12-15-99 Greg Bartow with RWQCB @ 622-2315 said the reuse soil criteria for relocating on site is 500 ppm - 1,000 ppm for TPH(MO) and TPH(diesel). The closer the soil is relocated to the Bay, the more lower the contamination level. There are also standard for PNAs and heavy metals, but we did not go into it during our conversation. When analysis starts I can get a copy of the Order and maps, approx 23 pages!

2/14/01 RW Order: 99-055
1500' slurry wall, extraction sump.
~1 mile shoreline
Spoke w/ G Bartow of RWQCB. He thought that the proposal to destroy all wells on the 2 sites & reinstall in 6/02 is okay given the presence of Order 99-055, the presence of a 1500' slurry wall & extraction sumps.

TOFC

8-2-00 John Prall with the Port of Oakland said the plume is larger than originally thought, and that it is going into the Bay. This is confirmed with water samples. Prall said Greg Barlow with the RWQCB has been informed of this information.

Hoa Wassell CDM

10-24-00 Spoke to Walt Scott with CEM concerning decommissioning the wells because of the on-site construction that will be pformed in the near future. I told him my concern is I did not want to have all the wells abandoned, and no monitoring taking place. Walt will send me a request and workplan to close out the wells, and the location of the construction. (Port is concerned the wells are going to be damaged during construction and ~~the~~ act as a conduit for contamination.) I told him if all the wells are closed out, the Port is going to have to make a commitment to replace the wells immediately after construction is completed, and this has to be put into their operating budget.

12-13-99 Met with John Prall with Port of Oakland. He informed me that Union Pacific Railroad should be moving out of 1717 Middle Harbor Rd. in spring of 2000. Development of the site for a shipping berth is scheduled to begin in 5/2000. I told him before development starts, remediation of the site where there is floating product should commence. Source removal should be implemented since there is floating product in the feeding locations. I told him it maybe possible to recover cost through the state funding program for UST clean up. Prall will send me a letter identifying the Port's propose future activities related to the investigation and clean-up.

Prall said the Port is looking at reusing the fill soil at the shoreline, and ~~placing~~ relocating it on the site. The person overseeing the project is Greg Barlow with the RWQCB @ 622-2315. Jack Gregg @ RWQCB is the person overseeing the dredging of the channel and relocating of the dredging materials

3-23-99 Hoa Voscott of Camp Dresser & Mckee Inc @ 925-296-8071 identified himself as the new contact person for 1717 Middle Harbor Rd and 1750 Fenno St, Oak. His company is contracted by the Port of Oakland to perform the environmental work. The Port has taken the property over from Union Pacific.

I asked Hoa to put in his report a summary and recommendation for future work based on the data collected. He said he would.

9-27-99 John Prall of Port of Oakland informed me that the permit to pump the treated groundwater into the EBMUD system is non-transferable. The permit was originally given to Union Pacific. Union Pacific ~~the~~ transferred the site to the Port in 12/98. Prall said they may have to shut down the system if they cannot get a permit from EBMUD. The system pumps approximately 5 gal/min of water and product to be treated. He said his contact at EBMUD to get a permit is Ray Maxwell @ 287-1655 ~~287-1654~~. Waste Discharge Permit # 502-5123. This permit given to Union Pacific is valid from 5/9/97 - 5/3/2000. Prall said the future plan for the Port is ~~to~~ to clean up the affected site during site development in 2000. The clean up would be contingent on their consultants recommendation

9-27-99 Left a message for Ray Maxwell @ 287-1655 to contact me regarding issuing a permit to the Port of Oakland.

6-1-98 Lisa Hennessy of Laidlaw will send me a letter requesting changing the reporting frequency so that it is the same for when they submit reports to EBMUD. The sampling frequency and sampling dates will be the same.

4-2-93 JE spoke w/ Tim Allbright.

* tank contains mtrl. sampled on 4-1 for 8240, PCBs, 8270, metals for cl HC, BTEX
  HC rktn putty on a stick into UST.
* SP soil will not be backfilled, but offhauled to East Carbon Devel. Co. in East Carbon Canyon UT (landfill)
  or Glen's Excavating in ~~East~~ Tooele UT. (recycling co.)
* self-insured.
* tracks next to UST. 7' distance
  3 tracks ~~next~~ closest to UST are active
  but they'll have either a flagman or a d-rail to derail the train. Control tower will know that the flagman is present. No trains will run on tracks within 20' of UST during tank removal, due to possibility of collapse.
* backfill material from La Vista Quarry in Hayward. 538-5080

STID 4020
Union Pacific Railroad
1717 Middle Harbor Rd.
Oakland CA 94607

2/15/94 spoke w/Harry Patterson of UPRR. . .there's diesel FP, 3 EWs. . .the FP goes into AST and gets recycled. . .approx. 300-400 gal/month diesel is recovered . . .told him I was at the waste oil UST removal. . .asked to get future reports. . .he said ok. Asked him if the RWQCB is overseeing this actively, or just shelving the reports. . .he thinks just shelving. . .

spoke w/Denton Mauldin of USPCI. They send QRs to EBMUD, which include gw monitoring info. Thinks they may already be sending reports to AlCo. Told him I don't think so, bec. I asked around and nobody knows about this site. Sampling is semiannual, and gauging is monthly. They don't track gw plumes. Unknown radius of influence. They had proposed more MWs and 1 more EW, but UPRR said no. There's 3 EWs now. MW4, 7, and 9 have FP. MW9 had 3.6 feet FP in Nov 93. GW treatment began May 92. FP thickness not really changed since then. Ray Balcam at RWQCB has not returned his calls. Denton cannot send any reports to me without authorization from UPRR.

Wrote NOR; transferred to LOP after discussing w/SH. She said we can work it as LOP until we discern that the problem is mostly SLIC. It would be easier to work the case this way, as opposed to writing to RP for money. Maybe I should call Ray's boss, Hussein Kazemi.

Wrote RP a letter. Mtg w/Jon Amdur. Port owns the property here, and also at 1750 Ferro St., all except a small triangle owned by UPRR. Told him of the FP here. He's concerned bec. the Port has plans to use that property. He'll call UPRR and ask for reports. The RWQCB fined them for the release to estuary about 2 yrs ago.

Mess. fm Ray Balcam. It's probably ok for me to inherit this case. I can pick up the file.

2/18 l.m. Ray Balcam re picking up the file.

2/24 ditto. . .also re whether a ULR or some other release form for SLIC sites was filed.

2/24/94 spoke w/Ken Rose of USPCI (303-938-5562). He's sending me the tank removal report, quarterly reports for gw remediation system, and the 6/10/91 Initial Assessment Report. Remediation began in May 92, he thinks. They installed the system without doing proper aquifer study, because Ray Balcam was pushing UPRR to do something. Hussein Kazemi is Ray's boss; his number is 286-3977

3/1/94 Received big package of info from USPCI, including
1) 2/25/94 letter from USPCI
2) 1/10/94 "QR, HC Recovery System," by USPCI
3) 7/20/92 "Hydrocarbon Recovery System, As-Built Construction Report," by USPCI
4) 6/5/91 "HC Invest. and Remedial Design," by USPCI
5) 2/25/94 "UST Closure Report," by USPCI

Reviewed the 2/25/94 letter from USPCI and 1/10/94 "QR HC Recovery System," by USPCI. GW sampled on 11/10/93 from 7 MWs (see Table 6). FP (diesel) detected in 6 wells; the thicknesses were documented in Table 5 (up to 3.55 feet). **Why were ORW-2 and ORW-3 not gauged? (Table 5)**

3/2/94 Reviewed the 2/25/94 "UST Closure Report," by USPCI

3/7/94 Mess. fm and to Jon Amdur. He's concerned that Port is listed as RP #1. Wrote letter to RWQCB.

4/6/94 Benson Lee from LSA Assoc. phoned (Pt. Richmond. . .236-6810). He was given my name fm Dan Schoenholz. He's working on the EIR for Oakland Naval Supply Center (NSCO), and just wanted an update.

4/26/94 Reviewed the 4/11/94 "First Quarter 1994 Mon. Report" by USPCI. The effluent stream from the second carbon vessel was ND, as well as the water between carbon units. Carbon breakthrough in the first vessel is estimated to happen in mid July 1995. **(Why does this estimated date continue to change every time they check the carbon usage? see table 4)**. . .The wells were gauged on 1/24/94, but they did not produce a potentiometric map because the gauging was deemed unreliable bec. they had elevated values due to increased rain this quarter. GW was not sampled again for this QR bec. it's only being sampled biannually. It was last sampled on 11/10/93 (see the 1/10/94 "QR, HC Recovery System," by USPCI), and was ND except OMW-3 (1,800 ppb TPH) and OMW-10 (2,600 ppb TPH and 4.3 ppb benzene).

<u>Why didn't they gauge ORW-1,2, and-3 for FP thickness? Up to 2.3 feet FP in ORM-9.</u>

5/5/94 Spoke w/J. Amdur. There is a pending lease agreement w/Navy; therefore, he's concerned. He recently spoke w/UP. Navy has about 80 acres that the Port will be leasing, adjacent to UPRR site. Navy is supposed to leave the site clean. Future plans for reconstructive work. . . UPRR may move. My concern is that FP thickness is not decreasing. Jon said the 1" wells may act as wicks and can increase concentrations. I think they're 4" RWs. In that case, if FP thickness is not decreasing, he's even more concerned.

5/18/94 mtg w/J. Amdur. Denton told him they may upgrade their treatment system. RWs ORW-1,2&3 are 8" in diameter. **cc Jon Amdur on my future letters.**

9/20/94 Reviewed 7/14/94 "QR, HC Recovery System," by USPCI. GW discharged from the treatment system did not exceed EBMUD discharge limits during the 2nd Q of 1994. GW was sampled on 5/2/94 in OMW-1,2,3,5,6,8 and -10. **GW had up to 6,000 ppb TEH and 0.52 ppb benzene in OMW-10. There was FP in OMW-4, -7, -9, (and maybe in the three RWs). Highest thickness of FP was 4.2 feet this past quarter. These 3 OMW wells are near the 3 RWs. Problems with the report: 1) The TEH values in Table 6 are all wrong. 2) They should include potentiometric maps in their QRs. 3) how bout some conclusions re the FP recovery? 4) There are no lab reports for the gw sampling (sampled on 11/10/93) in the 4/11/94 QR by USPCI.**

mess. fm Denton Mauldin today. Wants to know how often they should submit reports? They only sample the wells semi-annually; it's ok w/EBMUD. [Well, in 2/93, I had asked Harry Patterson to send monthly FP reports to me for 1750 Ferro St. . .and they have not been coming monthly. . .I'd have to ask the same here(?)] Just send quarterly FP recovery reports to me, and semi-annual GW sampling reports.

9/21/94 Spoke w/D. Mauldin. A property transfer between several parties is ongoing, in order to change the way they load cargo from ships and onto rail cars. He thinks UPRR will retain prop. ownership of this site. We discussed the 3 items (from 9/20 notes). He said ok to the first 3, and will also send the most recent potentiometric maps, which have been already drawn. Item 4 can be corrected by looking at the Jan 94 QR--the lab data is in there.
He thinks the FP recovery is adequate, but wonders if Navy is UG and contributing to problem. Riedel told him that they pulled USTs from the Navy, near UPRR's property line, about 5 yrs ago. DM said they've detected TPH as gasoline in their wells, which is

9/21a con't another indication that a problem may be originating from the Navy. **I told him that I did not have this data (re TPH-g).** I asked if the POrt is being cc'd these reports. He's been cc-ing the POrt on 1750 Ferro St. only, but will again try to get approval from RP in order to cc the Port on 1717 MIddle Harbor Rd. He'll send me reports 30 days after each quarter ends.

Wrote letter to RP documenting our conversation.

11/9/94 Reviewed 10/28/94 QR by USPCI. MWs gauged on 7/29 and 9/26 show consistent SE gw flow. Pumping rates fm RWs have been 2-3 gal/min on avg. GW sampled 5/2/94 had hits in OMW-10 (2600 TPH and .54 benzene) and OMW-3 (1800 TPH), but was ND in the other OMWs except FP again in OMW-9, OMW-7 and OMW-4. **There are no lab reports.**

They say the FP appears to be captured by the current recovery system, based upon the potentiometric surface maps. **I question whether you can correlate pot. surf. maps w/capture zone.** They also used a **"PATHLINE"** computer model simulation to ID those areas where the current recovery system was not capturing the FP. **The results suggest that the current recovery system is not creating enough of an influence to completely capture and control the FP and dissolved plumes.** So, the results from these two techniques are contradictory. They conclude that they need more data (ie doing a graphical trend analysis and monitoring carefully placed piezometers) to fully establish the effectiveness of the remediation system. **I guess this means they plan to install piezometers--what exactly do they hope to accomplish?** They want to gauge fluid levels in the piezometers along w/the MWs and RWs. What will this tell us? How will it help us improve the system?

Spoke w/J. Amdur. Dan S is involved with the Navy Supply Center; maybe he knows about tank removals near the UPRR prop. border. We don't understand Fig 8 (results of "PATHLINE" model). I should call Reidel, who operates the treatment system, and get their input.

left mess Mike Sulka (project mgr) of Reidel (222-7810) re treatment system.

11/9/94 con't mess fm J. Amdur: he got info on Navy property. Dan S. gave him a big report, thinks we have a copy: 8/6/93 by PRC Env: Comprehensive Long Term Env. Action Navy (Clean Program): it's a tank closure report, for many USTs, including 5 near the UPRR yard. They removed USTs, and then wanted to do a regional approach to cleanup. Larry Lin is PM (Navy engineer in San Bruno) 415-244-2527. Not much data. Thinks RWQCB is lead. Gasoline UST was nearby: Soil concs were not that bad.

left mess. Mike Sulka of Reidel. Mike was transferred to CO office. ARt Jensen of Reidel phoned. He referred me to his supervisor, John Leichti. He said they're not involved in interpretation of data; USPCI is. He said the system itself is effective. The discharged water is clean. 600-800 gal FP per 90 days is being recovered. FP being stored onsite, and then being shipped every 90 days to Evergreen to be recycled.

11/10/94 Messages to and fm D. Mauldin. Then we spoke. The purpose of the proposed piezometers is just to look at water levels, to better establish what the system is doing. They would not be sampled, just DTW. How long would they be monitored? Minimum 3 months. OMW-7 is the only well between the RWs. Try to define the cone of depression right around the RWs. Maybe put in piezometers UG, DG, and in between RWs. Then they would decide if they need to come back and put in more RWs. He wants a my ok re the concept, then he'll write a wp. I gave my OK. . .Fig 8: the arrows go SE, along w/gradient. The perpendicular lines represent time, he thinks. The main thing is that we're not capturing FP between the RWs, as seen by the straight arrowed lines bet. the RWs, as per the PATHLINE model. The curved lines represent the capture zone. Will try to get wp to me in approx one month. Aim for 12/16. He wants to do this work at same time as work at 1407 MH Rd. (Ken Rose's project).

1/26/95 Reviewed 1/13/95 Piezometer Inst. Workplan by USPCI. Proposes 3 piezometers (OP1,2&3) and one more recovery well (ORW-4). What is their rationale for the placement of their 4 wells? What is the difference bet a piezometer and a regular MW? The construction seems to be the same. Piezometers are usually <1" diameter, but they propose 2" diameter "piezometers." Piezometers are usually used for measuring "hydraulic head." Hydraulic head is the driving force for gw movement, and varies both spatially and temporally in gw systems. The gradient has been SE, and the FP plume has extended DG to OMW-9, so how about doing a RW SE of, or DG fm OMW-9?

so that's why they're going w/2" "piezometers." Would they be sampling fm the piezometers? No, only measure the fluid levels; they expect to find FP. Then they'd decide where to put (more) RWs. ORW-4 placed there bec. Harry Paterson asked them to. Can we measure Depth of FP in the existing 3 RWs? Difficult to measure; it has ranged fm 4-6' when recovery system is periodically shut off (due to biofouling or if air supply is cut off). Passing trains can change water level, and possibly depths of FP. They're still planning on Ken Rose doing this work, along w/Chrysler Auto Unloading Facility.

Wrote ltr to RP accepting wp.

1/27/95 Spoke w/Sum Arigala: He should have reviewed it by end of next week.

2/17/95 mess fm Susan Burns of ERM-West: 946-0455: wants info on this site and 1750 Ferro St. left her a message: both sites have wells, remediation; if she wants a file review, contact JB. .2hr no charge

2/22/95 Susan Burns of ERM-West phoned: wanted to know if the plumes had been defined. Gave her more info, altho she's setting up a file search w/JB, hopefully for this week (or next). .2hr no charge

3/9/95 Reviewed July to Dec 94 QR by USPCI. 5,560 gal of diesel have been recovered from 5/12/92 to 12/5/94. GW sampled on 11/15/94 flowed SW (but they say SE)(Fig 2), and had **up to .75' FP in OMW4, OMW7, OMW9, and a sheen in the most DG well, OMW10.** Must clarify gradient w/USPCI. Why don't they report "sheen" in Table 6 for OMW10? Pg 4 says there was a sheen. Phoned Ken Rose: he plans to start drilling here on 3/17 in the am. He'll call to confirm. Plans to start 1407 MH Rd on 3/15 in pm. Spoke w/Denton: asked for RG signature, he'll get back to me re how much FP in MW10, and re gradient interpretation.

6/29/95 Reviewed 4/26/95 QR by USPCI. **GW was NOT sampled, just monitored, on 1/25/95; it flowed SW (towards recovery system).** They could not locate OMW-5 or OMW-10, and could not sample OMW-3 bec it was submerged in standing water. **There was up to 6.2' FP on gw** (OMW-7). FP thickness increased significantly in OMW7 and OMW9. They think it's bec the recovery system in ORW1 and ORW2 performed poorly in Jan 95. THAT's bec there were maintenance problems w/the pumps in those wells. GW sampling will occur in wells w/out FP in 2nd Q 95. Four piezometers were installed around recovery system in 3/95. A report will be included in the semi-ann report.

Dale's notes

situated in an area of a crossover switch, and a total of 23 railroad ties are comprising this contaminated area.

10/16/95 Call to Denton Mauldin and he informed me that a Ken Rose out of the Boulder CO office would be preparing the proposal for the three monitoring wells. It is my understanding that at least one of these monitoring wells would be converted into a passive or possibly a active skimmer to remove free product. He informed me that there was a boring advanced, shortly after the spill, to determine whether the diesel had reached the groundwater, which it had. Free product was observed floating on the groundwater which was approximately measured at 8 feet bgs. He will send me a copy of the proposal ASAP (tomorrow).

10/17/95 Received proposal pm.

10/18/95 Reviewed proposal and drafted copy of approval letter. Call to/from Ken Rose concerning date of spill (to be incorporated into letter). He said it occurred at 1:00 am on October 1st. Gave him my verbal approval of subsurface investigation. He will be coordinating the drilling and MW installation. Final draft of letter after peer review. Sent letter.

11/1/95 Review USPCI "Third Quarter 1995 Monitoring Report"-dated October 30, 1995. The presence of diesel was observed in monitoring wells OMW-4, OMW-7 and OMW-9 and piezometers OP-1, OP-2, OP-3 and OP-4 during the measurements taken during the third quarter 1995. The average decrease in diesel thickness was approximately 1.25 feet? This figure does not seem correct, closer to 0.25 feet. Groundwater flow downgradient of the recovery system is south towards the Oakland Estuary.

11/8/95 On site to witness the advancement of three borings with subsequent conversion to groundwater monitoring wells DS-1, DS-2 and DS-3. Ken Rose of USPCI on-site for the drilling and installation of the three monitoring wells. No free product was observed in the bailed water from monitoring well DS-1, which is within ten feet of the spill release area. All three wells are downgradient of the release area, with DS-2 and DS-3 being across the access road from the release area. Ken said the wells will be monitored on a weekly basis for free product recovery if possible, and that he would ship a passive skimmer to the facility if the need arises. Wells will be sampled next week sometime, and a report will be forthcoming to my attention.

Dale's notes

4020 Union Pacific Railroad Yard, 1717 Middle Harbor Road, Oakland, CA

This case belongs to JE. Review Laidlaw (LES)"Semi-Annual Monitoring Report"-dated July 19, 1995.

This report details information in accordance with the East Bay Municipal Utility District (EBMUD) permit number 502-51231. This report provides semi-annual monitoring information pertaining to th ehydrocarbon recovery and treatment system, and the groundwater monitoring wells located at the fueling area of this site. The recovery and treatment system consists of three recovery wells, a diesel/water separator, a recovered diesel storage tnak, and an activated carbon treatment system. The recovered groundwater is treated and discharged to the EBMUD sanitary sewer in accordance with this permit.

During the operating period of January 1 to June 30, 1995, the groundwater recovery and treatment system treated approximately 420,000 gallons of groundwater. Since the initial start-up on May 12, 1992, until June 30, 1995, the system has recovered approximately 7,060 gallons of diesel. The presence of diesel was observed in monitoring well OMW-4, OMW-7 and OMW-9 during all fluid level measuring events. Diesel was also observed in piezometers OP-1, OP-2 OP-3 and OP-4 during the May 1995 sampling events. Diesel thicknesses increased in monitoring wells OMW-4 and OMW-9 and decreased in OMW-7 during the first half of this year. Product thicknesses reported for piezometer OP-3 and in monitoring well OWM-9 were 4.98' and 4.77', respectively.

Comments: Why is pump and treat system being used when free product thickness are reaching five (5) feet thick? Call to Harry Patterson of USPCI requesting information on product recovery system, ie., how much free product (diesel) is being removed since last report, not just how much total free product has been removed. He will fax me information on this.

10/12/95 Call from Denton Mauldin of USPCI concerning the recent diesel spill (approximately 700 gallons). He said that he was having a consultant prepare a SWI involving the placement of three Mws to track the diesel spill. It is located on the perimeter of the site, and the resulting spill could possible migrate off-site. I told him that I favored a source removal type of remediation, and that monitoring would only track it, and monitoring was not a viable remediation option. He stated that USPCI was concerned about the diesel migrating off-site, and that monitoring it would establish whether it was indeed migrating off-site. He stated that the consultant was going to furnish me the SWI ASAP, and I informed him that I could give him approval on the work plan in a 24hr turn-around time period, since this release was part of an emergency response. He wanted me to visit the site to see if any other remediation options should be evaluated. Gave me a site contact of Mike King at 874.1134. Scheduled a site visit for four o'clock today. Visited site; diesel contaminated area approximately 11 yards by 6 yards. It is

10/2/95 Britt Johnson phoned Tom Peacock: reported 700 gal diesel spilled from locomotive onsite. No cleanup being done now. All soaked into soil and gravel. Britt to send report. Avery Grimes or Gaines is lead geologist in Omaha NE at 402-558-9687.

11/30/95 Discussed case w/DK. There was a spill of diesel from a railroad car. It got into the coarse gravel, found the very shallow gw (about 5'), then went bye bye. Etc. etc. Reviewed DK's notes. Dale was not too happy w/location of wells bec he said all 3 are DG; none are UG.

Phoned Ken Rose: wells are being gauged every 2 weeeks, but will be done monthly as of Jan 96. He has analysis results; no FP, 5,500 ppb Tph-D is highest conc. There are storm drains on other side Ferro St. Concerned that rains will wash FP into storm drain. His MW Inst. Report will be to me by end of Dec. Gravel (RR ballast is 2 or 3" deep from surface). Sandy silt to about 6 or 7'bgs. Bay mud starts at 7 or 8'bgs. So it's essentially permeable to gw. He looked in the storm sewer, and did not see any sheen or FP. The stain was 43' by 15' at the widest point. It paralelled the track. The concern is contaminated surface runoff to storm drain. Jim Gorley (Env Mgr for Operations for UPRR) had plans to remove surface soils--about 6 inches; he's in Stockton. He handles "operational releases." Ken calculated 12.5 yd3 soil to be removed. It may have been done. Jim is Ken's boss/client on this; his # is 209-942-5358. If they see FP in any well, they will install a skimmer pump asap.

Phoned Jim Gorley: of UPRR: were the surface soils removed? When? Left message

12/4/95 mess fm Ken Rose: he spoke w/Jim Gorley Fri, who told him the surface soils were excavated and piled on visqueen, and will be offhauled on a gondola under manifest. He wants to confirm this w/the guy at the yard (Jay Jones). He will have figures, copies of photos, sample locations, tables of gw concs by end of week. Report by end of month.

12/12/95 tc w/Ken Rose: he sent me a fed ex. Has not excavated surface soils; staining is still there. (So he thinks. The heavy rains of 12/11 and 12/12 may have washed the staining away). Told him it's good time to check the Mws, due to the heavy rains. He will gauge wells this wk. If FP, will use a Keck skimmer pump.

Reviewed the FedEx pkg: photos, tables, bore logs.

12/27/95 lm Ken Rose

1/3/96 mess fm and spoke w/Ken Rose: He is expecting a return call from Jay Jones (out of Fremont). Conflicting messages between Jay Jones (not yet excavated) and Jim Gorley. Mws have been gauged 4X since installation (early Nov). Latest gauging bet Xmas and 1/1/96. No FP. Sheen in boring done close to spill. He is surprised there is no FP in the Mws. MW Inst. Report is done; waiting for CA RG to sign. **Will call me by 1/4 am.**

1/4/96 mess fm Ken: start excavation this am

1/9/96 mess fm KR: report sent fed ex. Removed 12.5 yd3. He will redevelop Mws when he visits (2nd or 3rd wk Feb). Out last wk Jan, 1st wk Feb.

1/26/96 Reviewed 12/19/95 "Semi Annual Mon Report, HC Recovery System," by Laidlaw. They had 1,500 ppb TPHd in effluent water stream from the carbon units in July 95; probably due to backwashing of carbon canisters. Carbon breakthrough due to occur in Dec 95. **Did it?** GWEs decreased an avg 0.7' from 9/95 to 11/95. **Fluid levels were measured, and gw sampled on 11/30/95.** But analytical results not yet received, and so will be included in First Q 96 report. **Avg diesel thickness decreased by approx 1' (except increase of 3' in piezometer OP-1).**

Reviewed 1/8/96 "Environmental Assessment of the Diesel Spill Site," by Laidlaw. **They recommend** cont monthly gauging of wells; if FP is found, begin IMMEDIATE skimming w/a canister; submit the results quarterly. **The shallow overex of HC stained soil occurred on 1/5/96; report forthcoming. Looks like we lost this spill. Minor recovery by way of overex. It must have washed out in the shallow gw. Whoosh!**

8/26/96 spoke w/Ken Rose: there was a derailment at 1717 Middle Harbor Rd., and they installed 3 Mws around Jan 96. (Dale Klettke went out on this one.) They are still gauging, but no FP (STID 4020). He had expected FP to come into the Mws, and it hasnt. He will check on status of the report. He manages all the tank sites in Cal. Those wells are designated DS-MW-1 to DS-MW-3, to see which report they are in, or if a separate report will be submitted. UP purchased SP, so mucho proptransaction soon. 1717 MH Rd may be expanded or closed down (?). When SP and UP become same co, they will close down huge section of SP yard.

10/29/96 Reviewed 4/30/96 "First Q 1996 Mon Rpt" by Laidlaw. **GW sampled on 1/10/96 and 3/25/96 flowed towards the Rws at a steep gradient, and generally South towards the estuary. TPH values increased above the concs observed since 1992 (max value was 13,000 ppb TPH).** Remediation system will continue.

12/10/96 mess fm Ken Rose: Had derailment, they put in 3 Mws to look for FP, no FP. Wants to abandon Mws. OK?

Reviewed 10/30/96 "third Q 1996 Mon Rpt" by Laidlaw. **GW measured outside the influence of the Rws on 7/25 and 9/16/96 flowed South between 0.003 and 0.004 ft/ft. Steep gradient towards the Rws (0.1 to 0.2 ft/ft). Diesel has not been observed in the diesel spill wells (DS-1 thru DS-3) since installation in 11/95. GW was SAMPLED on 5/26/96.**

Questions: 1) WHY was gw sampled on 5/96? WE ARE SUPPOSED TO BE DOING BIANNUAL SAMPLING: 1ST AND 3RD Qs. THEY WANT TO SAMPLE AGAIN IN 11/96; WHY?
2) Why didnt they report thickness of FP for OMW-10 in Table 1, when Table 2 says the reason they did not sample it is bec they got FP? Note 5/29/96 and 5/17/96 do not match up. Also note the absence of FP thickness in Table 1 for 11/15/94.
3) why didnt they ever sample gw from the DS wells? Dale accepted their proposal to just monitor for FP, in his ltr dated 10/18/95. But USPCIs proposal dated 10/17/95 included SAMPLING from wells that did not contain FP.

Lm Ken Rose: I have some questions.

12/20/96 lm Ken Rose w/the detailed questions.

1/2/97 Reviewed 12/20/96 "Semi Annual Mon Rpt, HC Recovery System" by Laidlaw. They are doing bi-monthly fluid level measurements and semi-annual gw samples from the Mws. They changed out the carbon in the first or lead vessel on 5/6/96. **Gw sampled on 11/12/96 flowed towards the recovery wells.** System has removed 9,400 gal of diesel since start up in 5/92. Avg GWE decrease was 0.24 feet. BTEX was ND. Max TPHd was 3,400 ppb in OMW2. **Max FP thickness was 3.46 feet in OP4.**

1/2/97 spoke w/Ken Rose: Does he think the recovery system is affecting the FP in OP4? This well has the highest FP thickness of any well: almost 4 ft. Do they hand bail?

1/8/96 rpt documents sampling of the 3 DS wells in 11/95. They DID sample the gw. Max was 5,500 ppb TPH in C10 to C50 range. UPRR is considering the derailment and DS wells as a separate investigation. Since 11/95, they gauged it thru 11/96. One well, DS1, has been disturbed or destroyed when they put in new track. That's what prompted RP to request DS well closure. Can he find that well to grout it out? He has survey, but if there's track over it, there may be a problem. Told him I think they can be destroyed. MUST WRITE A LTR; it's been over a year anyway. He will be making site visit in February.

Spoke w/ Denton Mauldin: **RE 12/20 SEMI ANNUAL REPORT:** GWE on OP4 is less than the GWE in OMW10 and OMW2. So OP4 is probably still within radius of influence of the Rws, but it will take a real long time. We could convert OP4 into a RW. They would have to trench over to it and put in 2 lines (air pressure and discharge lines) and a trench. OP means Oakland piezometer. It still would work as a RW. OP3 also has a lot of FP, although it's right next to a RW. He said it wd be more difficult to hook up OP3 bec he thinks it is a 2" well. **They do handbail those wells every other month.** He said the OP wells are 2" wells, except OP4 which is 4" bec they knew there was product in that area. OMW7 and OMW9 also have high concs. He heard there were USTs directly UG and N of their site, on Navy property.
RE 10/30/96 REPORT: they do gw sampling in conjunction w/EBMUD's sampling requirements. It's been in May and Nov for several years. They forgot to present the sampling dates in Table 1. **Cc letter to Denton.**

Reviewed 7/26/96 "Semi Annual Mon Rpt" by Laidlaw. **GW sampled on 5/17/96 flowed towards the RWs.** GWEs increased an avg of 0.3 ft. **Max FP thickness was 5.26' in OP-3.** Damn!

WROTE LETTER TO RP REQUESTING TO INCLUDE MORE WELLS IN THE RECOVERY SYSTEM.

1/3/97 phoned Versar: Steven Campbell: 814-5900 re his PM status for the "Fleet Industrial Supply Center" in Oakland. Spoke w/him: he is familiar w/the UPRR site. UPRRs problem extends onto Navy site. Navy has Mws near the UPRR prop boundary. There was a fight bet some Rps and Navy w/UPRR claiming it was Navys problem. Versar did detailed eval, and it was clear it was UPRRs problem. Navy did have an UST about 150 yd to the N of prop boun. Low levels of contam, got closure. From who? RWQCB (Gina Davis maybe). Current installation mgr for Navy is Antonio Tactay (415-244-2711) or try Gail Small w/PRC Env (lead consultant) 916-852-8300, or Dan Schafer w/PRC. Told him we have big white binders titled "Remedial Invest, Vols I thru V." He said the figures are in different volume. Ask Dan Schafer about these binders. He remembers old bulkhead extending east-west, in the direction of tracks, from prop line to water. A lot of product is behind bulkhead. He will call John Bird (hydrogeologist).

Phoned Dan Schafer at PRC: left mess. 916-852-8300 Main Base; their folks in Helena office. Another Dan Schaffer in Helena office, or Steve McNeil, Scott Payne, Kathy Roos at (406-442-5588). FISCO (Fleet Industrial Supply Center Oakland) has main base, Alameda Annex and Pt. Molate. Gail Small is now in charge of project, w/Alameda Annex.

Phoned PRCs Helena office and spoke w/Dan Schaffer: He is not the PM, but Dave Donohue is. Who is reg agency and contact? Report? **They are doing some offsite install of Mws, on the UPRR site.** Told him I have the file for that site, and am the caseworker.

Phoned Dave Donohue at PRC: 406-442-5588 UPRRs area is just south of Gate 2 on Navy site. Several USTs removed just N of UPRR site. ERM-West did the USTs. PRC doing the Installation Restoration program (CERCLA under DOD), a Navy Clean contract. They installed Mws N and W of Navys USTs, but no problem w/gw. UST area was not a major problem, as he recalled. Call Dick Heggerty at FISCO (302-6704). PRC is writing RIFS report by end of year, and needs to do file search for UPRR site. Port will be taking over FISCO by 2000; they are already leasing portions of it. D. Heinz and J. Prall are working w/them.

Phoned Dick Heggerty at FISCO (302-6704) They had 3 UST sites. USTs gone. Just getting a report on SI results. He will send me a copy of report (ERM-West). I can make copies of relevant sections, and return it. Reg agency is RWQCB; Vince Christian 286-4222.

1/10/97 phoned Dick Heggerty: to say I have not received the rpt yet. Has he sent it? Yes, late Wed 1/8.

Received rpt. "Revised UST Invest Rpt" by ERM-West, dated Dec 96.

1/13/97 MTG W/JOHN PRALL to peruse this report. **It does not include tank pit sampling. Just MW and Hydropunch results (soil also).** UST site #845 is closest to the UPRR site. GW flowed N on 1/23/95 (North?). Has 3 Mws. TPHd plume is shown as elliptical along storm drain in perpendicular direction of gw flow; strange. UST site #842A is to the west of #845. GW flowed NW; has 3 Mws. Then we compared UPRR bore logs (from 6/5/91 "HC Invest" rpt by USPCI) to Navys bore logs. UPRR borings show sand to about 13 or 14'bgs (depth explored)(OMW-1 to OMW-8). Navys logs (poorly done) show bay mud starting at around 7 or 8'bgs, underlying sand. Diane Heinz is handling the Navy project; they are transferring it to Port tenancy or ownership; not sure. **John will make me a map of UPRR site which is the same scale as the Navy map. Then I can piece them together. Port is dredging a 52' deep channel in Inner Harbor to deepen it; will also widen it by removing soil fm UPRR site on west end. He referred me to Bill Spong of ERM-West at 916-444-9378; he authored the rpt, altho there is NO name or signature on the rpt. Must be on the cover letter; not included here.**

For my info, this locomotive fueling area is now inactive. They are allowed to discharge up to 5 ppb benzene, 500 ppb "chlorinated Hcs," 100 mg/L O&G, 100 mg/L "phenolic compounds" into EBMUD sewer (7/20/92 As Built pg 8).

MORE QUESTIONS FOR DENTON:

1) Does the french drain share the same oil/water separator as the hydrocarbon recovery system?
2) Where is OMW-11? Fig 2 in 7/20/92 "As Built" rpt shows it on Navy property. But recent rpts do not show it on map or tabulated data.
3) Have they assessed the effectiveness of the FP recovery system BASED ON a decrease in FP thicknesses? Or is it just based on gallons of diesel removed, and the effluent mtg its discharge limits?

Lm for Dick Heggerty: I need report of UST removal and tank pit sampling.

1/14/97 Juan Feng phoned for Dick Heggerty: (415-244-3597) He works for Navy; he is an engineer. He took over this project from Larry Lin, another engineer. He has a report, but thinks he sent it to the County. He will ask Larry WHO the County contact was, and get back to me.

Phoned Denton Mauldin: left mess w/the 3 detailed items from 1/13.

1/15/97 mess fm Denton: OMW-11 is a remnant from a wp (not colored in); thinks they could not get approval fm Navy. They did put in french drain to take advantage of the open trench. Potential problem is pulling in offsite (or other) plume. Effectiveness of FP recovery is based on potentiometric surface (depressed around recovery wells) and control of gw gradient. He realizes it is not the most effective way to capture that product, bec other wells have product and must be bailed individually. Looks like subcontractor did not bail product in Sept and maybe Nov. He has a question re 1750 Ferro St. In their last report (10/31?), they recommended to abandon OKUS-W4 and change mon freq of wells 5 and 6 fm monthly to quarterly. Those 2 have Bunker C; they have limited info. OKUS-W4 has been destroyed and he doesn't think it is repairable. He did not put that in a cover letter. Did I get any Navy info?

Spoke w/Denton: french drain is not hooked up to the oil/water sep (used for HC recovery). OMW-11 should not have been on the As Built. OMW-10 is the highest numbered well. But the 6/5/91 rpt only shows OMW-1 thru OMW-8. Were OMW-9 and 10 put in at a later time? Yes, but he cannot find where they were reported. What about based on recovery rates (ie average free product thicknesses over time). He thinks it wd be best to put in a recovery trench DG of OMW-9. Trench to about 10', put in a conduit, backfill w/coarse material. Water and product would be recovered via sump(s), which would operate continuously. Not easy to do w/the tracks there. I thought they didn't use those tracks. They do, for loading railcars. How bout making the trench parallel to tracks? RR's policy is not to dig w/in 5' or so of a track. How about hooking up to other wells w/FP? OP-4 is 4" well, so ok. But all the others are 2" wells. Bay muds in the area. TOFC (this) site was under water at one time, before being built up. It's all fill from about 0-4'bgs. Can dewater that area and prevent product fm migrating; lithology is an advantage. Told him there is no FP at Navy site. But highest TPHd conc in gw was 156 mg/L (grab sample at site

842)(although MW1 located about 20' away was ND and grab gw sample in tank pit was ND).

As per pg 3 of the 7/20/92 "As Built" rpt, the boring logs for ORW wells are in the "Prelim Design Rpt." What date? Where is rpt? I cannot find it. Looked thru all the files. Previous file reviewers have messed up the order of reports.

1/15/97 phoned Dick Heggerty: He said Vince Christian at RWQCB (286-4222) is now their contact for FISCO site. Phoned V. Christian: left message. Does he have a rpt re UST removal and tank pit sampling? Did he see their recommendations for further work? Is he requiring it?

FINALLY **FINISHED LETTER TO RP.** I am not asking for delineation of FP plume bec ORW-1 has no FP, and Navys wells are delineating the N extent. Possible need for delineation to the east of OP2. Waiting for John Prall to give me copy of UPRR map w/same scale as PRCs map. Then I will put them together and get the big picture of relationship of wells.

Navy report review: they recommend further SI for these 3 UST sites.

Phoned Bill Spong of ERM-West: 916-444-9378. Left mess: Asked him where are the results of tank pit sampling for UST site 750 (UST 04), 842 (UST 05) and 845 (UST 06)? They are not in app B. Is the tank pit samplg data tabulated somewhere?

1/16/97 mess fm Bill Spong: Thinks those 3 USTs were removed by PWC, and they are bad about taking notes and documenting things. Try contacting Julie Herbst at Navy Public Works at 302-3034. There were 2 USTs at 750, and thinks they were both removed. Navy has so many contracts w/so many people, so its confusing as to who did what. Lm for Bill S: thanks for yr detailed and candid message. So I am assuming that you never received info re removal of UST 04, 05, and 06. Phoned Julie Herbst: 302-3034 Navy Public Works. No answer and no machine; rang about 30 times.

Mess fm Vince Christian at RWQCB: those 3 USTs in rpt 9/95 **proposing pump and treat on 842 (had some FP)**, monitoring at tank 845, and had access problems (fm UPRR) to further invest at 750 (so they wd state what they wanted to do later). RWQCB made comments to that rpt, then State Bd came out w/new guidance for USTs. Funding problems w/Navy shut down UST program for time being. Since then, little has been done in their UST

program. He understands a rpt is coming out soon addressing those and other UST sites.

1/16/97 Mess to Vince Christian: 286-4222 What? There was FP at site 842? The 12/96 ERM rpt shows no FP. I wrote a ltr to RP saying Navy had no FP.

Spoke w/Bill Spong: This rpt is all they have. No separate tank removal rpt. **They found FP in Geoprobe sample in site 842. But that's the only spot. The ERM report DOES mention FP; see pg 4-31 (recommendations) They recommendeded another well to evaluate thickness of FP and remove it if possible.** Navy had big staff reduction, and put structural engineers. I asked him why pg 2-49 says there was FP in Geoprobe borings W1 and W2, when Fig 2-46 shows a hit of TPHd as 10,640 ppb in W1 and ND for W2, and W3 had 156,000 ppb TPHd?

Phoned Ken Rose to tell him it's ok to close the 3 DS wells. Navy had drums stacked 5 or 6 high. Told him I think the Port is taking over the Navy site.

Spoke w/Vince Christian: Who is his contact? Base Closure Program (Installation Restoration Program); EFA West (Engineering Field Activities West) is office that does work for Navy; Lou O'Campo 415-244-2712 is in charge of IR program. UST program is under Compliance Program,but Lou gets funds for UST program. Dick Heggerty is not part of that. EFA West lead person for USTs is Larry Lind. Told him that Warren Feng is now the lead. And Larry is his boss. Told him the 12/96 is really a draft report. They recommended pump and treat for 842. **Could I get a copy of his comments?** Navy now has $$ for this again. **He wants a copy of most recent FP plume map for UPRR.** They are trying to close the base and turn it over to the Port.

1/21/97 Received and reviewed 1/16 fax from Vince Christian. It's his letter dated 11/27/95 to the Navy.

Lm Bill Spong: do you have any info yet?

Truong Mai phoned back (4:40 pm) for Bill Spong and left message: 916-444-9378 (same # as Bill's). What can I do for you? Lm for TM. He is out for the day (4:52 pm). Told him it wd be easier if Bill wd explain what info I need, rather than me starting from square one. Phoned Bill Spong: left similar message.

1/22/97 Received UPRR map, copied to same size (1" = 250') fm Port. Pasted it together w/Navy map.

1/23/97 phoned Bill Spong: left message.

Phoned Truong Mai (x109): They encountered FP (notes fm field tech) in W1 and W2. They got gw sample fm below product line. But they got ND dissolved in W2. He doubts conc in W3. Told him I think maybe samples got mixed up. Field notes are not in the rpt. They do not specify thickness of FP.

Phoned Julie Herbst from FISCO: 302-3034 (busy, then no answer) to get info on tank removals.

WROTE 4-PAGE LETTER REQUESTING VARIOUS ITEMS

3/10/97 Reviewed 2/20/97 "File Update" letter fm USPCI. It responds to my inquiries on pg 3 of my 1/15/97 ltr to RP. Fig 5 is interesting; it shows a proposed location for a MW (MW10) on the Navy property.

3/21/97 Reviewed 3/14/97 "Additional Remediation Wp" by Laidlaw. The Rws may not be removing diesel DG of the gap bet ORW1 and ORW2, and recovery could be enhanced to the S and E of the ORW1/the current system. They plan to do 2 phases of work. First phase is conversion of 2 Mws to Rws. Those wells are OP4 and OMW9.

QUESTIONS:
1) What about enhancing product removal to the W and SW of the system/ORW1? That is the area of thickest product. OP4 is to the SW. Maybe they misspoke their directions? **Never mind.**

Spoke w/D. Mauldin: the piping fm enhanced RWs gets connected to the oil separator on the ground surface? No; all underground piping. Hardest part will be putting in trenches and going under the RR tracks. French drain is too high over the water table to use. Re 9/5/91 Preliminary Design Report: There was confusion as to who lead agency was at some point. They didnt get any response fm Ray Balcolm at RWQCB, so thats why they didnt have it finalized. RR may hire someone else to enhance the new RWs.

WROTE APPROVAL LETTER

7/7/97 mess fm Scott Kelsted from Burns and McDonnell: 415-876-5261. They expanded the system by installing pumps in existing wells. Will do capture analysis in 3 mos.

7/30/97 Reviewed 5/16/97 ltr fm Scott Kellstedt.

implement their spill plan in their; Hazardous Materials Business Plan and his reply was: "we do not have one"

5. Mr. Burns asked me: "how do I get you out of my office?" I responded: As soon as you notify your cleanup contractors that you have a spill and request their services. He reluctantly made the calls after considerable delays.

2-6-91 At UPR's facility, I observed and sampled free diesel product in a freshly dug trench down gradient of the spill area. The trench had uncovered the storm drain that may have allowed diesel to enter the Oakland Estuary.

2-7-91 Port of Oakland's representative, Andrew Clough observed and reported a sheen on the Estuary from UPR's storm drain.

2-7-91 At UPR's facility, I observed and sampled discharges at:

storm drain outfall	UPR-001
soil escavation site	UPR-002
spill area (east side)	UPR-003

2-7-91 UPR's reports a spill and the release of 30 gallons of diesel to the Estuary during cleanup operations.

2-8-91 UPR completes cleanup and sandbagging and plugging of two storm drains with concrete.

2-19-91 U.S. Coast Guard, Ensign Farrell, claims there is still diesel in UPR's facility storm drains.

2-20-91 Received UPR's draft S.P.C.C. plans
(no secondary containment for spill pads, below-ground waste oil, diesel and gasoline tanks)

2-27-91 I noticed a sheen from capped UPR's storm drain pipe and notified UPR's Allen Jensen.

3-7-91 Received UPR's proposed workplan for Hydrocarbon Investigation and Remediation

5-20-91 Spill report received for releases on 2-4-91 and 2-7-91

5-22-91 Meeting with UPR's Harry Patterson and submittal of draft Hydrocarbon Investigation and Remedial Design (announced that there is a four foot layer of free diesel product in the fuel loading area and 1600 tons of soil have been removed and sent to a recycler)

5-23-91 Refer case to Alameda County D.A. Lawrence Blazer for prosecution under Cal. Health & Safty Code.

July 29, 1991

May 28, 1991

To: Alameda County Deputy District Attorney, Larry Blazer

From: CRWQCB, Ray Balcom

Subject: Chronological narrative, field report and observations at Union Pacific Railroad Intermodal Yard (UPR), Oakland.

2-1-91 received call from "Baykeeper", Kurt Lootens, while he was on patrol, he saw a large fresh diesel slick he traced to west end of American President Lines pier next to UPR's storm drain outfall

2-4-91 received second call from Baykeeper, Mike Hertz, while on patrol, observed: "fresh diesel spill covering an area approx.1000-1500'long by 75'wide" most concentrated close to shore at east end near (Berth 60) adjacent to Union Pacific yard

2-4-91 called American President Lines, Bob Fairbanks, and he reported back that his staff traced the diesel sheen to UPR's facility and notified David Burns, Terminal Manager of a possible spill emanating from their yard
(no spill report was received by County or State O.E.S. on 2-1-91 or 2-4-91)

(2-3-91)? U.S. Coast Guard traced sheen from Coast Guard Island (.5) nautical mile along estuary to UPR's facility but could not locate source according to P.O. Davis and Ensign Farrell of the Marine Safty Office (no self reporting of a spill by

2-4-91 UPR's admission of a spill release due to a rainfall event

2-5-91 I met David Burns,Terminal manager and requested a facility tour to investigate the alleged spill complaints. After locating the storm drain with a decernable sheen and smell of diesel, I asked to see the fueling area for locamotives. The following observations were made:

1. Dark petroleum stains surrounding fiberglass spill pans and free standing petroleum liquid cresting the sumps.(sumps appear to be full of sand)

2. Heavy oil stains and oily water could be followed along tracks from the fueling area for approx. 350'in an easterly direction where it terminates in a low spot.

3. I asked Mr.Burns if the facility has had any reportable fuel spills? At first his reply was "no". And then added they had been spilling since the 1950's.

4. I requested that Mr.Burns contact a cleanup contractor and