

FILE REVIEW
8/13/96 1.2 HOURS

494 Bill Cox Cadillac & Buick, 230 Bay Place, Oakland, CA 94612

11/27/95

New case from TP. Review file and prepare site summary. On December 1, 1988, one 3000-gallon waste oil was removed and a strong hydrocarbon odor was reported in the excavated soil. Floating product was observed on the standing water in the bottom of the excavation. Obvious holes were observed in the side of the tank. Approximately 360 gallons of tank rinsate was disposed of at Refinery Services in Patterson, CA. The UST was transported by H & H Ship Service, and eventual disposal as scrap metal at Levin Metals in Richmond, CA. One water sample and two soils samples (1A and 2A), one from each end of tank at an approximate depth of eight (8) feet bgs, were collected from the excavation. Total Petroleum Hydrocarbons (oil and grease by method 503 D & E) were detected at concentrations of 10 ppm and 7 ppm in samples 1A and 2A, respectively. No TPHd, TPHg or BTEX was detected in either of the soil samples. Laboratory results for the water sample were cancelled due to being rejected by the laboratory as being too dirty to run!!!! On March 17, 1989 the excavation was resampled with three (3) additional soil samples (one sample taken from the east and west sides of the excavation at an approximate depth of 8' bgs and one sample taken from the backfill pile. In addition, one water sample was taken from the tank in which the excavation water was being stored. The soil samples collected from the vent and fill ends detected TPHd-48 ppm and 150 ppm, TPHg-45 ppm and 0.5 ppm, respectively. The soil samples collected from the vent end detected 420 ppb-toluene, 1200 ppb-ethyl benzene and 1500 ppb-total xylenes. The soil sample collected from the fill end detected 25 ppm-total oil and grease.

On September 24, 1992, a 1,050-gallon mineral spirits UST was removed from the site. Although one corrosion hole was observed in the tank where it abutted an abandoned sewer pipe, there was no indication that significant product release has occurred. Only a small amount of soil, in the vicinity of the fill riser, showed sensory evidence of contamination (organic vapor meter readings and odors), and analysis of the soil revealed no detectable evidence of hydrocarbons. There was no free product or hydrocarbon sheen on the groundwater, and test results of soils beneath the tank showed that no detectable petroleum hydrocarbons were present. The groundwater sample which was collected on September 24, 1992 detected 0.1 ppm TPH as mineral spirits.

In February 1993 monitoring well MW-1 was installed, initial groundwater well sampling occurred March 1993.

In October 1993, Wells TW-1 through TW-7 installed and sampled.

On January 27, 1994 a 10000-gallon unleaded gasoline UST and associated piping was removed from the site. The UST was found to be in excellent condition, although some of the tar wrap had been dissolved, possibly due to overfilling. At

least one of the product line couplings had been perforated by corrosion, and evidence of past leakage (soil discoloration and odors) was visible in the pipe trench soil and in the backfill of the UST. Groundwater was encountered at an approximate depth of five (5) feet in the excavation. A thin film (sheen) of product and black materials was observed floating on the groundwater. The maximum concentrations detected in the soils remaining adjacent to the tank excavation were in proximity to the building foundation, on the north side of the excavation at a five foot depth. These are 4,300 ppm-PHg, 40 ppm-benzene, 250 ppm-toluene, 85 ppm-ethyl benzene and 460 ppm-total xylenes. This sample was collected from within the zone that had obviously impacted by free product from the groundwater surface. The soil sample taken from the south side of the excavation at a depth of four feet bg, just above the present level of groundwater saturation. The concentrations detected in this sample were 39 ppm-TPHg, 1.6 ppm-benzene, 1.4 ppm-toluene, 0.73 ppm-ethyl benzene and 4.5 ppm-total xylenes. The soil sample taken immediately below the corroded product line coupling detected 4400 ppm-TPHg, 29 ppm-benzene, 300 ppm-toluene, 92 ppm-ethyl benzene and 490 ppm-total xylenes.

On June 22, 1994 limited soil excavation activities were performed to remove the most contaminated soils immediately beneath the pipe trench excavation area above the saturated zone. Five (5) discrete soil samples (S-1 through S-5) were collected from the walls of the excavation to evaluate the effectiveness of removal of contaminated soils from the pipe trench. These soil samples detected Total Volatile Hydrocarbons as gasoline (TVHg) at concentrations of 2 ppm, ND, 700 ppm, 620 ppm and 260 ppm, respectively. The concentration of contaminants were significantly higher in samples S-3, S-4 and S-5, which were collected from the eastern end of the excavation, near the documented location of the former pipe leak. Maximum concentrations of BTEX fractions were detected in the sidewall soil sample S-3, which was collected at a depth of 4' bg approximately 18 feet from brick wall. These concentrations were 7.3 ppm-benzene, 36 ppm-toluene, 12 ppm-ethyl benzene and 68 ppm-total xylenes. Approximately 100 cubic yards of soil, generated during site excavation activities and during the underground tank removal, was disposed of at Forward Landfill in Stockton, CA.

11/28/95

Review EOA, Inc. "Well Conversion and First Quarterly Monitoring Report"- dated January 26, 1995. The general direction of groundwater flow is in a southwesterly direction, toward Lake Merritt. Groundwater samples collected from monitoring wells **MW-1, TW-6 and TW-7** detected TVHg-110 ppm, 24 ppm and 210 ppm, benzene-18 ppm, 5 ppm and 49 ppm, toluene-11 ppm, 2 ppm and 49 ppm, ethyl benzene-2 ppm, 3 ppm and 7 ppm and total xylenes-16 ppm, 6 ppm and 28 ppm, respectively. 1,2-DCA was detected in monitoring well MW-1 at a concentration of 130 ppb. Permit applications were filed for the temporary wells TW-2, TW-6 and TW-7, and these three wells were converted to permanent monitoring wells. MW-1 is in the "inferred" down gradient position from the former waste oil tank and TW-7 is down gradient of the former 10000-gallon

gasoline UST.

Review EOA, Inc., "Second Quarter Monitoring Report"-dated April 21, 1995. Groundwater flow is consistent in a southwesterly direction towards Lake Merritt. All three (3) wells are impacted with maximum concentrations of TPHg and BTEX being detected in well TW-7 (56ppm-TPHg and 13 ppm-benzene). 1,2-DCA was again detected in MW-1 at a reported concentration of 130 ppb.

Review EOA, Inc., "Third Quarterly Monitoring Report"-dated July 25, 1995. Groundwater flow is consistent in a southwesterly direction towards Lake Merritt. All three (3) wells are impacted with maximum concentrations of TPHg and BTEX being detected in well TW-7 (100 ppm-TPHg and 39 ppm-benzene).

Review EOA, Inc., "Offsite Groundwater "Hydropunch" Sampling" report-dated September 12, 1995. A total of six (6) hydropunch borings (HP-1 through HP-6) were advanced and five (5) groundwater samples were collected. A groundwater sample was not collected from HP-6, however in the hydropunch boring summary table, no groundwater had been reported for boring HP-5. Possibly this information was incorrectly reported. Only the groundwater sample collected from hydropunch boring HP-1 detected any contamination, 1.3 ppb-benzene and 3.1 ppb-toluene. All other groundwater samples were analyzed to contain non-detectable concentrations of TPHg and BTEX fractions. These investigative analyses tend to suggest that there has been minimal migration of contaminants off-site, with hydropunch boring HP-1 being the closest to monitoring well TW-7. **However, EOA, Inc in its discussions states that the dramatic discontinuity between pollution levels in TW-7 and the locations sampled in this study may be the result of natural attenuation or, more likely, a result of the shallowest groundwater being intercepted and drained by porous materials in pipe trench backfills associated with the numerous utilities which are know to run through the immediate area of TW-7 and aHP-1, in a direction approximately perpendicular to the direction of on-site groundwater flow.**

Review EOA, Inc., "Fourth Quarterly Monitoring Report"-dated November 1, 1995. The August groundwater flow direction is anomolous to previous groundwater level measurements, due to the measurement obtained from well MW-1, otherwise groundwater flow has been consistently in a southwesterly direction towards Lake Merritt. All three (3) wells are impacted with maximum concentrations of TPHg and BTEX being detected in well TW-7 (74 ppm-TPHg and 32 ppm-benzene). 1,2-DCA was again detected in MW-1, at an maximum reported concentration of 980 ppb. Since this is the fourth quarterly sampling event, and concentration of TPHg and benzene are in the moderate to high range, a remedial action plan is warranted to assess options for remediating the site. Draft RAP.

11/29/95

Call to EOA, left message. Reviewed file regarding monitoring well installation

and boring logs. Soil borings for the installation of well TW-7 documented silty clays (CL) and silty sand (SM) in the borings at 2-2.5' bgs and 3.5-10+, respectively. Boring TW-7 was terminated at 10' bgs. These soils were documented as having moderate to strong hydrocarbon odors. Talked to Don Eisenberg of EOA concerning next step in remediation process. We talked about over-excavation of piping run, feasibility study to determine appropriate alternative cleanup technologies for the ppm levels of benzene presently being detected in groundwater sampling events.

- 1/8/96 Review file for meeting with RP and consultant at 10:00 am.
- 1/9/96 Sent final draft of CAP for remediation of petroleum hydrocarbon contamination.
- 1/23/96 Review EOA "Annual Monitoring Report"-dated January 1996. Groundwater flow has been consistently in a southwesterly direction towards Lake Merritt. Even though it appears that contamination is not migrating offsite, further investigation is warranted in the vicinity of the numerous utilities which are located to the west of monitoring well TW-7.
- 2/20/96 Call from/to Sharis Ragsdale of EOA. She stated that a client approved phase I of the CAP would be forthcoming in the next day or so. I told her I would be sure to comment on it as soon as I receive it.
- 2/26/96 Review EOA "Cox Cadillac Corrective Action Plan"-dated February 20, 1996. This CAP will be completed in two phases; the first phase of work for th CAP will include the following:
- * Review of Site History to Identify Potential Subsurface Structures;
 - * Utility Location Review
 - * Develop Assumptions Regarding Magnatude and Extent of Hydrocarbon Plume Beneath Building
 - * Preliminary Risk Assessment (based on assumptions above)
 - * Biotreatability Sampling and Analysis

A report will be prepared and submitted after completion of the above phase I tasks.

Draft approval letter.

- 3/18/96 Calls from/to Don Eisenberg of EOA. Left message.
- 4/17/96 Call from Andy Briefer (?) of PES Environmental. Review EOA, Inc. "Corrective Action Plan Development Report, Phase I"-dated April 8, 1996. Many utilities and subsurface structures are most likely intercepting the shallow groundwater petroleum hydrocarbon plume. In addition, a major storm conduit is directly west of the site and travels approximately 850 feet directly into Lake Merritt. A risk-

based site assessment was performed for the applicable exposure scenarios. Benzene concentrations exceeded RSBLs for the exposure pathways "soil vapor intrusion from soil to buildings", "soil volatilization to outdoor air" and groundwater vapor intrusion to buildings" for a target risk level of 1E-05.

- 4/18/96 Calls from/to Sherris Ragsdale (EOA) and Andy Briefer (PES).
- 4/22/96 Review PES Environmental, Inc., "Work Plan Potential Source Investigation"- dated April 18, 1996. Visit site to determine location of possible off-site receptors in order to develop defensible Tier 2 SSTLs. Spoke with Frank Tinley (Resident engineer - 835-4700) of the St. Pauls Tower Complex located at 100 Bay Place. He informed me that complaints were filed with (City of Oakland?) pertaining to the occurrence of gasoline odors emanating from the storm drains located at the corner of Bay Place and Vernon Street. He stated that these odors were at times very strong, but that the odors had not been reported recently. He also stated that Kirk Zacharias was another engineer which could provide additional information. The storm drains discharge directly to the waters of Lake Merritt, which is approximately 700 feet south of the site. There was a noticeable discharge of water in the storm drains. In addition, I spoke with the receptionist at the Veteran's Memorial Building. Contact is Howard Banchefsky (238-3284), and he will be back tomorrow. Review file on storm drains location from CAP report dated 4/1/96.
- 4/23/96 Call to Kirk Zacharias of the St. Paul Towers. He informed me that noticeable gasoline odors were not detected inside the building to his knowledge, and that the odors were only detected emanating from the storm sewers, and only occasionally would vapors be noticed in the parking area which is at or below the ground floor level (he stated that this occurred only when the wind direction was such that vapors coming from the storm sewers would be blown into the garage parking level). Call to Howard Banchefsky of the Veterans Memorial Building (VMB). He stated that to his knowledge, not gasoline vapors have been reported either by him, or by anyone at the VMB. Call to Kevin Graves of the RWQCB requesting what further action is appropriate for this site (active remediation?). He will be back tomorrow the 24th (Weds.). Call from Andy Briefer of PES Enviromental. Discussed with him the information about the storm drain odors which I had obtained during my site visit yesterday. Also commented that Phase II of the CAP should probably be implemented as well as their source identification work plan which I just reviewed (PES - dated 4/18/96). Told him that I would approve the work plan after talking to Kevin Graves tomorrow.
- 4/29/96 Call from Kevin Graves.
- 5/2/96 Call from Andy Briefer of PES. I told him I would get an approval letter out today, and I reemphasized that the PES work plan, should in no way, delay implementation of Phase II of the CAP. Draft approval letter. Call to Kevin

Graves requesting time frame for pre-approval from the UST fund. He won't be back until Monday the 6th. Draft of approval letter sent after BC review. Review EOA "February 1996 Monitoring Report" - dated April 5, 1996. In general, concentrations of TVH and BTEX have decreased slightly in wells TW-6 and TW-7 and increased slightly in well MW-2 since the last quarterly monitoring event; however, all concentrations remain within the same order of magnitude. Groundwater elevations have risen in all measured wells since the September 29/95 sampling event (maximum groundwater increase was 2.46 feet in TW-6).

- 5/28/96 Review copy of Bill Cox letter dated 5/20/96. In addition, reviewed letter from Don Eisenberg of EOA. Review April 1, 1996 EOA report. Draft letter rebutting letter and requesting Phase II of CAP be completed ASAP.
- 6/10/96 Review EOA letter dated June 5, 1996 which describes my May 29, 1996 letter as contentious. Visit site to determine whether they had begun implementing Phase II of the CAP. It appeared that they hadn't. I walked over to the storm drains to see if there was any present discharge of groundwater. The first storm drain which was located across Vernon Street on Bay Place appeared dry. However, the drain located across Vernon Street on Vernon Street had what appeared to be a slight discharge of water which appeared as a slight rippling of the water's surface. As I came closer to the surface of the storm drain, I immediately noticed a hydrocarbon odor emanating from the storm drain cover. A woman approached me from Bay Place and after identifying myself I asked her if she could distinguish a gasoline odor. She replied after a second or two, that she could indeed smell something gasoline-like. I returned to the office to obtain sampling equipment (disposable bailer) and VOA vials. I returned to the site to obtain a representative sample of the water which had accumulated in the storm drain. After much difficulty obtaining one VOA vial, let alone four, I returned to the office with one full VOA vial and one VOA which was approximately 80 % full. PID readings were taken at approximate 15 minute intervals. PID readings were 1.6 ppm background/3.2 ppm exposed (2:45 pm), 1.7 ppm background/4.3 ppm exposed (3:00 pm), 3.2 ppm/5.8 ppm exposed (3:30 pm). PID meter was exposed 3-4 inches through storm drain grate during exposed readings. Background readings were taken up-wind of storm drain. As soon as PID tip was inserted into storm drain grate, increasing instrument readings were observed. PID instrument was calibrated directly before using. I instructed the laboratory to run the full VOA vial for BTEX, in addition to TPHg, if there was enough sample. Newton told me that the one vial would be enough, that he would be able to run TPHg and BTEX. Call to City of Oakland Fire Department (Britt Johnson) to report gasoline odor and health risk. Left message on voice mail.
- 6/13/96 Call from/to/from Don Eisenberg of EOA. Talked about the site and the need to implement Phase II of the CAP.
- 6/17/96 Call from Don Eisenberg of EOA requesting to schedule an appointment between

EOA, Mr. Cox, TP and myself. Tentative schedule for 2:00 pm on the 19th (Weds).

6/18/96 Call from Don Eisenberg of EOA confirming 2:00 pm on the 19th.

6/19/96 Prepare for today's meeting. Review file and prepare agenda.

~~Write~~ letter requesting that active
Write
remediation be implemented in order
to reach RBCA goals.

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Dave Schultz
Lab

209-268-7021

EOA, Mr. Cox, TP and myself. Tentative schedule for 2:00 pm on the 19th (Weds).

- 6/18/96 Call from Don Eisenberg of EOA confirming 2:00 pm on the 19th.
- 6/19/96 Prepare for today's meeting. Review file and prepare agenda. Meeting with Don Eisenberg (EOA working for Bill Cox the former operator of the USTs), Jeri Alexander (SCI working with EOA), Andy Briefer (PES working for Wells Fargo Trust and the owners) and Bill Cox. Mr. Eisenberg brought an agenda, so we used his. Results of lengthy meeting was that phase II of the CAP was to be implemented, but receiving pre-approval through the UST Fund first. Mr. Eisenberg will send me a letter detailing information he needs in my forthcoming letter which references that RBCA will be applied at this site. I'm sure that Mr. Eisenberg is aware that three bids will be solicited for the phase II, and that once a contract is awarded, he may lose this site. He was originally requesting what Target Level would be used at this site. I informed him that since there was a distinct possibility that off-site receptors may be impacted, that a 1E-05 (1 in 100,000 excess cancer risk) would be utilized. Mr. Eisenberg and Ms. Alexander were under the impression that since they thought that the plume was well-defined (as determined in the hydropunch investigation), and since the property was currently being used as commercial, that a 1E-04 target level (1 in 10,000 excess cancer risk) would be appropriate. They were not looking at the possibility of future land uses, and subsequent health impacts that redevelopment may have on the site. It was at that time that Mr. Briefer informed us that the site did at one time have potential buyers who had submitted plans for an apartment complex to occupy the site adjacent to the existing building.
- In addition, Andy Briefer mentioned that an interim remedial action plan be implemented in the form of ORCs or bioventing (with hydrogen peroxide). I'm not sure if this would be incorporated in the phase II, or possibly something that PES would initiate. Need to call Andy Briefer and confirm. I instructed everyone that I would try to expedite approval through the UST Fund by contacting Cheryl Gordon.
- 6/20/96 Call from Andy Briefer of PES. He will be sending me suggestions for incorporation into the letter which I will be drafting for the Phase II work plan and feasibility study. Faxed him a copy of the DDC information I talked about in our meeting yesterday. His fax number is (415)899-1601.
- 6/24/96 Received copy of Cal/EPA SWRCB letter denying UST fund reimbursement for the PES work plan. Call to Andy Briefer. Faxed him copy of SWRCB denial letter. Review EOA and PES letters. Draft letter requiring the implementation of Phase II of the CAP.
- 6/25/96 Finish draft of letter requiring Phase 2 of the CAP be implemented. Calls from/to

Don Eisenberg. Fax DDC information to Don Eisenberg. Call from Christopher Stevens of the UST fund. Call to Andy Briefer. Confer with BC and ML concerning fate and transport analysis, is it practical for this site? They don't think that a fate and transport analysis would provide useful information due to the heterogeneity of the backfill associated with the numerous utilities intercepting the plume. Final draft of Phase 2 CAP letter for BC review. Letter sent.

7/29/96

Calls from/to Don Eisenberg of EOA. He wants to schedule a meeting concerning the implementation of Phase II of the CAP for Monday August 5, 1996. Returned call and left message that I would be on vacation that week, and that the meeting would need to be rescheduled.

Reviewed EOA "Corrective Action Plan, Phase II"-dated July 25, 1996.

The results of the technology screening indicate that a combination of technologies present the most effective alternative in remediating hydrocarbon impacted soil and groundwater at the site.

For soil remediation in the unsaturated zone in the former parking lot area, the most effective and cost-effective approach involves additional excavation to a depth of about six feet in the vicinity of the south and east sides of the former piping leak.

Impacted groundwater, and soils within the smear zone, would be most effectively and cost-effectively removed using active in-situ bioremediation, with groundwater extraction, aeration and nutrient addition, and re-infiltration.

ORC may be incorporated as an interim alternative for enhancing in-situ bioremediation of groundwater. For ORC implementation for the entire area would cost approximately \$53,000, while an ORC grid covering an area of 15 by 50 feet in the area of the former piping leak would cost about \$9,000.

8/13/96

Performed consulting services for the prospective buyers (represented by Burton Peek Edwards-Architect). Robert Kitay of Aqua Science Engineers was also present on behalf of Burton Peek Edwards. 1.2 hours was billed to Mr Edwards for my time associated with the consultation. Call from Cheryl Gordon of the UST Fund concerning a reimbursement request from the trust representing the site owners. They had requested reimbursement for the entire project to date, and Cheryl informed me that the 10,000-gallon UST would not be included in the reimbursement, since that was being reimbursed through the Cox Cadillac UST Fund request.

8/13/96

Consultation with Burton Peek Edwards-Architect who is representing a potential buyer of the property. Robert Kitay of Aqua Science Engineers was also in attendance as requested by Mr. Edwards. The potential buyer would like to purchase the property for purposes of an elementary school. Calls from/to Cheryl Gordon of the UST Fund.

8/15/96 Calls from/to Cheryl Gordon of the UST Fund.

9/25/96 Review Subsurface Consultants, Inc., "Corrective Action Plan Conceptual Remedial Design"-dated 9/5/96. Draft approval letter for BC review.

9/26/96 Final draft of letter sent after BC review.

11/12/96 Calls from/to/from/to Andy Briefer of PES. Calls from/to Don Eisenberg of EOA. Review file.

11/15/96 Reviewed letter from Hanson, Bridgett, Marcus, Vlahos & Rudy, LLP letter from Leah Goldberg-dated 11/11/96. She is concerned about the expired deadline for the submittal of the three bids to the UST Fund. I verbally told Andy Briefer that an extension will be approved, but that the revised WP should be submitted to me ASAP after comments from EOA are incorporated into the WP.

11/20/96 Review letter from PES "Response to EOA, Inc.'s Comments"-dated November 15, 1996. Call to Andy Briefer-left message.

11/21/96 Calls from/to Andy Briefer of PES. I informed him that I would accept an addendum documenting the changes to the work plan, which includes a permanent well inside the building, instead of the temporary one which was proposed by PES. Deadline for the addendum is next Tuesday the 26th.

11/26/96 Review PES "Addendum to Revised Interim Remedial Action Plan". Initial draft of approval letter.

11/27/96 Final draft of approval letter sent.

1/14/96 Received UST Fund "Letter of Commitment" -dated 1/3/97.

1/22/97 Call from Cheryl Gordon. Faxed copy of "Confirmation of Corrective Action Compliance" to Cheryl Gordon of UST Fund.

1/27/97 Review PES Environmental "California Underground Storage Tank Cleanup Fund Cost Pre-Approval Request"-dated 12/13/96.