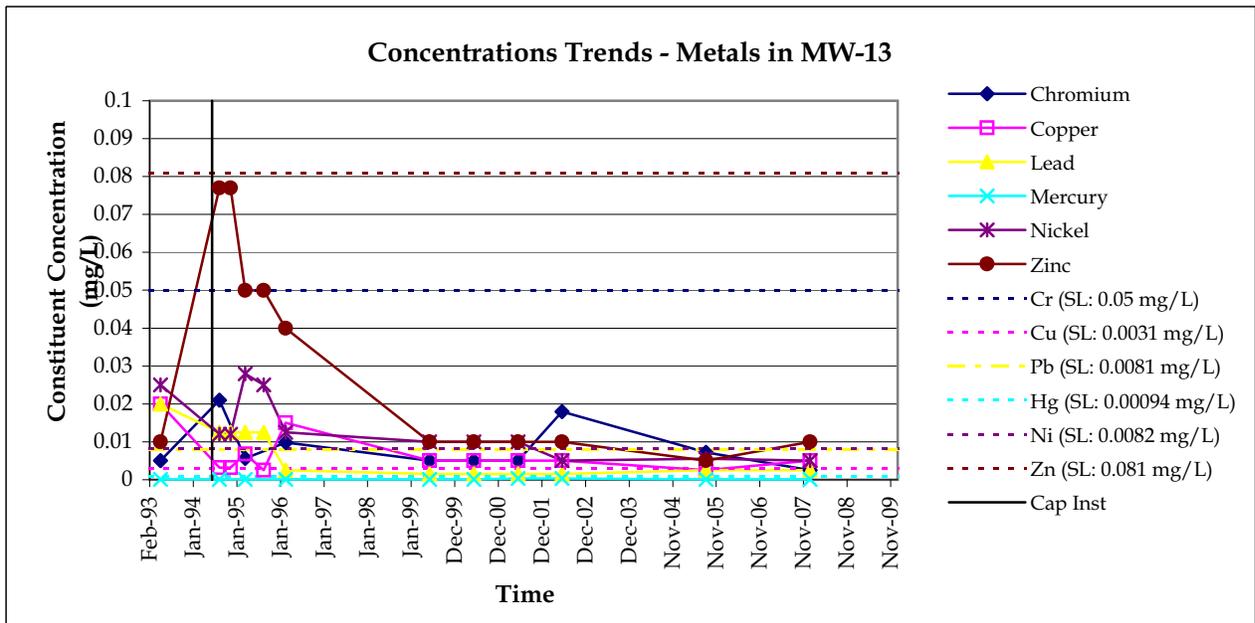
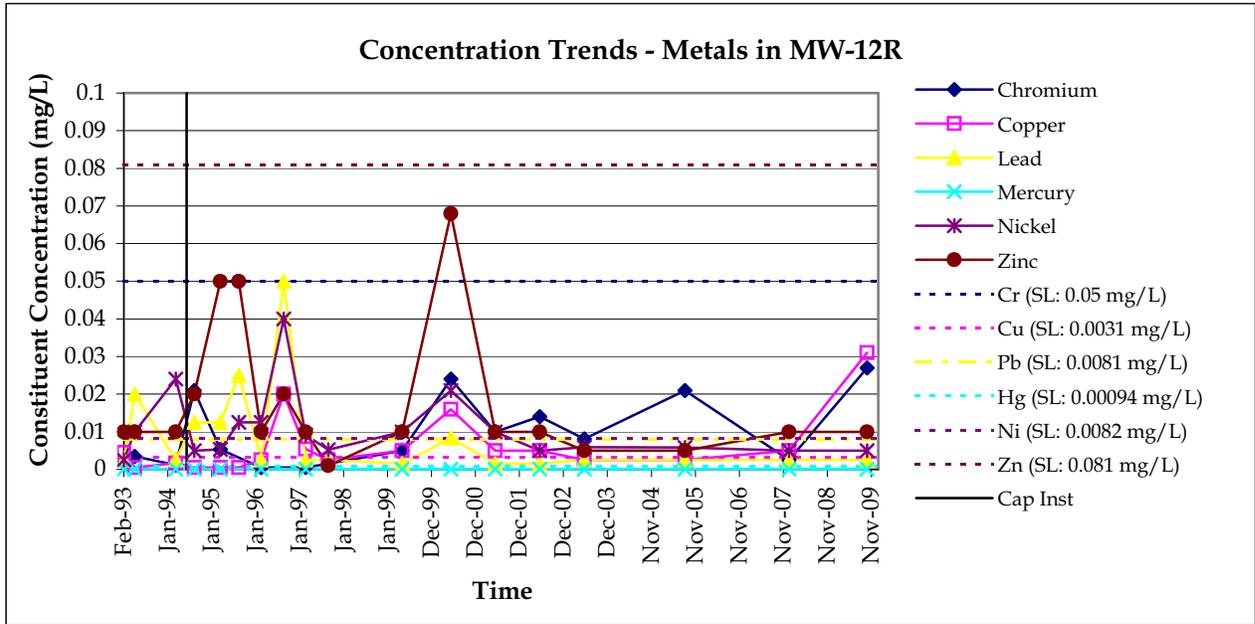


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

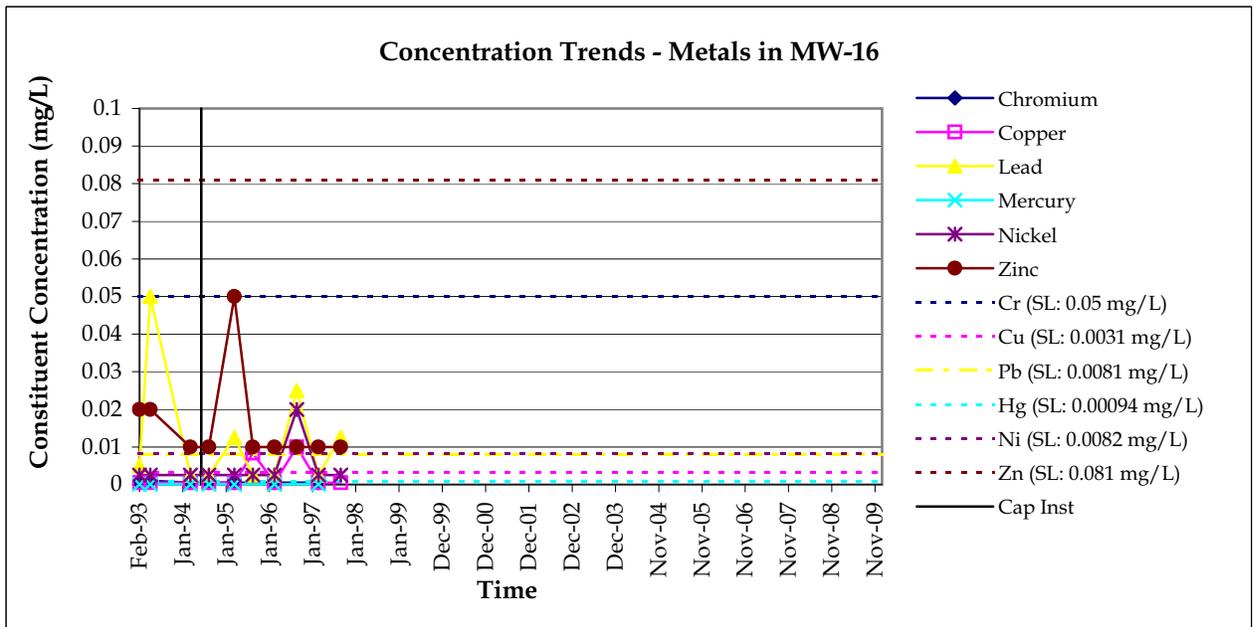
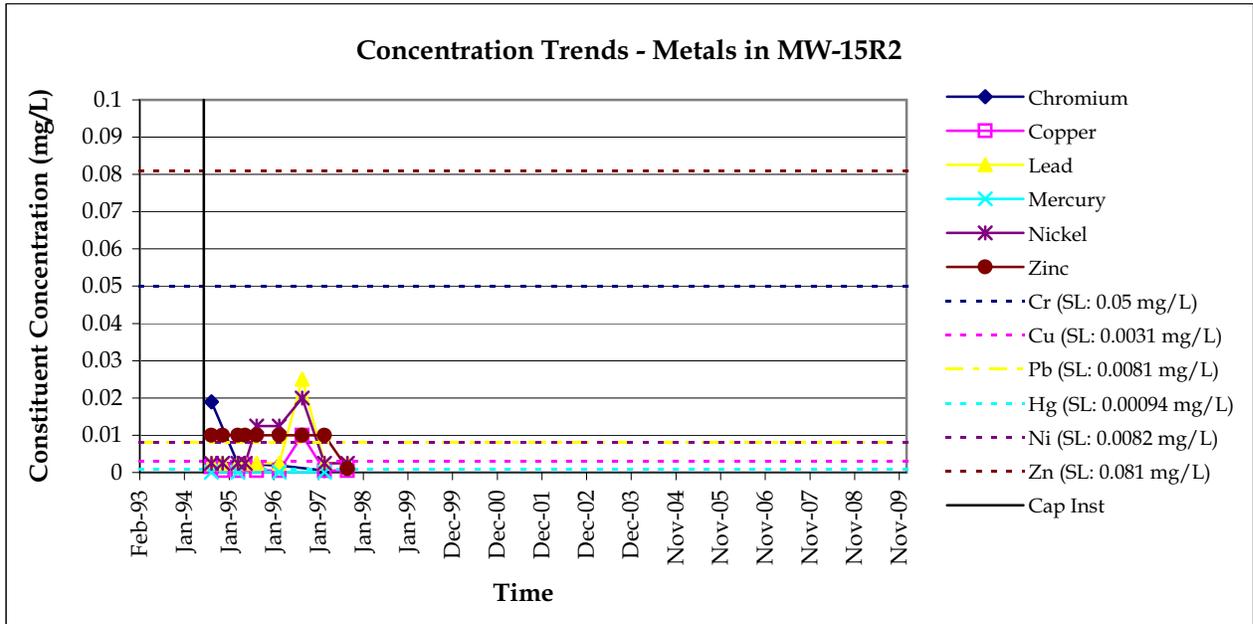


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

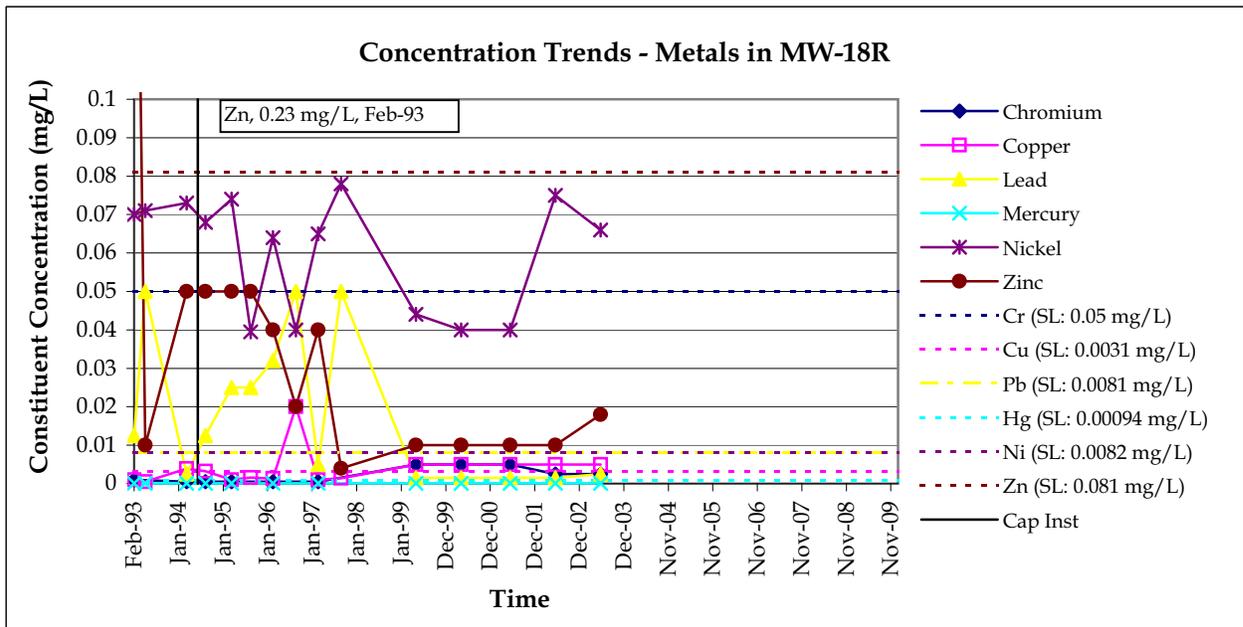
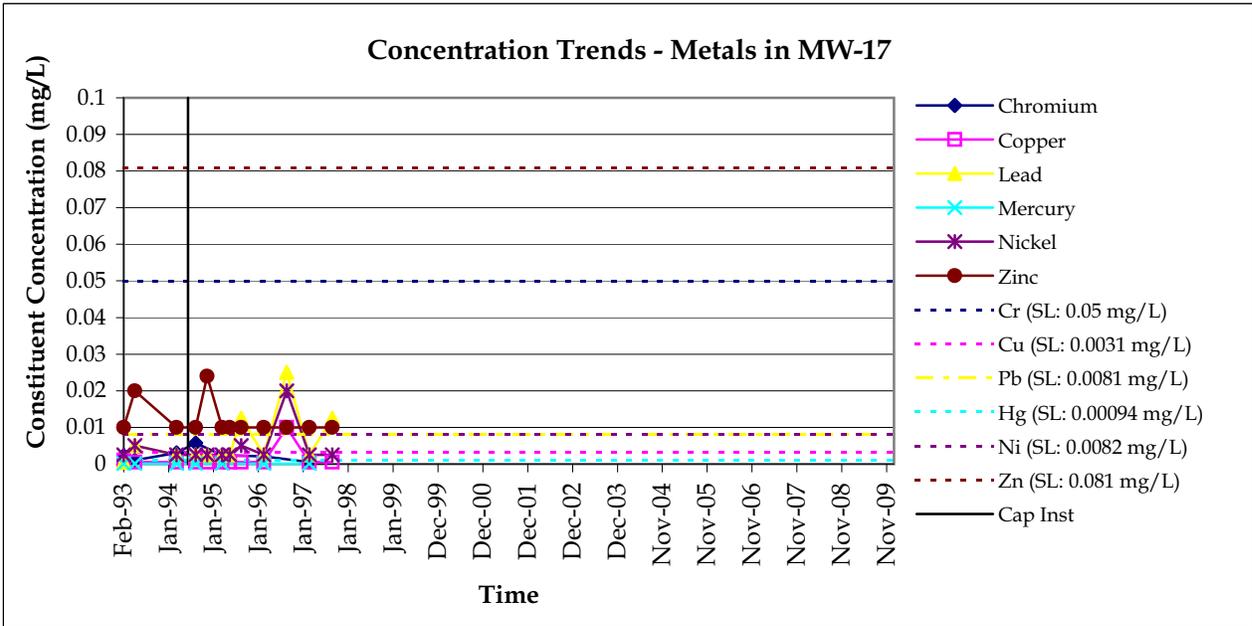


Figure C-1
Concentration Trend Graphs for Metals
Liquid Gold Site
Richmond, California

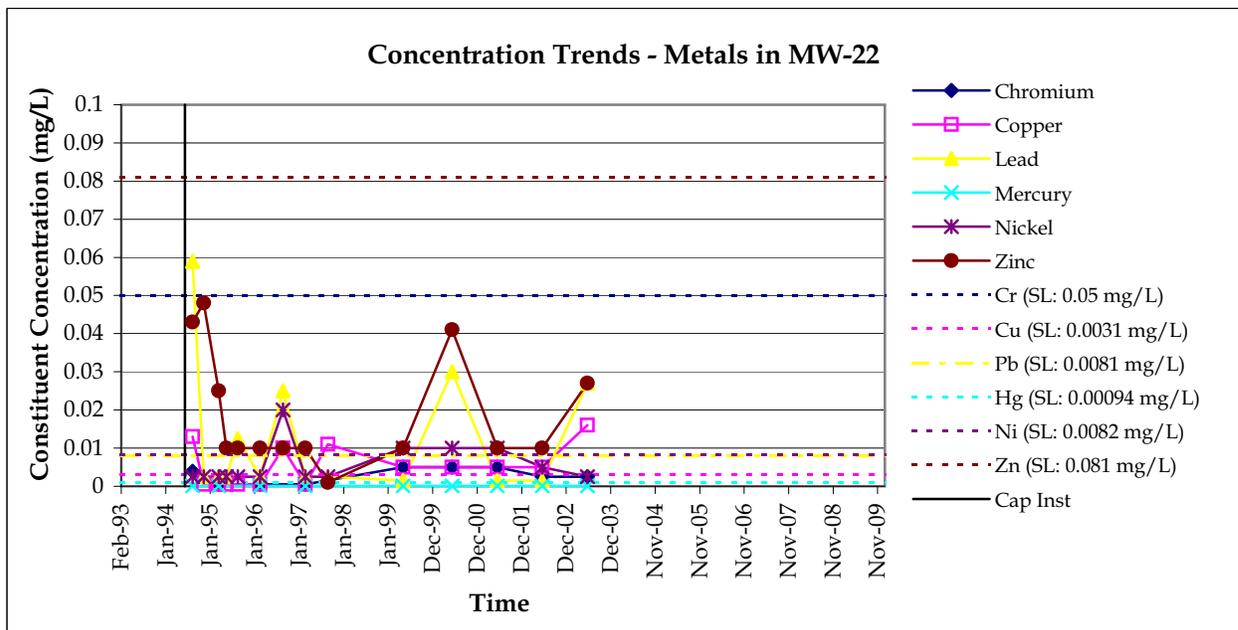
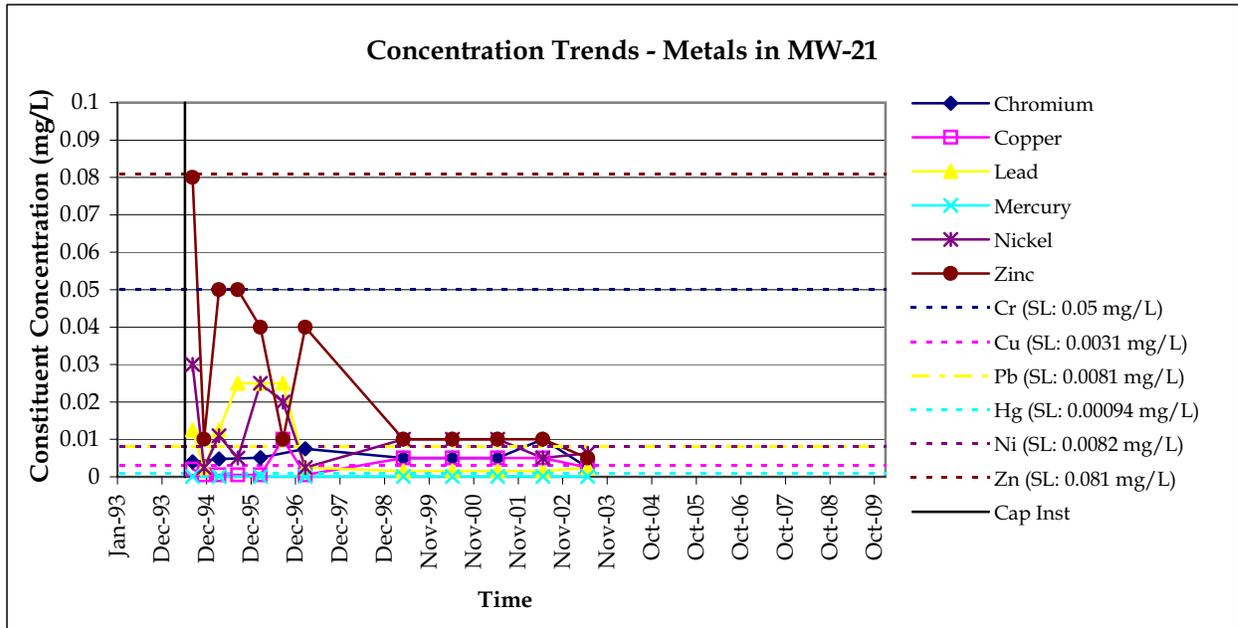


Figure C-2
Concentration Trend Graphs for TPH-D
Liquid Gold Site
Richmond, California

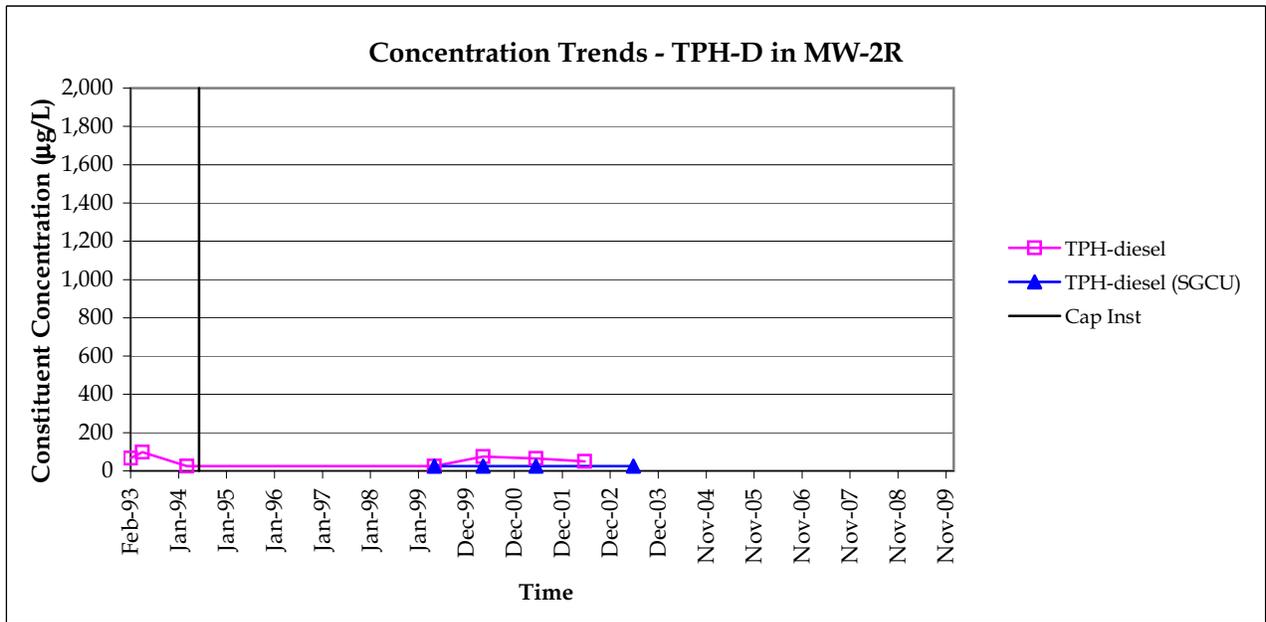
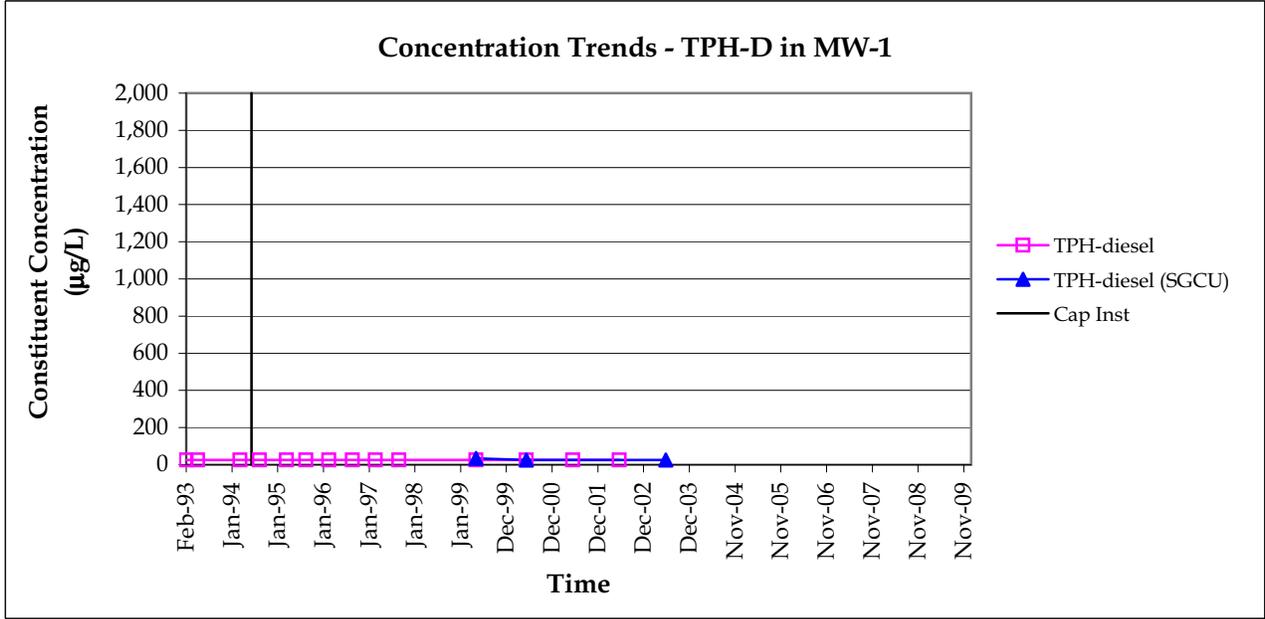


Figure C-2
 Concentration Trend Graphs for TPH-D
 Liquid Gold Site
 Richmond, California

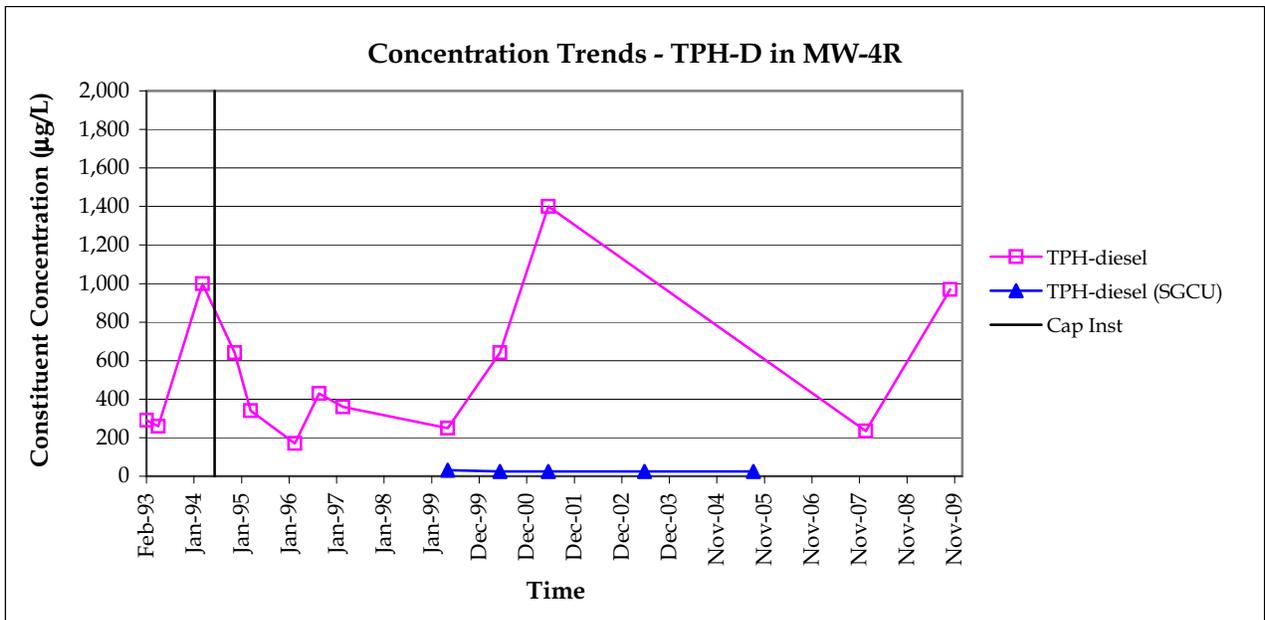
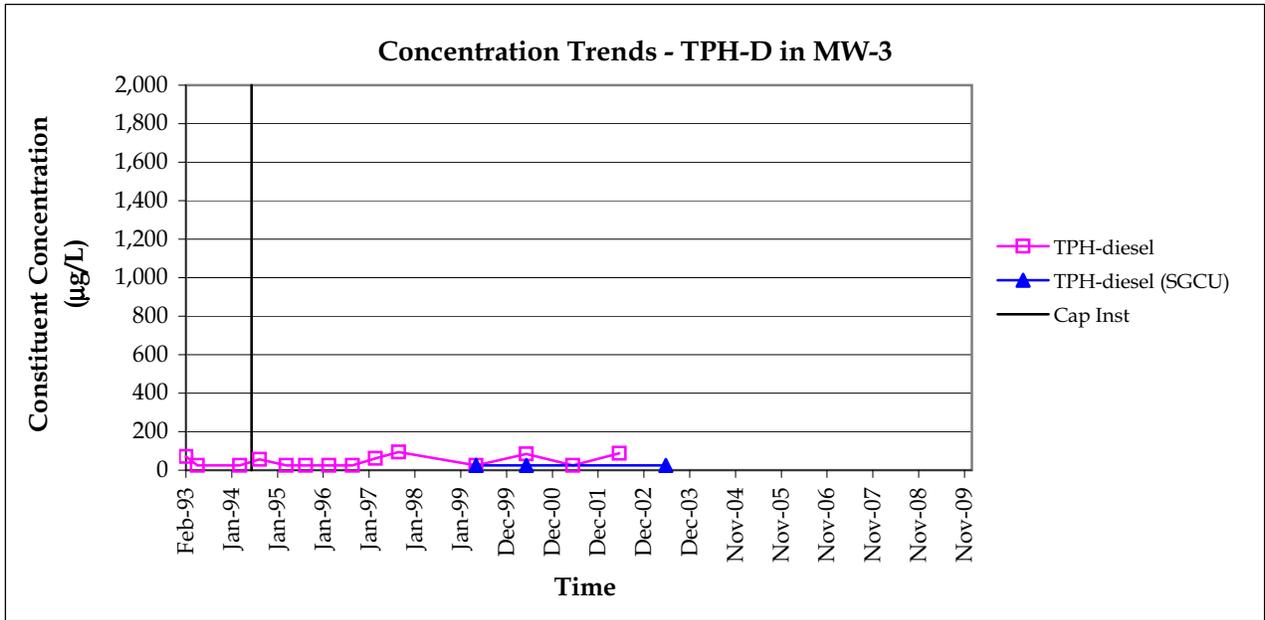


Figure C-2
 Concentration Trend Graphs for TPH-D
 Liquid Gold Site
 Richmond, California

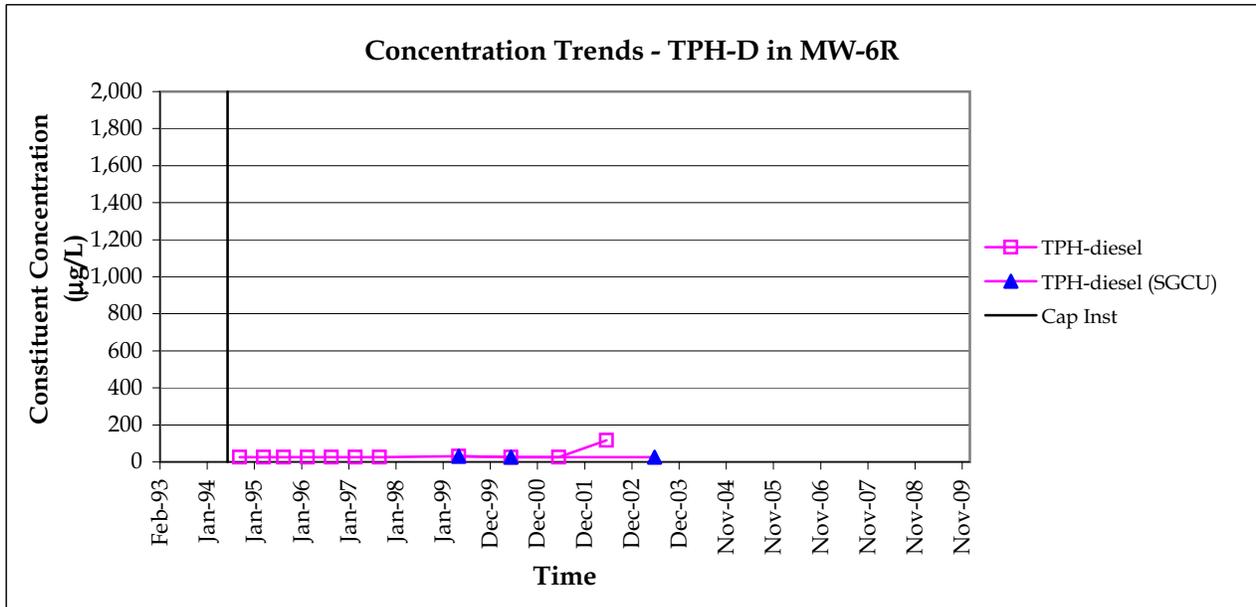
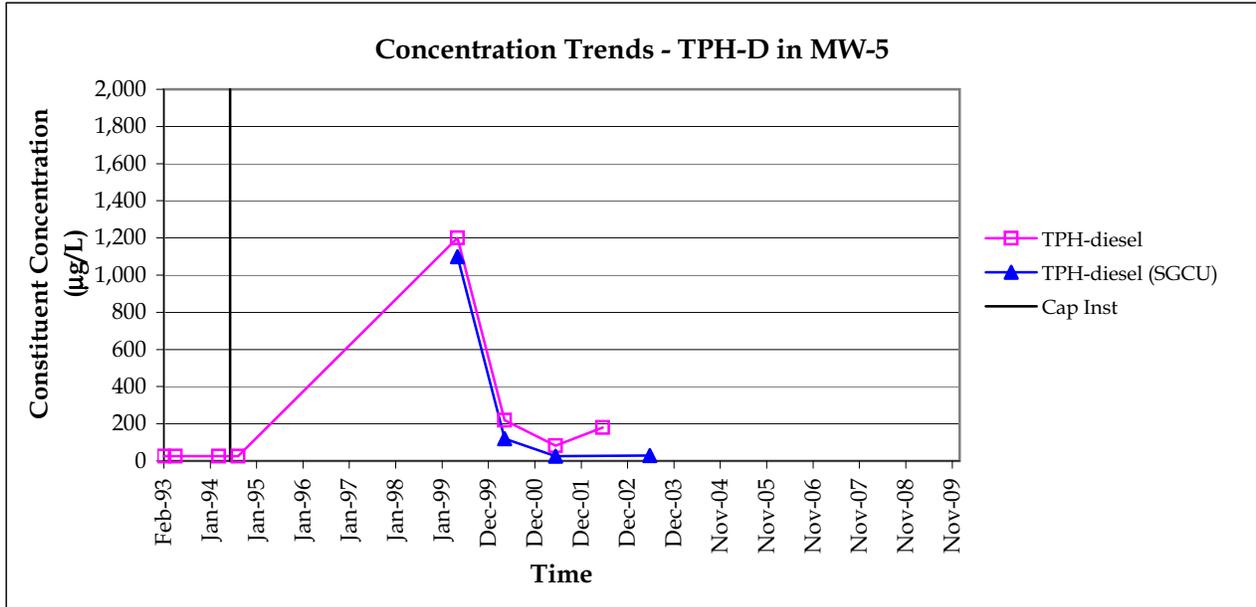


Figure C-2
Concentration Trend Graphs for TPH-D
Liquid Gold Site
Richmond, California

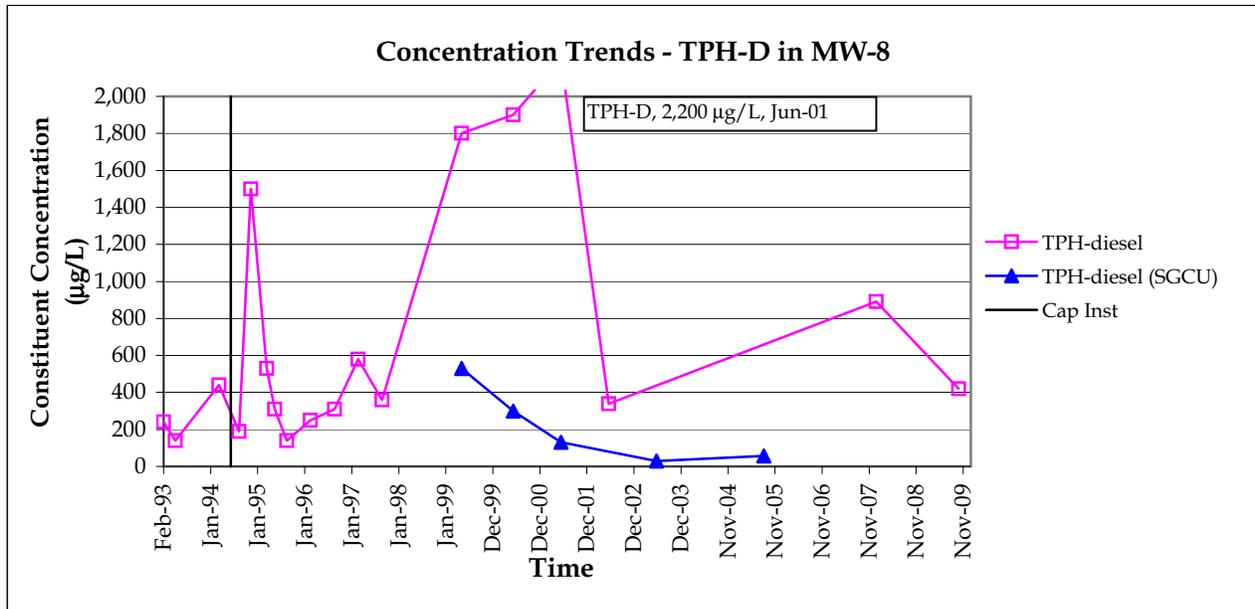
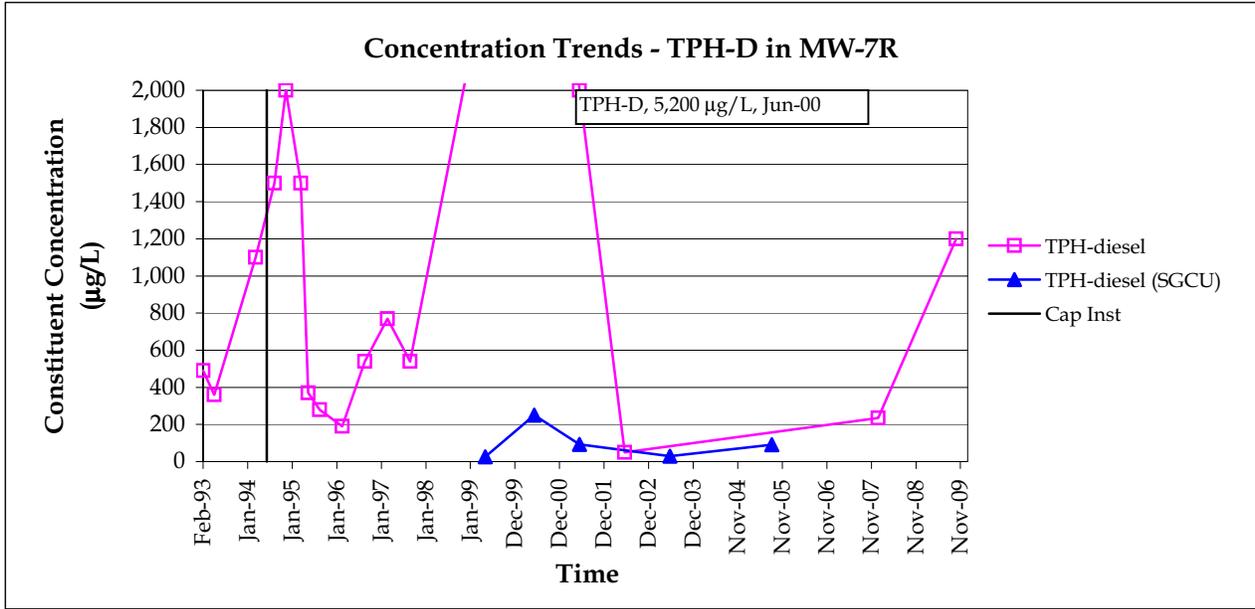


Figure C-2
 Concentration Trend Graphs for TPH-D
 Liquid Gold Site
 Richmond, California

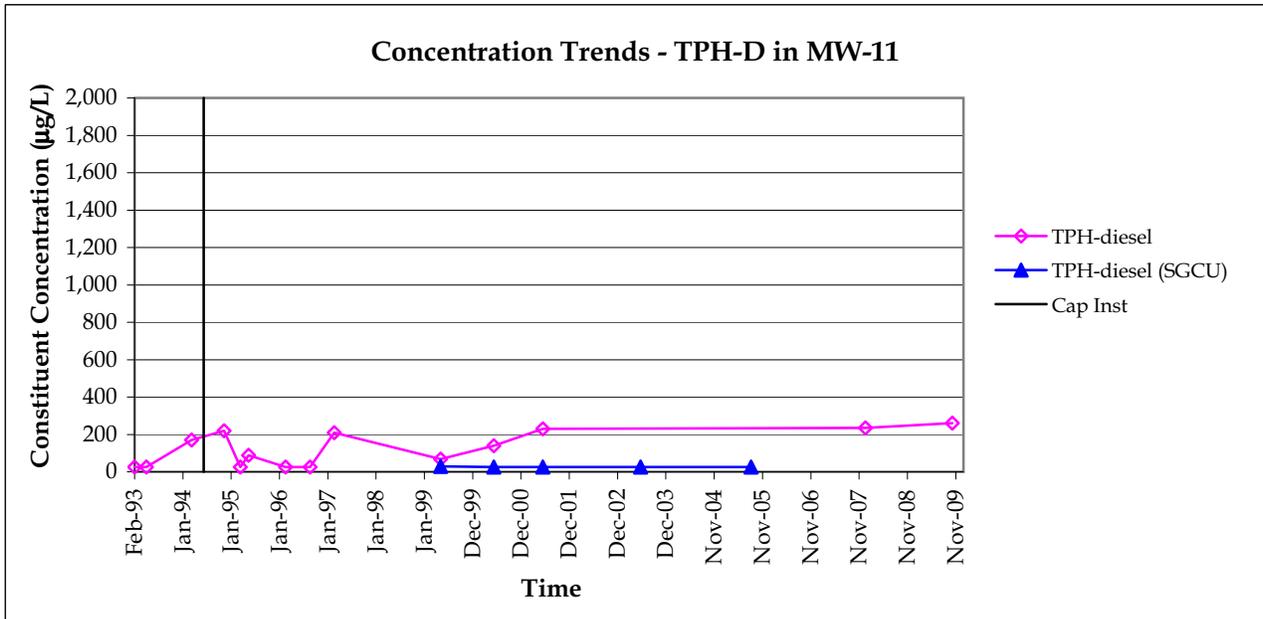
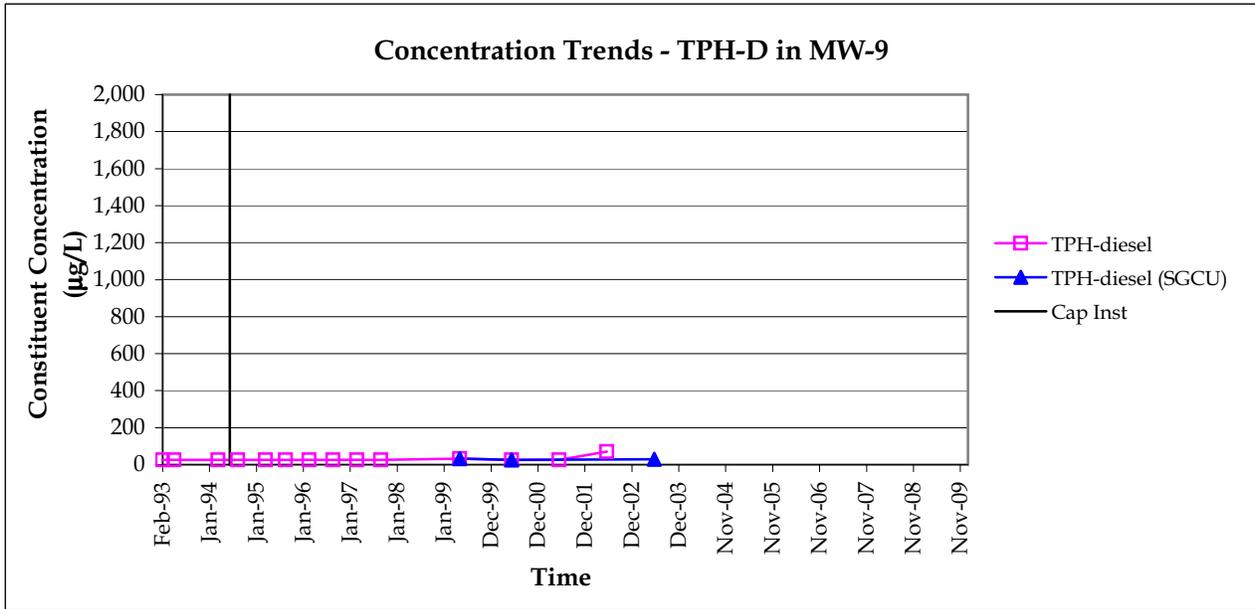


Figure C-2
 Concentration Trend Graphs for TPH-D
 Liquid Gold Site
 Richmond, California

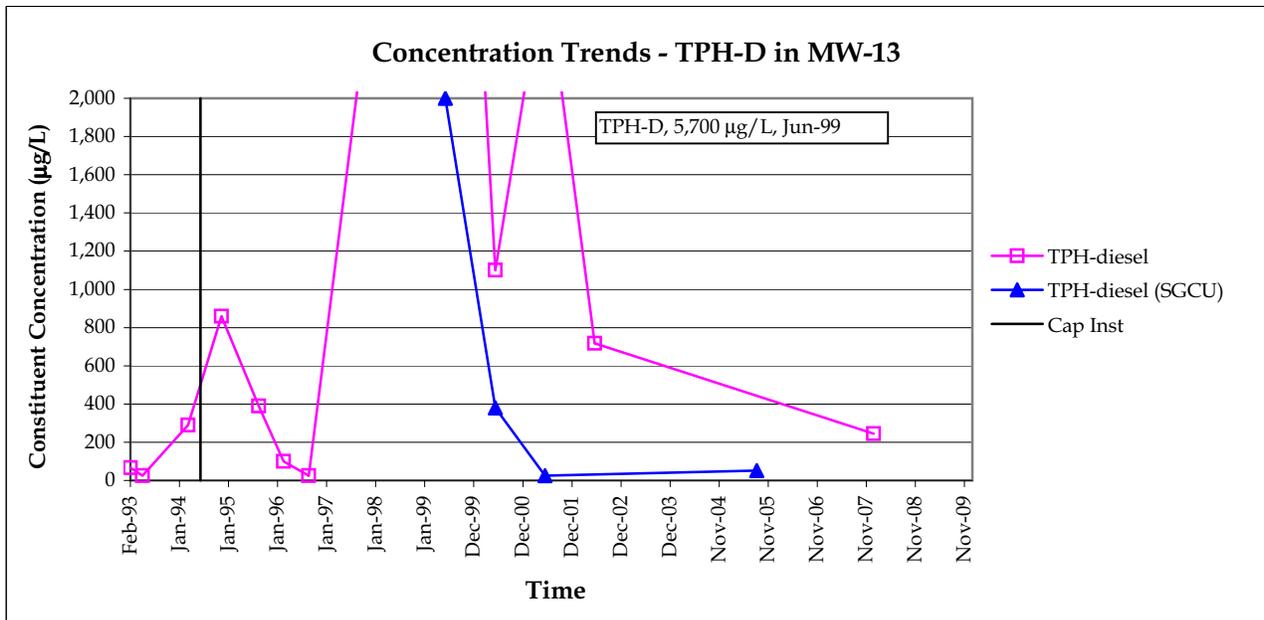
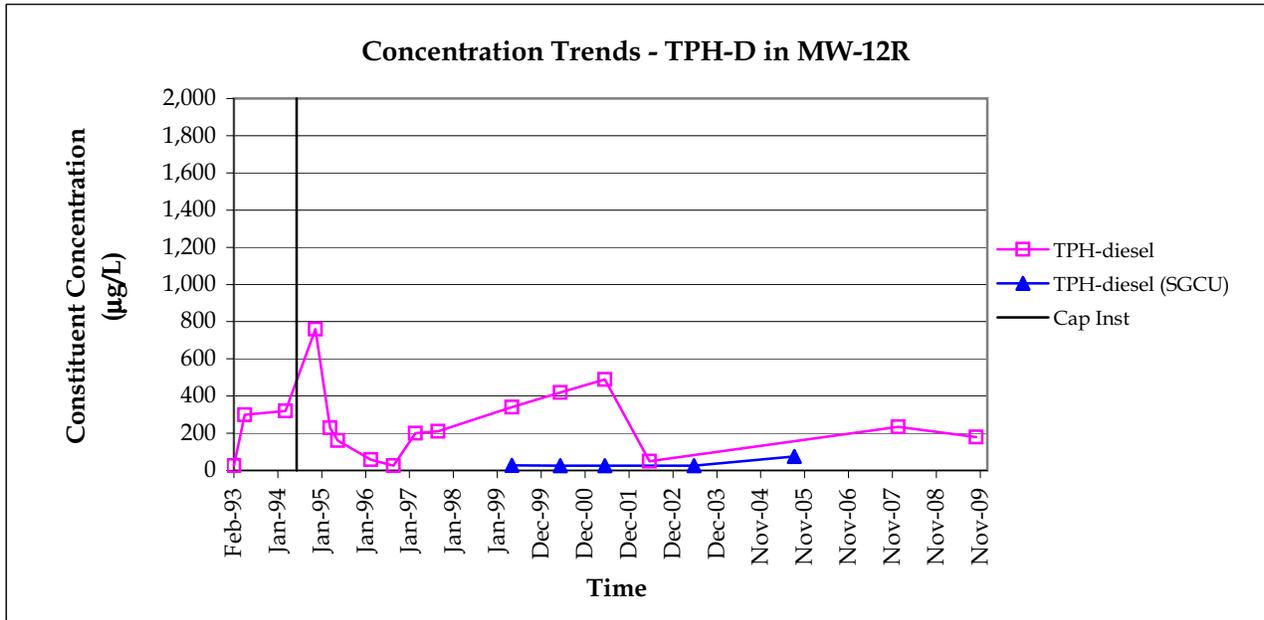


Figure C-2
 Concentration Trend Graphs for TPH-D
 Liquid Gold Site
 Richmond, California

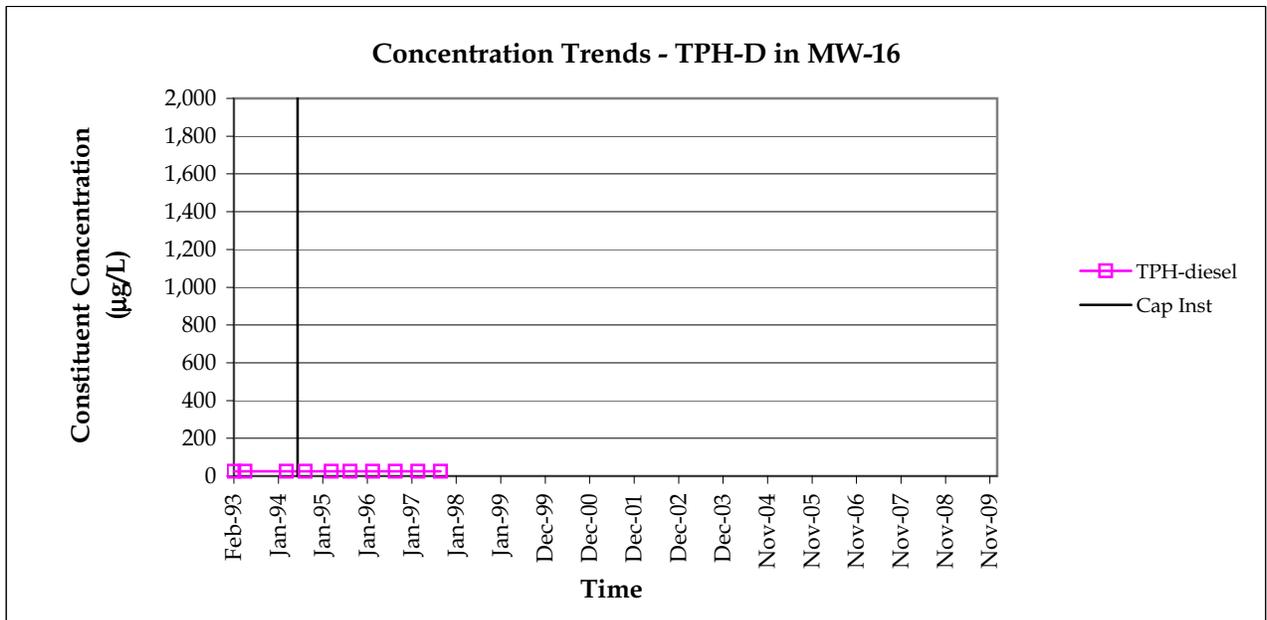
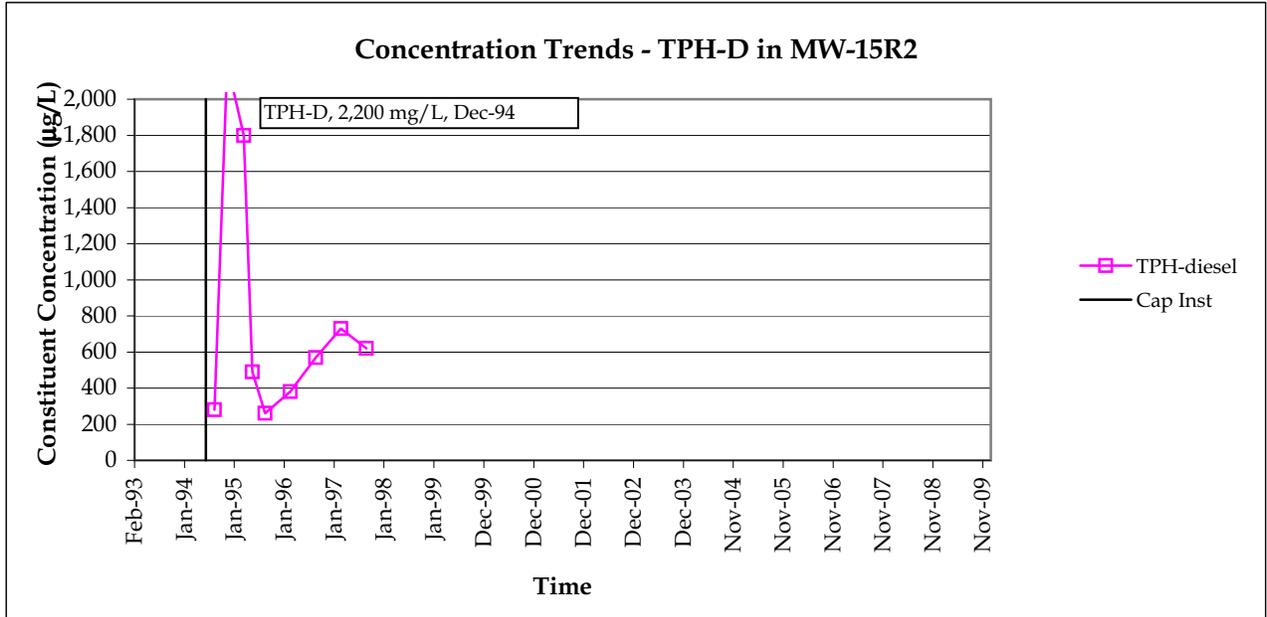


Figure C-2
 Concentration Trend Graphs for TPH-D
 Liquid Gold Site
 Richmond, California

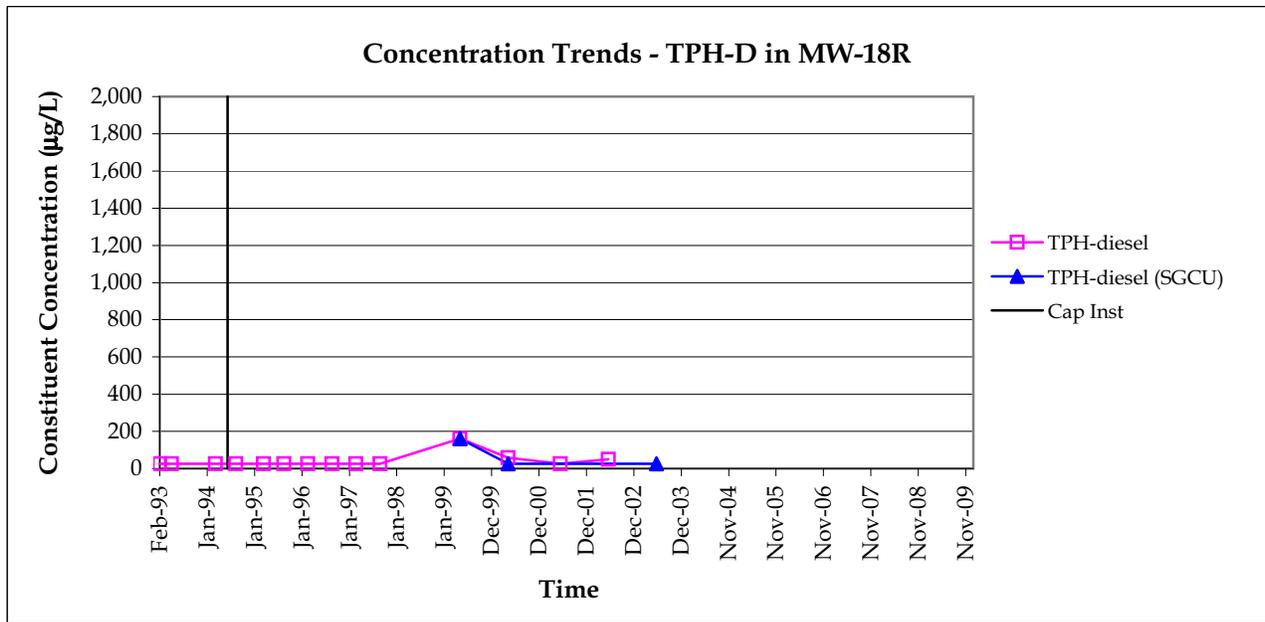
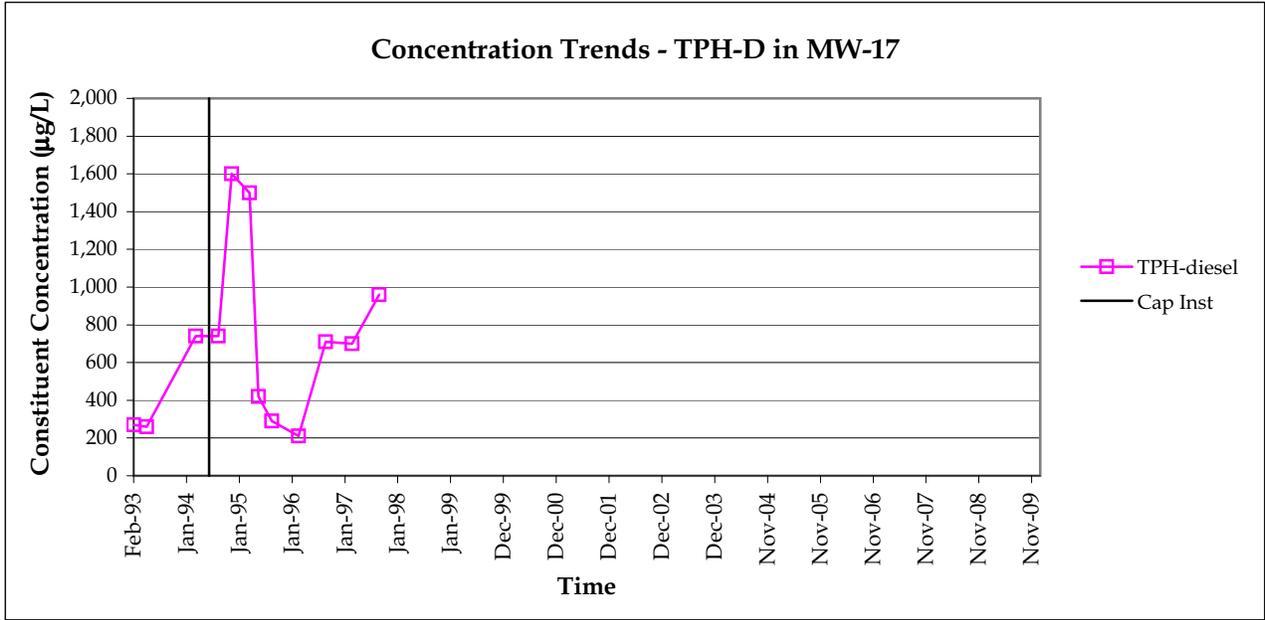
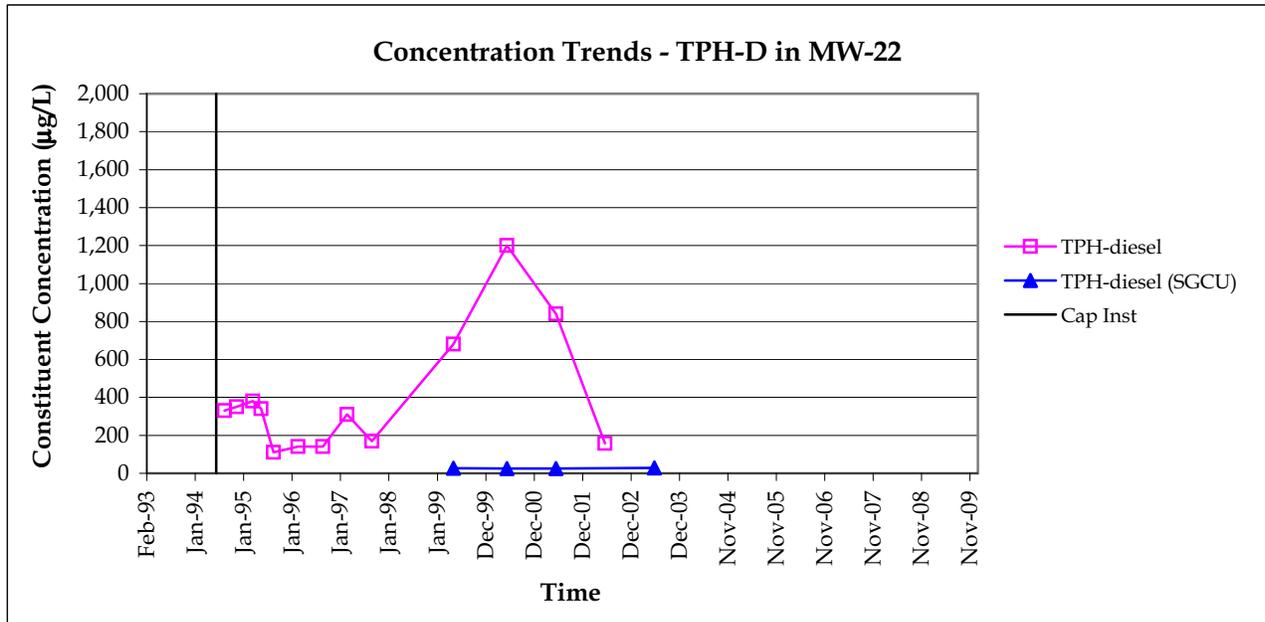
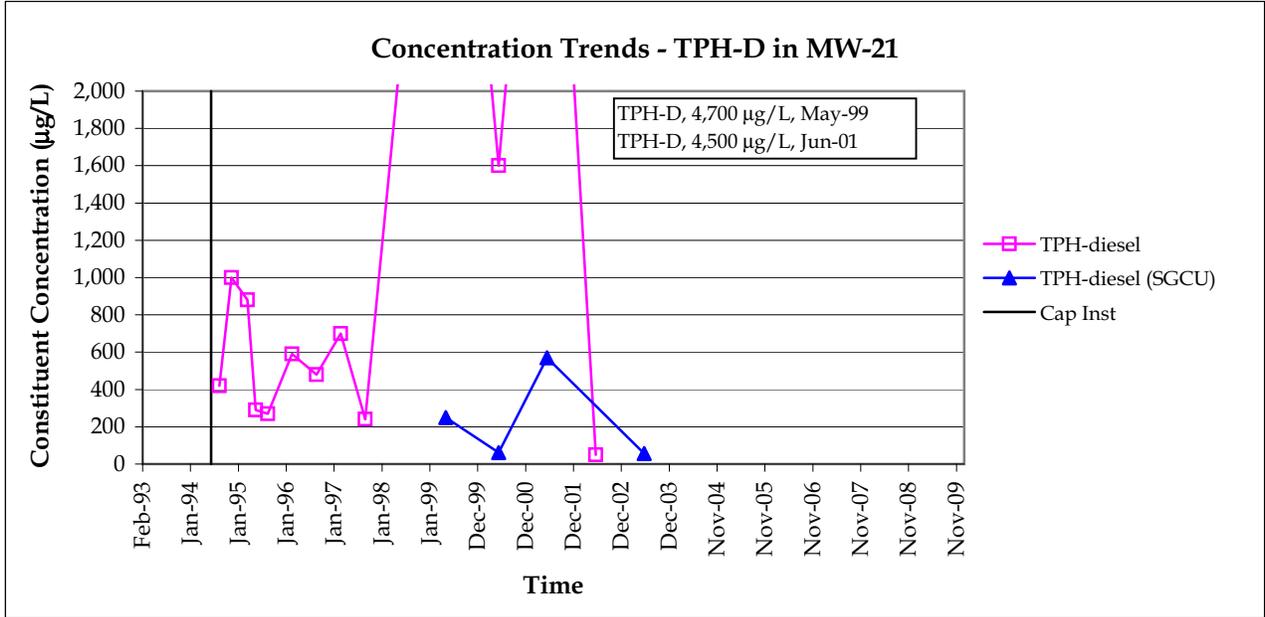


Figure C-2
Concentration Trend Graphs for TPH-D
Liquid Gold Site
Richmond, California



Appendix D
Covenant to Restrict Use of Property,
Recorded 9-13-95

RECORDING REQUESTED BY

SOUTHERN PACIFIC
TRANSPORTATION COMPANY

RECORDED AT REQUEST OF
NORTH AMERICAN TITLE CO.

27

AND WHEN RECORDED MAIL TO

┌
Dept. of Toxic Substances Control
700 Heinz, Suite 200
Berkeley, CA 94710
└

SEP 13 1995

9-13-95
8 O'CLOCK A.M.

AT
CONTRA COSTA COUNTY RECORDS
STEPHEN L. WEIR
COUNTY RECORDER

95. 152781

FEE \$

SPACE ABOVE THIS LINE FOR RECORDER'S USE

[Handwritten signature]

**COVENANT
TO RESTRICT USE OF PROPERTY
THE FORMER "LIQUID GOLD" SITE
RICHMOND, CALIFORNIA**

COVENANT OF DEED RESTRICTION

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COVENANT
TO RESTRICT USE OF PROPERTY

The Former "Liquid Gold" Site
Richmond, California

This Covenant and Agreement ("Covenant") is made on the 25
day of ^{July 25th} ~~June~~, 1995 by Southern Pacific Transportation Company
"Covenantor"), which is the owner of record of certain property
situated in Richmond, County of Contra Costa, State of
California, described in Exhibit "A" attached hereto and
incorporated herein by this reference and as shown in Exhibits
"B", "C" & "D" attached hereto and incorporated herein by this
reference the "Property"), and by the Department of Toxic
Substances Control (the "Department" Covenantor and the
Department desire and intend that in order to protect the present
and future public health and safety, the Property shall be used
in such a manner as to avoid potential harm to persons or
property which may result from hazardous substances which have
been deposited on the Property

ARTICLE I

STATEMENT OF FACTS

1.01 Description of Contamination. The site, commonly

1 referred to as the Liquid Gold site, consists of about 18 acres
2 of an approximately 40-acre property, including Hoffman Marsh,
3 currently owned by Southern Pacific Transportation Company. The
4 site was formerly the location of an asphalt manufacturing
5 facility and later of Liquid Gold, which operated a waste oil
6 collection, storage and transshipment facility. All operations
7 ceased in 1980 and the site is presently inactive, with the
8 ~~exception of a firing range on a portion of the property.~~

9
10 Soil and groundwater investigations at the site found areas in
11 which the soil contained lead and PAHs at concentrations greater
12 than those acceptable for residential exposure. Concentrations
13 of metals (lead, nickel, and zinc) were found to be elevated in
14 one monitoring well in the shallow groundwater zone. Groundwater
15 in both aquifers is not potable.

16
17 The site is being remediated in accordance with the Remedial
18 Action Plan (RAP) which was approved, after public notice and
19 comment, in June, 1993 by the Department and subsequently by the
20 US EPA. The final remedial action includes grading to control
21 runoff patterns; placing 2 feet of clean imported surface soil
22 over a portion of the Property (See Exhibit D); seeding the area
23 with native plants; access restrictions to prevent disturbance
24 of the vegetated soil cover, which include fencing and signage;
25 recording a restrictive covenant on the property to prevent
26

27

1 residential development of the site or use of the groundwater
2 below the site; groundwater monitoring for a minimum of 5 years;
3 and removal, consolidation and capping on the upland area of
4 sediments and debris from two drainage channels in the adjacent
5 marsh areas.

6
7 1.02 Potential Exposure Pathways and Health Risk. Exposure
8 ~~pathways may be via in-place contact, surface water runoff, and~~
9 wind dispersal, resulting in dermal contact, inhalation, or
10 ingestion by humans or animals. The risk of public exposure is
11 lessened by distance from contaminants, shortened length of time
12 of exposure, containment of contaminants and mitigation measures
13 to control exposure The health effects of contaminants found on
14 site are described in Exhibit E, "Health Effects of the
15 Contaminants."

16
17 1.03 Surrounding Land Use. The Property is located in the
18 City of Richmond, west of Interstate 580 and southwest of the
19 Bayview west interchange adjacent to the San Francisco Bay
20 Surrounding the Liquid Gold site are industrial areas to the
21 north across Stege Drainage Channel, Point Isabel, a remediated
22 hazardous substances site now used as park land, to the south,
23 and Highway 580 to the east. To the west and immediately
24 adjacent to the site are tidal wetlands and the San Francisco
25 Bay The nearest residential area is located just east of
26
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1 Highway 580 and is within one-fourth mile radius A residential
2 area west of Carlson Boulevard and north of Colusa Street is
3 being developed and is within one mile of the site. Neighboring
4 businesses are light industry located north of the site across
5 Stege Drainage Channel and east of Highway 580 in the area west
6 of Carlson Boulevard and north of Colusa Street.

7
8 ARTICLE II

9 GENERAL PROVISIONS

10 2.01 Provisions to Run with the Land. This Covenant sets
11 forth protective provisions, covenants, restrictions, and
12 conditions (collectively referred to as "Restrictions"), upon and
13 subject to which the Property and every portion thereof shall be
14 improved, held, used, occupied, leased, sold, hypothecated,
15 encumbered, and/or conveyed. Each and all of the Restrictions
16 shall run with the land, and pass with each and every portion of
17 the Property, and shall apply to, inure to the benefit of, and
18 bind the respective successors in interest of Covenantor. Each
19 and all of the Restrictions are imposed upon the entire Property
20 unless expressly stated as applicable to a specific portion of
21 the Property. Each and all of the Restrictions are imposed
22 pursuant to Health and Safety Code Sections 25222.1, 25355.5 and
23 25356.1 and run with the land pursuant to Health and Safety Code
24 Sections 25222.1, 25230(a)(1) and 25355.5. Each and all of the
25 Restrictions are for the benefit of and enforceable by the
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Department.

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2.02 Concurrence of Owners Presumed All purchasers, lessees, or possessors of any portion of the Property shall be deemed by their purchase, leasing, or possession of such 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 future Owners and Occupants and that their interest in the Property shall be subject to the Restrictions contained herein

2.03 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions set out herein shall be incorporated by reference in each and all future deeds and leases of any portion of the Property

2.04 Statement Regarding Condition of the Property. The purpose of this Covenant is to protect occupants of the Property and the general public from exposure to residual contaminants which may pose human health concerns by restricting use of the Property appropriately. Accordingly, this Covenant is not, and shall not be construed as, a statement, admission, or declaration that the Covenantor or the Department intends to create or permit

1 to exist on the Property a health, safety, environmental, or
2 other hazard or nuisance.

3
4
5 ARTICLE III

6 DEFINITIONS

7 3.01 Department "Department" shall mean the California
8 ~~State Department of Toxic Substances Control and shall include~~
9 its successor agencies, if any.

10
11 3.02 Improvements. "Improvements" shall mean all
12 buildings, roads, driveways, regrading, and paved parking areas,
13 constructed or placed upon any portion of the Property.

14
15 3.03 Occupant(s). "Occupant(s)" shall mean those persons
16 entitled by ownership, leasehold, or other legal relationship to
17 the exclusive right to occupy any portion of the Property.
18 Occupants shall not include an occupant's licensees or invitees

19
20 3.04 Owner(s). "Owner(s)" shall mean the Covenantor or its
21 successors in interest, including heirs and assigns, who hold
22 title to all or any portion of the Property.

23
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25 3.05 Director. "Director" shall mean the Director of the
26 California Department of Toxic Substances Control or his or her

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designee.

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ARTICLE IV

DEVELOPMENT, USE, AND CONVEYANCE OF THE PROPERTY

4.01 Restrictions on Development and Use. Covenantor promises to restrict the use of the Property as described in said Exhibit A as follows:

- a. Property shall be restricted to parks, open space, commercial or industrial uses.
- b. Residential development for human habitation shall not be permitted on the Property.
- c. Hospitals or health clinics shall not be permitted on the Property.
- d. Day-care centers for either children or senior citizens shall not be permitted on the Property.
- e. Schools for children under 21 years of age shall not be permitted on the Property.
- f. No groundwater shall be extracted on the Property for purposes other than site remediation or construction dewatering.
- g. No raising of food (cattle, food crops, cotton,

chickens) shall be permitted on the Property.

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h Subdivision of the Property is forbidden, except as allowed under Health and Safety Code Section 25232(a 2) and (b) (2).

i. No activities which will disturb the soil (e.g., excavation, grading, removal, trenching, filling, earth movement, or mining) shall be permitted on the Property ~~without a Health and Safety Plan and a Soils Management Plan~~ submitted to the Department for review and approval.

j. The Property shall be posted with a bilingual sign in English and Spanish stating that no grading, excavation or construction activities can occur on the Property without written permission of the Department.

k. Any contaminated soils brought to the surface by grading, excavation, trenching or backfilling shall be managed in accordance with all applicable provisions of state and federal law

l. All uses and development of the Property shall preserve the integrity of the vegetated soil cover and shall not disturb the integrity of any hazardous substances containment.

m. The Owner(s)/Occupant(s) shall maintain all vegetated soil cover, groundwater monitoring wells, fences, gates and warning signs, as specified in the Draft Remedial Action

Plan and Operation and Maintenance Plan for the Site.

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n. Any proposed alteration of the vegetated soil cover shall require written approval by the Department.

o. The Owner(s) shall monitor the vegetated soil cover yearly for deterioration and integrity.

p. The Owner(s) shall notify the Department of each of the following: 1 The type, cause, location and date of any disturbance to the vegetated soil cover which could affect its ability to contain subsurface hazardous substances on the Property and 2 The type and date of repair of such disturbance Notification to the Department shall be made by registered mail within ten (10) working days of both the discovery of the disturbance and the completion of repairs

q. If groundwater monitoring detects contamination at levels of concern, the Owner(s) shall develop and submit a plan of action for Department approval.

r. The Department shall be allowed access to the Property for inspection, surveillance, monitoring, maintenance, and other activities consistent with the purposes of this covenant as deemed necessary by the Department in order to protect the public health and safety. Except in case of emergency, Department personnel shall conduct inspections during normal business hours, notify the Owner(s) in

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1 advance, or upon arrival at the property, of their desire to
2 inspect the property and shall not attempt to inspect the
3 property without notice to, or unaccompanied by, a
4 representative of the owner.

5 s. Prior to sale, lease, or rental, the Owner(s) shall give
6 written notice to purchasers, lessees, and tenants stating
7 that there is residual contamination as specified in Health
8 and Safety Code Section 25359.7(a).

9 4.02 Conveyance of Property. The Owner(s) shall provide a
10 fifteen (15) days advance notice to the Department of any sale,
11 lease or other conveyance of the Property or an interest in the
12 Property to a third person. The Department shall not, by reason
13 of the Covenant, have authority to approve, disapprove, or
14 otherwise affect any sale, lease, or other conveyance of the
15 Property.
16

17
18 4.03 Enforcement. Failure of the Owner(s) to comply with
19 any of the requirements, as set forth in Section 4.01, shall be
20 grounds for the Department, by reason of the Covenant, to require
21 that the Owner(s) modify or remove any improvements constructed
22 in violation of Section 4.01. Violation of the Covenant shall be
23 grounds for the Department to file civil and criminal actions
24 against the Owner(s) as provided by law.
25

26 ARTICLE V
27

VARIANCE AND TERMINATION

1 5.01 Variance. Any Owner(s) or, with the Owner(s)' written
2 consent, any Occupant of the Property or any portion thereof may
3 apply to the Department for a written variance from the
4 provisions of this Covenant. Such application shall be made in
5 accordance with Section 25233, Health and Safety Code. The
6 Department shall provide notice to the Owner(s) before taking
7 action on any such application by any Occupant and shall permit
8 the Owner(s) to intervene in any proceeding on the application,
9 as set forth in said Section 25233.
10

11
12 5.02 Termination. Any Owner(s) or, with the Owner's(s')
13 written consent, any Occupant of the Property or a portion
14 thereof may apply to the Department for a termination of the
15 Restrictions as they apply to all or any portion of the Property.
16 Such application shall be made in accordance with Section 25234,
17 Health and Safety Code. The Department shall provide notice to
18 the Owner before taking action on any such application by any
19 Occupant and shall permit the Owner(s) to intervene in any
20 proceeding on the application, as set forth in said Section
21 25233.
22

23
24 5.03 Term. Unless terminated in accordance with Section
25 5.02 above, by law or otherwise, this Covenant shall continue in
26 effect in perpetuity.
27

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ARTICLE VI

MISCELLANEOUS

1
2 6.01 No Dedication Intended Nothing set forth herein
3 shall be construed to be a gift or dedication, or offer of a gift
4 or dedication, of the Property or any portion thereof to the
5 general public or for any purposes whatsoever.
6

7
8 6.02 Notices. ~~Whenever any person gives or serves any~~
9 notice, demand, or other communication with respect to this
10 Covenant, each such notice, demand, or other communication shall
11 be in writing and shall be deemed effective 1) when delivered, if
12 personally delivered to the person being served or to an officer
13 of a corporate party being served or official of a government
14 agency being served, or 2) five (5) business days after deposit
15 in the mail if mailed by United States mail, postage paid
16 certified, return receipt requested:
17

18 To: "Covenantor" c/o Law Department
19 Southern Pacific Transportation Company
20 One Market Plaza, Eighth Floor
21 San Francisco, CA 94105

22 To: Dept. of Toxic Substances Control, Region 2
23 700 Heinz Avenue, Suite 200
24 Berkeley, CA 94710
25 Attention: Chief, Site Mitigation Branch

26 6.03 Partial Invalidity. If any portion of the
27 Restrictions or terms set forth herein is determined to be

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1 invalid for any reason, the remaining portion shall remain in
2 full force and effect as if such portion had not been included
3 herein.

4
5 6.04 Article Headings. Headings at the beginning of each
6 numbered article of this Covenant are solely for the convenience
7 of the parties and are not a part of the Covenant.

8
9 6.05 Recordation This instrument shall be executed by the
10 Covenantor and by the Site Mitigation Branch Chief, California
11 Department of Toxic Substances Control. This instrument shall be
12 recorded by the Covenantor in the County of Contra Costa within
13 ten 10) days of the date of execution.

14
15 6.06 References. All references to Code sections include
16 successor provisions.

17
18 6.07 Cure. The Department shall give Covenantor written
19 notice and a reasonable opportunity to cure any alleged default
20 by Covenantor prior to exercising its remedies.

21
22 IN WITNESS WHEREOF, the parties execute this Covenant as of the
23 date set forth above.
24
25
26
27

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OWNER: Southern Pacific Transportation Co.

By: *Moni Casey*

Title: Asst. Vice President and General Manager
Real Estate

Date: July 5, 1995

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

By: *Barbara Cook*

Barbara Cook

Chief, Site Mitigation Branch, Region 2

Date: July 25, 1995

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STATE OF CALIFORNIA

COUNTY OF Alameda

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On July 25 1995 before me, the

undersigned, a Notary Public in and for said state, personally appeared Barbara Cook, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the Department of Toxic Substances Control executed the instrument

WITNESS my hand and official seal.

Signature

A ydar

(Seal



STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

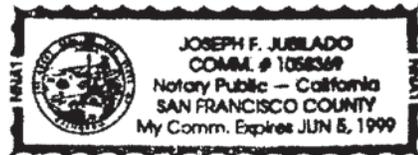
On JULY 10, 1995 before me, the undersigned, a Notary Public in and for said state personally appeared M. W. CASEY personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument

WITNESS my hand and official seal.

Signature

Joseph F. Jubilado

(Seal)



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EXHIBITS

EXHIBIT A

LEGAL DESCRIPTION OF SITE

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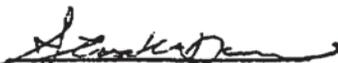
April 8, 1993
0132-93-00

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LEGAL DESCRIPTION
For
DEED RESTRICTION
AT SOUTHERN PACIFIC TRANSPORTATION COMPANY
LIQUID GOLD SITE

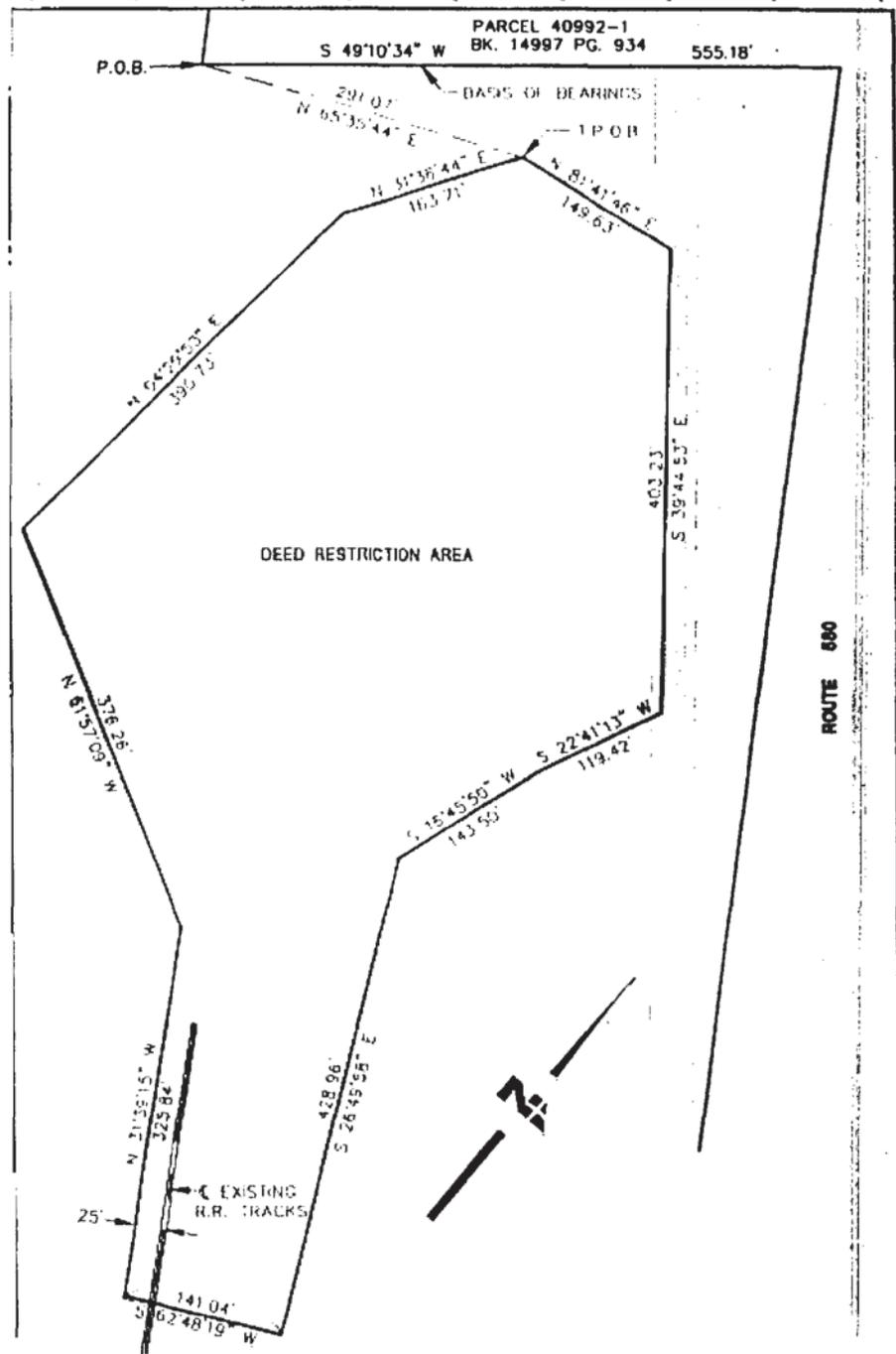
All that certain real property situated in the City of Richmond, County of Contra Costa, State of California, being a portion of the parcels of land described in the following deeds, Book 126 of Deeds at page 511 recorded July 23, 1907, Book 124 of Deeds at page 403 recorded April 15, 1907, Book 120 of Deeds at page 338 recorded October 18, 1906, and Book 425 of Official Records at page 197 recorded January 29, 1937, Contra Costa County Records, being also a portion of Sections 20 and 29 in Township 1 North Range 4 West M.D.B. & M. being more particularly described as follows:

Beginning at the southwesterly terminus of a course in the general southerly line of Parcel 409921-1 as described in the Amended Final Order of Condemnation recorded April 12, 1989 in Book 14997 of Official Records at page 934, Contra Costa County Records, said course having a bearing of S 49° 10' 34" W and a length of 555.18 feet;
thence N 65° 35' 44" E, 291.07 feet to the TRUE POINT OF BEGINNING;
thence N 81° 41' 46" E, 149.63 feet;
thence S 39° 44' 53" E, 403.23 feet;
thence S 22° 41' 13" W, 119.42 feet;
thence S 16° 45' 50" W, 143.50 feet;
thence S 26° 49' 58" E, 428.96 feet;
thence S 62° 48' 19" W, 141.04 feet to the southwesterly line of the parcel of land as described in the deed recorded Jan 29, 1937 in Book 425 of Official Records at page 197, Contra Costa County Records;
thence along said southwesterly line and its northwesterly prolongation N 31° 39' 15" W, 179.03 feet;
thence N 53° 34' 34" W, 508.44 feet;
thence N 4° 29' 53" E, 390.73 feet;
thence N 31° 36' 44" E, 163.71 feet to the TRUE POINT OF BEGINNING.

Checked by 



LD0067-D



DATE: 3-31-93
SCALE: 1"=100'
DRAWN: EG
CHECKED: DLA

N
NOLTE and ASSOCIATES
SAN JOSE • WALNUT CREEK
SAN DIEGO • SACRAMENTO

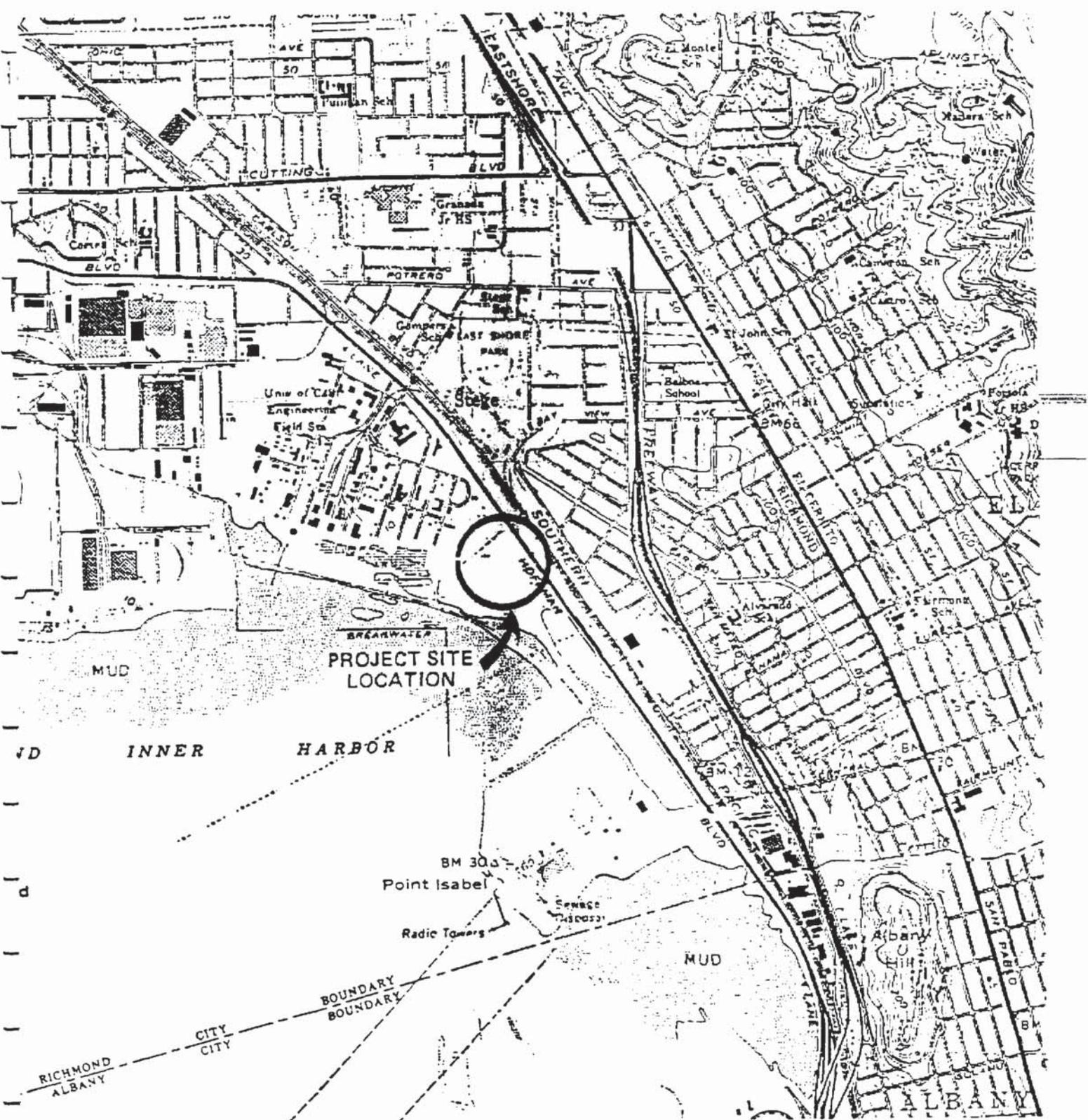
PLAT TO ACCOMPANY LEGAL DESCRIPTION
FOR DEED RESTRICTION
AT SOUTHERN PACIFIC TRANSPORTATION COMPANY
LIQUID GOLD SITE
RICHMOND CALIFORNIA

TR/291 56

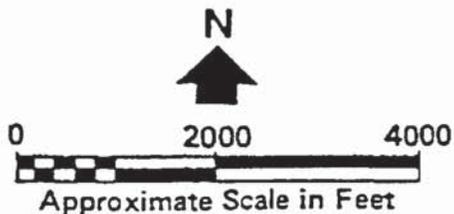
95 152781

EXHIBIT B

SITE LOCATION MAP



Basemap Reference: USGS Topographic Map
 Richmond Quadrangle 7.5 Minute Series
 Photorevised 1980



Kennedy/Jenks Consultants
 Southern Pacific Transportation Company
 Liquid Gold Site
 Site Location Map
 K/J 855018.14
 February 1993

Figure 1

TABLE 2

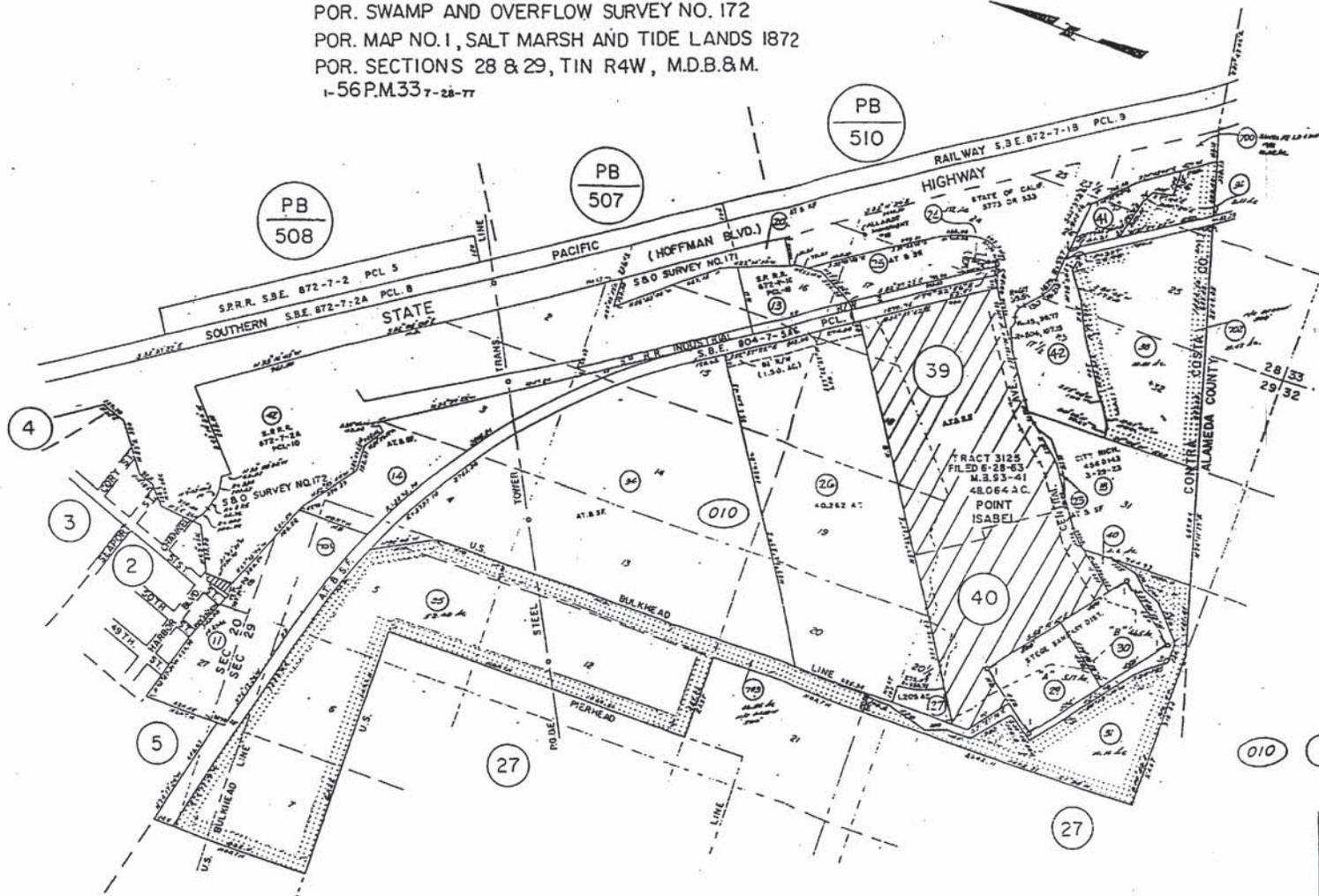
OWNERSHIP OF NEARBY PROPERTIES
LIQUID GOLD SITE - RICHMOND, CALIFORNIA
K/J 855018.14

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PARCEL NUMBERS	OWNER
13, 42	Southern Pacific Transportation Company San Francisco, California
14, 20, 23, 25, 27, 34, 37, 39, 40	SF Pacific Properties San Francisco, California
26	United States Postal Service San Bruno, California
24, 29, 30	East Bay Municipal Utility District Oakland, California
35, 36, 38	City of Richmond Richmond, California
700, 701	Santa Fe Energy Resources, Inc. Midland, Texas

Note: This information was provided by the Contra Costa County Assessor's office on 26 January 1993. The Assessor's office attaches a disclaimer warning about possible errors and omissions in the data. See Figure 8 for a copy of the Assessor's map.

POR. SWAMP AND OVERFLOW SURVEY NO. 171
 POR. SWAMP AND OVERFLOW SURVEY NO. 172
 POR. MAP NO. 1, SALT MARSH AND TIDE LANDS 1872
 POR. SECTIONS 28 & 29, T1N R4W, M.D.B.&M.
 1-56P.M.337-28-77



Notes:

1. Source:
 Assessor's Map Book 560, Page 01
 Contra Costa, California
 2 - 26 - 63 (Revised 12 - 2 - 92)
2. For owners of parcels refer to Table 2

Kennedy/Jenks Consultants
 Southern Pacific Transportation Company
 Liquid Gold Site
 County Assessor's Map of Site
 and Adjacent Property
 K/J 855018.14
 February 1993

Figure 8

EXHIBIT E

HEALTH EFFECTS OF CONTAMINANTS

95 152781

**HEALTH EFFECTS OF CONTAMINANTS
ALLOWABLE EXPOSURE VALUES**

CHEMICAL	TLV ¹ TWA (mg/m ³)	STEL ¹ (mg/m ³)	PEL ² (mg/m ³)	ACUTE EXPOSURE SYMPTOMS ³	TARGET ORGANS ³
Lead, inorganic fumes and dust	0.15	NE ⁴	0.05	Lassitude; insomnia; pallor, eye grounds; anorexia, low weight, malnutrition; constipation; abdominal pain, colic; hypotense; anemia; gingival lead line; trembling, paralysis of wrists	GI tract, central nervous system, kidneys, blood, gingival tissues
Nickel, metal and soluble compounds	1	NE	1	Sensitization dermatitis; allergic asthma; nasal cavities; pneumonitis; (carcinogenic)	Nasal cavities, lungs, skin
Copper, dust and mist	1	NE	1	Irritation of mucous membranes, pharynx; nasal perforation; eye irritation; metal taste; dermatitis	Respiratory system, skin, liver, kidneys, increased risk with Wilson's disease
Chromium metal and insoluble salts	0.5	NE	0.5	Histologic fibrosis of lungs	Respiratory system
Zinc (nuisance dust)	10	NE	10	Metallic taste, dry throat	Respiratory system
Oil and Grease (specific chemical components are not identified by this method)	-	-	-	-	-
Petroleum Hydrocarbons (as gasoline)	890	1,500	900	Irritation of skin, mucous membranes, dermatitis; flushing of face; staggering gait; slurred speech; mental confusion	Central nervous system
Mercury	0.1	-	0.05	Coughing, chest pain, insomnia, indecision, headache, weakness, fatigue	Skin, respiratory system, central nervous system, kidneys, eyes
Polycyclic Aromatic Hydrocarbons (as coal tar pitch volatiles)	0.2	NE	0.2	Dermatitis, bronchitis	Respiratory system, skin, bladder, kidneys
Nuisance Dust (total)	10	NE	10	-	-

HEALTH EFFECTS OF CONTAMINANTS
ALLOWABLE EXPOSURE VALUES

NOTES:

1. TLV - TWA = Threshold Limit Value - 8 hr. Time Weighted Average
STEL = Short Term Exposure Limit
American Conference of Governmental Industrial Hygienists. Threshold Limit Values (TLV) and Biological Exposure Indices for 1991-1992.
TLV - TWA reported in mg/m^3 represents milligrams of substance per cubic meter of air.
2. PEL = Federal OSHA (29 CFR 1910 Subpart Z) Permissible Exposure Level based on 8 hour time weighted average. U.S. Department of Health and Human Services.
NIOSH Pocket Guide to Chemical Hazards. June 1990.
3. Sittig, Marshall. 1985. Handbook of Toxic and Hazardous Chemicals and Carcinogens. Park Ridge, New Jersey. Noyes Publications.
4. NE = Not established.

Sources: NIOSH Pocket Guide to Chemical Hazards, June 1990.

Sittig, Marshall. Handbook of Toxic and Hazardous Chemicals and Carcinogens. Second Edition. Noyes Publications. 1985.

END OF DOCUMENT

184291 96

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737



LAND USE COVENANT
SIGN-OFF SHEET

LIQUID GOLD SITE
SOUTHWEST OF HIGHWAY 580 BAYVIEW EXIT
RICHMOND, CALIFORNIA

Ben Hymme
Project Manager

6/15/95
Date

[Signature]
Unit Chief

06/24/95
Date

Derek E. Van Horn
Office of Legal Counsel

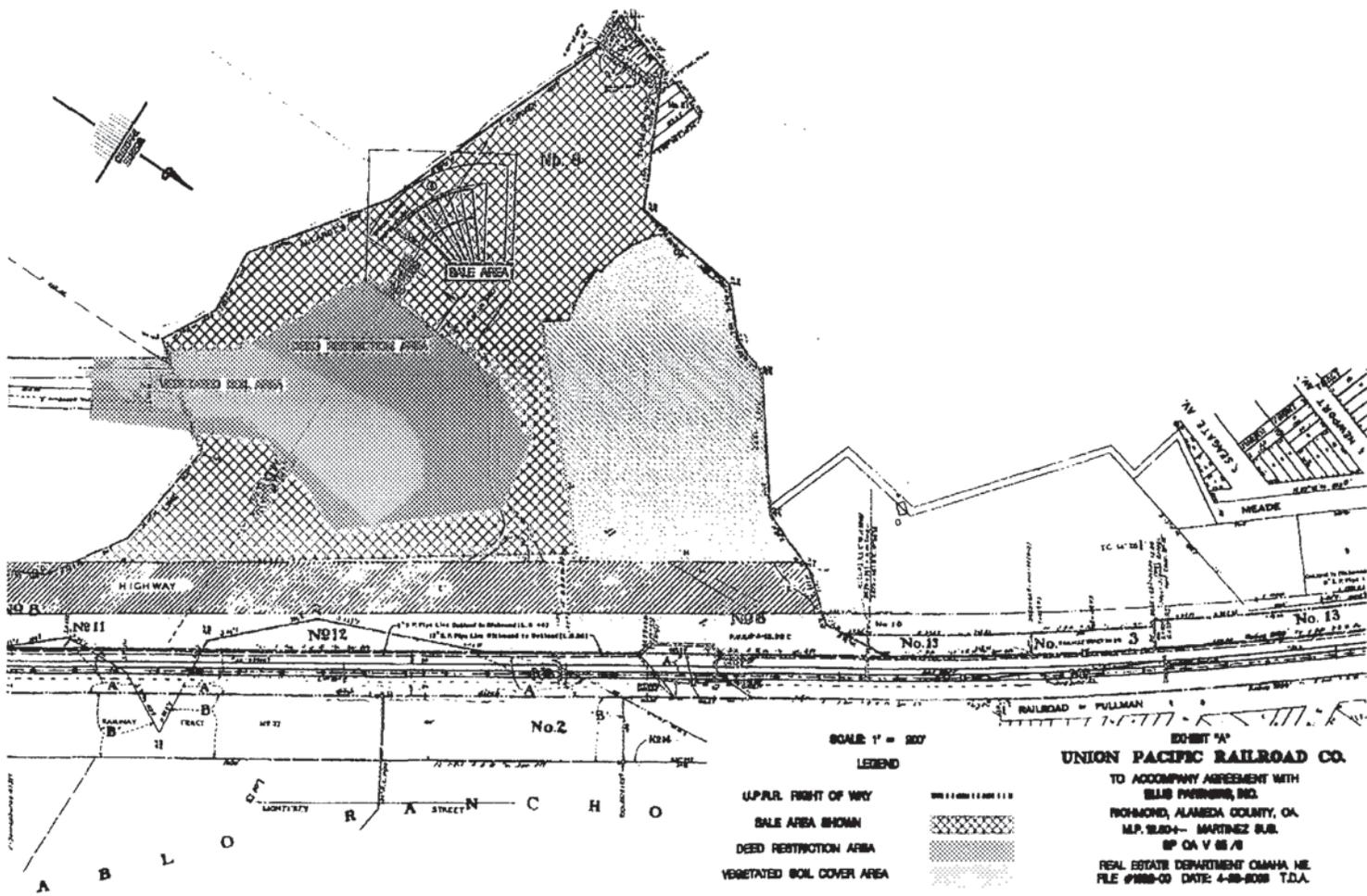
6/15/95
Date

Barbara J. Coz
Branch Chief

6/27/95
Date



Appendix E
Map of Deed Restricted Area
Superimposed on Area of Vegetated Cap



SCALE 1" = 200'

LEGEND

- U.P.R.R. RIGHT OF WAY
- SALE AREA SHOWN
- DEED RESTRICTION AREA
- VEGETATED SOIL COVER AREA

EXHIBIT 'A'
UNION PACIFIC RAILROAD CO.
 TO ACCOMPANY AGREEMENT WITH
 BLAS FERRERES, INC.
 RICHMOND, ALAMEDA COUNTY, CA.
 M.P. 9.824-4 - MARTINEZ SUB.
 SF CA V 66 1/8
 REAL ESTATE DEPARTMENT OMAHA NE
 FILE # 9888-00 DATE: 4-28-2008 T.D.A.

Appendix F
Five Year Review
Site Inspection Form
(2010)

Site Inspection Checklist

I. SITE INFORMATION													
Site name: Liquid Gold Oil Corp.	Date of inspection: 03/02/2010												
Location and Region: Richmond, CA, Region 9	EPA ID: CAT000646208												
Agency, office, or company leading the five-year review: EPA	Weather/temperature: Light to moderate rain, approximately 60F												
Remedy Includes: (Check all that apply) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Landfill cover/containment</td> <td style="width: 50%;">Monitored natural attenuation</td> </tr> <tr> <td>▶ Access controls</td> <td>Groundwater containment</td> </tr> <tr> <td>▶ Institutional controls</td> <td>Vertical barrier walls</td> </tr> <tr> <td>Groundwater pump and treatment</td> <td></td> </tr> <tr> <td>Surface water collection and treatment</td> <td></td> </tr> <tr> <td colspan="2">▶ Other <u>vegetated cover (non-landfill)</u></td> </tr> </table>		Landfill cover/containment	Monitored natural attenuation	▶ Access controls	Groundwater containment	▶ Institutional controls	Vertical barrier walls	Groundwater pump and treatment		Surface water collection and treatment		▶ Other <u>vegetated cover (non-landfill)</u>	
Landfill cover/containment	Monitored natural attenuation												
▶ Access controls	Groundwater containment												
▶ Institutional controls	Vertical barrier walls												
Groundwater pump and treatment													
Surface water collection and treatment													
▶ Other <u>vegetated cover (non-landfill)</u>													
Attachments: none													
II. INTERVIEWS (Check all that apply)													
1. O&M site manager _____ <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 40%; text-align: center;">Name</td> <td style="width: 30%; text-align: center;">Title</td> <td style="width: 30%; text-align: center;">Date</td> </tr> <tr> <td>Interviewed at site at office by phone</td> <td>Phone no. _____</td> <td></td> </tr> <tr> <td colspan="3">Problems, suggestions; Report attached _____</td> </tr> <tr> <td colspan="3">_____</td> </tr> </table>		Name	Title	Date	Interviewed at site at office by phone	Phone no. _____		Problems, suggestions; Report attached _____			_____		
Name	Title	Date											
Interviewed at site at office by phone	Phone no. _____												
Problems, suggestions; Report attached _____													

2. O&M staff _____ <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 40%; text-align: center;">Name</td> <td style="width: 30%; text-align: center;">Title</td> <td style="width: 30%; text-align: center;">Date</td> </tr> <tr> <td>Interviewed at site at office by phone</td> <td>Phone no. _____</td> <td></td> </tr> <tr> <td colspan="3">Problems, suggestions; Report attached _____</td> </tr> <tr> <td colspan="3">_____</td> </tr> </table>		Name	Title	Date	Interviewed at site at office by phone	Phone no. _____		Problems, suggestions; Report attached _____			_____		
Name	Title	Date											
Interviewed at site at office by phone	Phone no. _____												
Problems, suggestions; Report attached _____													

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)				
1.	O&M Documents O&M manual As-built drawings Maintenance logs Remarks _____	Readily available Readily available Readily available	Up to date Up to date Up to date	► N/A ► N/A ► N/A
2.	Site-Specific Health and Safety Plan Contingency plan/emergency response plan Remarks _____	Readily available Readily available	Up to date Up to date	► N/A ► N/A
3.	O&M and OSHA Training Records Remarks _____	Readily available	Up to date	► N/A
4.	Permits and Service Agreements Air discharge permit Effluent discharge Waste disposal, POTW Other permits _____ Remarks _____	Readily available Readily available Readily available Readily available	Up to date Up to date Up to date Up to date	► N/A ► N/A ► N/A ► N/A
5.	Gas Generation Records Remarks _____	Readily available	Up to date	► N/A
6.	Settlement Monument Records Remarks _____	Readily available	Up to date	► N/A
7.	Groundwater Monitoring Records Remarks _____	Readily available	Up to date	► N/A
8.	Leachate Extraction Records Remarks _____	Readily available	Up to date	► N/A
9.	Discharge Compliance Records Air Water (effluent) Remarks _____	Readily available Readily available	Up to date Up to date	► N/A ► N/A
10.	Daily Access/Security Logs Remarks _____	Readily available	Up to date	► N/A

IV. O&M COSTS

1. **O&M Organization**
 State in-house Contractor for State
 PRP in-house ► Contractor for PRP
 Federal Facility in-house Contractor for Federal Facility
 Other _____

2. **O&M Cost Records**
 Readily available Up to date
 Funding mechanism/agreement in place
 Original O&M cost estimate _____ Breakdown attached

Total annual cost by year for review period if available

From _____	To _____	_____	Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	Breakdown attached
Date	Date	Total cost	

3. **Unanticipated or Unusually High O&M Costs During Review Period**
 Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS ► Applicable N/A

A. Fencing

1. **Fencing damaged** Location shown on site map ► Gates secured N/A
 Remarks Some of the top barbed wire on interior (non-perimeter) fencing was hanging loose but fence was still intact

B. Other Access Restrictions

1. **Signs and other security measures** Location shown on site map N/A
 Remarks _____
One DTSC sign out of date (old name and phone number) and very faded

C. Institutional Controls (ICs)				
1.	Implementation and enforcement			
	Site conditions imply ICs not properly implemented		Yes	▶ No N/A
	Site conditions imply ICs not being fully enforced		Yes	▶ No N/A
	Type of monitoring (<i>e.g.</i> , self-reporting, drive by) <u>On-foot inspection</u>			
	Frequency <u>every two weeks</u>			
	Responsible party/agency <u>United Pumping Service, Inc for UPRR</u>			
	Contact <u>Bob Rico</u>	<u>Sales Representative</u>	<u></u>	<u>626-890-7100</u>
	Name	Title	Date	Phone no.
	Reporting is up-to-date		▶ Yes	No N/A
	Reports are verified by the lead agency		▶ Yes	No N/A
	Specific requirements in deed or decision documents have been met		Yes	No ▶ N/A
	Violations have been reported		Yes	No ▶ N/A
	Other problems or suggestions: <u>Report attached</u>			

2.	Adequacy	ICs are adequate	ICs are inadequate	N/A
	Remarks _____			

D. General				
1.	Vandalism/trespassing	Location shown on site map	▶ No vandalism evident	
	Remarks <u>Evidence of homeless activity immediately outside of the fence but not on the capped area</u>			
2.	Land use changes on site	▶ N/A		
	Remarks _____			

3.	Land use changes off site	▶ N/A		
	Remarks _____			

VI. GENERAL SITE CONDITIONS				
A. Roads	▶ Applicable		N/A	
1.	Roads damaged	Location shown on site map	▶ Roads adequate N/A	
	Remarks _____			

B. Other Site Conditions			
Remarks _____ _____ _____ _____ _____			
VII. LANDFILL COVERS Applicable ► N/A (vegetated cap, not landfill)			
A. Landfill Surface Cap surface			
1.	Settlement (Low spots) Areal extent _____ Remarks _____	Location shown on site map Depth _____	► Settlement not evident
2.	Cracks Lengths _____ Widths _____ Depths _____ Remarks _____	Location shown on site map	► Cracking not evident
3.	Erosion Areal extent _____ Remarks _____	Location shown on site map Depth _____	► Erosion not evident
4.	Holes Areal extent _____ Remarks _____	Location shown on site map Depth _____	► Holes not evident
5.	Vegetative Cover ► Shrubs	► Grass ► Cover properly established	► No signs of stress
6.	Alternative Cover (armored rock, concrete, etc.) Remarks _____		► N/A
7.	Bulges Areal extent _____ Remarks _____	Location shown on site map Height _____	► Bulges not evident

8.	Wet Areas/Water Damage	► Wet areas/water damage not evident
	Wet areas	Location shown on site map Areal extent _____
	Ponding	Location shown on site map Areal extent _____
	Seeps	Location shown on site map Areal extent _____
	Soft subgrade	Location shown on site map Areal extent _____
	Remarks <u>Entire site was wet due to active rainfall but the capped area was draining well. One large low spot/ponding area to the west of the cap</u>	
9.	Slope Instability Slides	Location shown on site map ► No evidence of slope instability
	Areal extent _____	
	Remarks _____	
B. Benches Applicable ► N/A		
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	Flows Bypass Bench	Location shown on site map N/A or okay
	Remarks _____	
2.	Bench Breached	Location shown on site map N/A or okay
	Remarks _____	
3.	Bench Overtopped	Location shown on site map N/A or okay
	Remarks _____	
C. Letdown Channels Applicable ► N/A		
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	Settlement	Location shown on site map No evidence of settlement
	Areal extent _____ Depth _____	
	Remarks _____	
2.	Material Degradation	Location shown on site map No evidence of degradation
	Material type _____ Areal extent _____	
	Remarks _____	
3.	Erosion	Location shown on site map No evidence of erosion
	Areal extent _____ Depth _____	
	Remarks _____	

4.	Undercutting	Location shown on site map	▶ No evidence of undercutting
	Areal extent _____	Depth _____	
	Remarks _____		
5.	Obstructions	Type _____	▶ No obstructions
	G Location shown on site map	Areal extent _____	
	Size _____		
	Remarks _____		
6.	Excessive Vegetative Growth	Type _____	
	▶ No evidence of excessive growth		
	Vegetation in channels does not obstruct flow		
	Location shown on site map	Areal extent _____	
	Remarks _____	<u>some of the vegetation is several feet high</u>	
D. Cover Penetrations ▶ Applicable N/A			
1.	Gas Vents	Active Passive	
	Properly secured/locked	Functioning	Routinely sampled Good condition
	Evidence of leakage at penetration		Needs Maintenance
	▶ N/A		
	Remarks _____		
2.	Gas Monitoring Probes		
	Properly secured/locked	Functioning	Routinely sampled Good condition
	Evidence of leakage at penetration		Needs Maintenance ▶ N/A
	Remarks _____		
3.	Monitoring Wells (within surface area of cap)		
	Properly secured/locked	▶ Functioning	▶ Routinely sampled ▶ Good condition
	Evidence of leakage at penetration		Needs Maintenance N/A
	Remarks _____		
	<u>No lock on several wells (noted in a previous inspection, CH2MHill plans to add locks)</u>		
4.	Leachate Extraction Wells		
	Properly secured/locked	Functioning	Routinely sampled Good condition
	Evidence of leakage at penetration		Needs Maintenance ▶ N/A
	Remarks _____		
5.	Settlement Monuments	Located	Routinely surveyed ▶ N/A
	Remarks _____		

E. Gas Collection and Treatment Applicable ► N/A			
1.	Gas Treatment Facilities Flaring Thermal destruction Collection for reuse Good condition Needs Maintenance Remarks _____ _____		
2.	Gas Collection Wells, Manifolds and Piping Good condition Needs Maintenance Remarks _____ _____		
3.	Gas Monitoring Facilities (<i>e.g.</i> , gas monitoring of adjacent homes or buildings) Good condition Needs Maintenance N/A Remarks _____ _____		
F. Cover Drainage Layer Applicable ► N/A			
1.	Outlet Pipes Inspected Functioning N/A Remarks _____ _____		
2.	Outlet Rock Inspected Functioning N/A Remarks _____ _____		
G. Detention/Sedimentation Ponds Applicable ► N/A			
1.	Siltation Areal extent _____ Depth _____ N/A Siltation not evident Remarks _____ _____		
2.	Erosion Areal extent _____ Depth _____ Erosion not evident Remarks _____ _____		
3.	Outlet Works Functioning N/A Remarks _____ _____		
4.	Dam Functioning N/A Remarks _____ _____		

H. Retaining Walls			Applicable	► N/A
1.	Deformations	Location shown on site map	Deformation not evident	
	Horizontal displacement _____		Vertical displacement _____	
	Rotational displacement _____			
	Remarks _____			
2.	Degradation	Location shown on site map	Degradation not evident	
	Remarks _____			
I. Perimeter Ditches/Off-Site Discharge			Applicable	► N/A
1.	Siltation	Location shown on site map	Siltation not evident	
	Areal extent _____	Depth _____		
	Remarks _____			
2.	Vegetative Growth	Location shown on site map	N/A	
	Vegetation does not impede flow			
	Areal extent _____	Type _____		
	Remarks _____			
3.	Erosion	Location shown on site map	Erosion not evident	
	Areal extent _____	Depth _____		
	Remarks _____			
4.	Discharge Structure	Functioning	N/A	
	Remarks _____			
VIII. VERTICAL BARRIER WALLS			Applicable	► N/A
1.	Settlement	Location shown on site map	Settlement not evident	
	Areal extent _____	Depth _____		
	Remarks _____			
2.	Performance Monitoring	Type of monitoring _____		
	Performance not monitored			
	Frequency _____	Evidence of breaching		
	Head differential _____			
	Remarks _____			

C. Treatment System		Applicable	► N/A
1.	Treatment Train (Check components that apply) Metals removal Oil/water separation Bioremediation Air stripping Carbon adsorbers Filters _____ Additive (e.g., chelation agent, flocculent) _____ Others _____ Good condition Needs Maintenance Sampling ports properly marked and functional Sampling/maintenance log displayed and up to date Equipment properly identified Quantity of groundwater treated annually _____ Quantity of surface water treated annually _____ Remarks _____ _____		
2.	Electrical Enclosures and Panels (properly rated and functional) N/A Good condition Needs Maintenance Remarks _____ _____		
3.	Tanks, Vaults, Storage Vessels N/A Good condition Proper secondary containment Needs Maintenance Remarks _____ _____		
4.	Discharge Structure and Appurtenances N/A Good condition Needs Maintenance Remarks _____ _____		
5.	Treatment Building(s) N/A Good condition (esp. roof and doorways) Needs repair Chemicals and equipment properly stored Remarks _____ _____		
6.	Monitoring Wells (pump and treatment remedy) Properly secured/locked Functioning Routinely sampled Good condition All required wells located Needs Maintenance N/A Remarks _____ _____		
D. Monitoring Data			
1.	Monitoring Data Is routinely submitted on time		Is of acceptable quality
2.	Monitoring data suggests: Groundwater plume is effectively contained		Contaminant concentrations are declining

D. Monitored Natural Attenuation			
1.	Monitoring Wells (natural attenuation remedy)		
	Properly secured/locked	Functioning	Routinely sampled
	All required wells located	Needs Maintenance	Good condition
	Remarks		► N/A

X. OTHER REMEDIES			
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.			
XI. OVERALL OBSERVATIONS			
A. Implementation of the Remedy			
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). <u>The remedy is designed to restrict residential use of the site, reduce the potential for disturbance of the soils, and provide a means for long-term monitoring of ground water to detect significant changes in ground water quality. The vegetated cap is designed to prevent contact with impacted soils and to control runoff patterns, and site fencing is designed to prevent access to the site. The cap appeared to be in good condition, and the fencing was intact. A portion of the vegetated cap was not contained within the fencing, though this was a known issue prior to the site inspection.</u>			
B. Adequacy of O&M			
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. <u>Trespassing is still an ongoing concern, but the increased site inspections (every two weeks) have reduced the incidence of homeless encampments and dumping. There was trash visible onsite, but none on the vegetated cap. Monitoring seems to adequately address minor issues, such as fence repairs or trash removal, as they come up.</u>			

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

Large pampas grass plants, especially towards the southern end of the vegetated cap, prevented a thorough inspection of the cap and in some cases the fencing.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

No opportunities for optimization related to site inspections noted at this time.

INTERVIEW DOCUMENTATION FORM

The following is a list of individual interviewed for this five-year review. See the attached contact record(s) for a detailed summary of the interviews.

<u>Bob Rico</u> Name	<u>Sales Representative</u> Title/Position	<u>United Pumping Service, Inc.</u> Organization	<u>03/05/2010</u> Date
<u>Daniel Perry</u> Name	<u>Vice President</u> Title/Position	<u>United Pumping Service, Inc.</u> Organization	<u>03/08/2010</u> Date
_____ Name	_____ Title/Position	_____ Organization	_____ Date
_____ Name	_____ Title/Position	_____ Organization	_____ Date
_____ Name	_____ Title/Position	_____ Organization	_____ Date
_____ Name	_____ Title/Position	_____ Organization	_____ Date

INTERVIEW RECORD

Site Name: Liquid Gold Oil Corp.		EPA ID No.: CAT000646208	
Subject: Site Inspections and Maintenance		Time: 2:00 PM	Date: 03/05/2010
Type: <input checked="" type="radio"/> Telephone Visit Other		Incoming <input checked="" type="radio"/> Outgoing	
Location of Visit:			
Contact Made By:			
Name: Rachelle Strickfaden	Title: Environmental Engineer	Organization: EPA Region 9	
Individual Contacted:			
Name: Bob Rico	Title: Sales Representative	Organization: United Pumping Service, Inc.	
Telephone No: 626-890-7100		Street Address: 14000 E. Valley Blvd	
Fax No:		City, State, Zip: City of Industry, CA, 91746	
E-Mail Address: bobrico@unitedpumping.com			
Summary Of Conversation			
<p>Operations and maintenance for the Liquid Gold site is primarily site inspections every two weeks. United Pumping fills out a check-list of yes or no questions, and notes need for follow-up (such as a hole in fence), and arranges for repairs. There are occasional problems with homeless encampments, including cutting holes in the fence, but much less frequently than there used to be now that vegetation (especially tall grasses) along the road has been cut lower to improve visibility. There is occasionally a need to remove trash and debris from illegal dumping onsite, which occurs if the yellow access gate is ever unlocked. There has been no need for maintenance of the vegetated cap itself; there are mainly only security issues.</p>			

INTERVIEW RECORD

Site Name: Liquid Gold Oil Corp.		EPA ID No.: CAT000646208	
Subject: Site Inspections and Maintenance		Time: 4:00 PM	Date: 03/08/2010
Type: <input checked="" type="radio"/> Telephone Visit Other		Location of Visit: <input checked="" type="radio"/> Incoming Outgoing	
Contact Made By:			
Name: Rachelle Strickfaden	Title: Environmental Engineer	Organization: EPA Region 9	
Individual Contacted:			
Name: Daniel Perry	Title: Vice President	Organization: United Pumping Service, Inc.	
Telephone No: 626-890-7073		Street Address: 14000 E. Valley Blvd	
Fax No:		City, State, Zip: City of Industry, CA, 91746	
E-Mail Address: danielperrysr@unitedpumping.com			
Summary Of Conversation			
<p>There have been no major problems or concerns. No maintenance on the cap has been needed- maintenance has been related to site security. There are occasionally holes cut in the fencing, and occasional problems with homeless encampments. The area is fairly isolated. Sometimes the railroad calls the police for assistance with discouraging homeless encampments, and trash related to homeless encampments is routinely cleaned up.</p>			

Appendix G
March 2010 Fact Sheet



Department of
Toxic Substances
Control

*Our mission is
to provide the
highest level of
safety, and to
protect public
health and the
environment
from toxic
harm.*

Five-Year Review Period Begins for Union Pacific Railroad Company Former Liquid Gold Oil Corporation Site in Richmond

The California Department of Toxic Substances Control (DTSC) and the U.S. Environmental Protection Agency (US EPA) are beginning the Five-Year Review (FYR) process for the former Liquid Gold Oil Corporation (Liquid Gold) property currently owned by Union Pacific Railroad Company (UPRR). Liquid Gold is about 18 acres of land adjacent to the San Francisco Bay, west of Interstate 580, and Southwest of the Harbor Front businesses in Richmond, California.



What is a Five-Year Review

The FYR is required because hazardous substances, pollutants, or contaminants remain at the Liquid Gold property above levels that allow for unrestricted land use. This will be the fourth FYR conducted at the Site.

The purpose of a FYR is to ensure that the remedial action or cleanup continues to protect human health and the environment. The FYR process includes a site inspection, inspection of completed cleanup activities on-site, review of maintenance records, and review of regulatory standards to determine if new requirements were set after the original cleanup plan was approved by DTSC and US EPA. In addition, there is a review of present technologies to ensure the appropriate and most effective technologies are being used. Any issues identified during the review will be documented in the FYR Report along with recommendations to resolve them.

This review process will follow the Comprehensive FYR Guidance established by the US EPA in 2001. The process will also comply with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 121 (c), the National Oil and Hazardous Substances Pollution Contingency Plan Section 300.430 (f)(4)(ii),



State of California



California
Environmental
Protection Agency

and the Office of Solid Waste and Emergency Response directive 9355.7-03B-P. The FYR Report will be a part of the Site file and will be available to the public.

Liquid Gold Property History

The Site was previously owned by the Southern Pacific Transportation Company and leased to several tenants from the 1940's to the early 1980's. An asphalt manufacturing facility operated on-site from the 1940's until about 1965. Liquid Gold leased the property from 1965 to 1982, using it as a waste oil and solvent collection, storage and transfer facility. During Liquid Gold operations, waste oils, solvents, and tank bottom sediments were stored in storage tanks on-site. Spills of oil and chemicals were documented on-site in the 1970's and early 1980's. The Site was placed on the National Priorities List ("NPL") in September 1983 and was later delisted in 1996 after cleanup activities were completed. The property is currently owned by UPRR who is also responsible for all long-term monitoring and operation requirements.

Cleanup Activities

In 1982, an interim cleanup was conducted to remove storage tanks, drums, contaminated soils, structures and debris. This removed any immediate on-site threat to the public or environment. The hazardous materials were disposed off-site at hazardous waste facilities. The final cleanup plan to address the remaining contamination was approved in 1993 and implemented in 1994. Major components included: a deed restriction prohibiting residential development; capping of soils containing lead and polycyclic aromatic hydrocarbons; groundwater monitoring; and removal of sediments and debris from two drainage channels.

Where to Find the Documents

Documents related to the UPRR property are available for review at the following locations:

Richmond Library
325 Civic Center Plaza
Richmond, CA
(510) 620-6561

Department of Toxic Substances Control
Regional Records Office
700 Heinz Avenue
Berkeley, CA
Contact: (510) 540-3880

Site documents are also available at www.envirostor.dtsc.ca.gov/public. In the City entry field, type "Richmond", then click on the Get Report button at the bottom of the page. Scroll down and click on "[Report]" to the left of the Liquid Gold. This opens the home page for the Site. In the top section, click on "Activities Report" highlighted in blue print to reveal the documents available in the database. A computer is available in the DTSC file room for your use.

Who to Contact for Information

If you have any questions about the project or cleanup activities, please contact:

Lynn Nakashima, DTSC Project Manager
(510) 540-3839
lnakashi@dtsc.ca.gov

Yvette LaDuke, DTSC Public Participation
1-866-495-5651, 3 then 2
yladuke@dtsc.ca.gov

Kam Coveyou, DTSC Public Information/Media
(916) 324-8304
kcoveyou@dtsc.ca.gov

Rachelle Strickfaden
Superfund Remedial Project Manager
US EPA, Region 9, SFD-7-3
(415) 972-3962
strickfaden.rachelle@epa.gov

Notice to Hearing-Impaired Individuals

You can obtain additional information about the site by using the California State Relay Service at 1 (888) 877-5378 (TDD). Ask them to contact Yvette LaDuke at (818) 717-6569 regarding the Union Pacific Railroad Company project.

Mailing Update

If you would like to be deleted off the mailing list and receive future information via e-mail, please send Yvette LaDuke an e-mail containing the address to be deleted. Thank you.