

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



sent 5-4-00  
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20423

May 3, 2000  
StID # 1222

Mr. Douglas Herman  
Port of Oakland  
530 Water St.  
Oakland CA 94604-2064

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

**Re: Soil and Groundwater Investigation and Human and Ecological Risk Evaluation,  
Crowley Yard II, 321 Embarcadero, Oakland CA 94606**

Dear Mr. Herman:

Our office has received and reviewed the referenced Baseline April 2000 report for Crowley Yard II, 321 Embarcadero. This report describes the results of the over-excavation of former USTs GF-11 and GF-12, the installation of three monitoring wells and provides a human and ecological risk evaluation for the residual soil and groundwater contamination.

The conservative evaluation compared the highest reported contaminant concentrations versus cleanup levels published in the Water Board Orders, 99-045 and 98-072, the SFIA and Catellus orders, respectively. Based upon the similarity in settings of these sites, this is a reasonable approach. Our office agrees that additional groundwater monitoring should be performed to verify the groundwater concentrations immediately down-gradient of the former USTs.

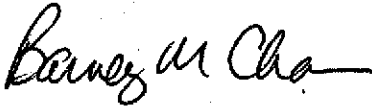
Our office has the following additional comments on this report:

- The Port is still responsible to sample along the piping runs when the building foundations are demolished as planned in the future.
- Although no specific cleanup levels may exist for specific compounds (specific PAHs, TPHmo) some evaluation will be required prior to requesting site closure.
- Be aware that the recommended ecological soil evaluation was omitted in the Ecological Health Screening. Some evaluation of this data will be required prior to requesting site closure.
- Assuming that this site will be developed into a park, the Port shall prepare a health and safety plan for future maintenance or construction workers. The Port shall prepare a soil and groundwater management plan.
- The Port shall provide evidence of filing a deed restriction limiting the future land use of the site, prohibiting the use of groundwater beneath the site and requiring an impervious cap or a clean soil covering over any areas of known shallow soil contamination.

Please contact me at (510) 567-6765 if you have any questions.

Mr. Douglas Herman  
321 Embarcadero  
StID # 1222  
May 3, 2000  
Page 2.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, file  
Ms. Y. Nordhav, Baseline , 5900 Hollis St., Suite D, Emeryville, CA 94608  
321EmbarcRA

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY  
DAVID J. KEARS, Agency Director

*Sent 11-22-99  
Including cc's*

*R0423*

November 22, 1999  
StID # 1222

Mr. Doug Herman  
Port of Oakland  
530 Water St., 2<sup>nd</sup> Floor  
Oakland CA 94607

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6700  
(510) 337-9432

**Re: Work Plan for Pacific Dry Dock II, 321 Embarcadero, Oakland CA 94606**

Dear Mr. Herman:

This letter serves to respond to your November 15, 1999 letter regarding the proposed investigation and work at the above site, which in turn responded to the County's October 18, 1999 letter regarding the Port's original work plan. Your letter appropriately addresses the County's concern, therefore, you should proceed as soon as possible with the following work:

- The two underground storage tank pits should be over-excavated to remove the reused spoils for proper disposal. At that time, it would be prudent to take confirming soil samples to verify the residual soil contaminant concentrations. In addition, any free product or groundwater with sheen should also be removed from the excavation pits.
- The three monitoring wells, as proposed, should be installed after the over-excavation of the pits. Both soil and groundwater samples will be taken from the well borings for chemical analysis.
- In order to remove residual product from pipelines, you may use a vacuum truck hose (equipped with a stinger) to remove as much product as possible prior to capping the piping. Soil sampling will be done when the piping is removed in the future.

Please provide your schedule for this work and contact our office prior to this activity.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files

Ms. Y. Nordhav, Baseline Environmental Consulting, 5900 Hollis St., Suite D, Emeryville,  
CA, 94608

3PDDIIwp

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



SENT 10-18-99  
including cc's

P0423

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

October 18, 1999  
StID # 1222

Mr. Doug Herman  
Port of Oakland  
530 Water St., 2<sup>nd</sup> Floor  
Oakland CA 94607

**Re: Port of Oakland Response Letter for Pacific Dry Dock, Yard II, 321 Embarcadero,  
Oakland, CA 94606**

Dear Mr. Herman:

Our office has received and reviewed your October 8, 1999 response letter to my September 16, 1999 letter dealing with the investigation and remediation of the two former diesel underground tanks at the above site. I would like to address your comments as numbered in your response letter.

The piping closure is requested to be postponed until the concrete foundation, where the pipeline is located, is removed. It is assumed that this will be done when the site has been authorized for redevelopment as part of the Estuary Plan. Our office agrees in delaying the removal of the underground piping on the condition that the pipeline locations are determined and that the pipelines are rinsed to remove residual product and capped. Please describe how this will be done. Please add the analysis for semi-volatiles in addition to the proposed suite of analytes for the piping run samples when samples are taken and notify us in advance of this action.

The stockpiled soils from both tank removals are proposed to be left in-place, however, our office again requests their removal based upon the following observations:

- Although the concentration of the stockpiled soils may be less than RWQCB orders for the protection of human health, the protection of **ecological health** has not been considered. Both the residual soil concentration and that of the spoils exceed the clean-up levels recommended in the SFIA and Catellus Water Board orders.
- The grab groundwater sample, which is at least partially the result of groundwater contact with contaminated soil, exhibited 91ppm diesel, greatly exceeding the recommended groundwater cleanup levels in the Water Board orders.
- Because the stockpile soil samples were 4 point composite samples, the reported results could be "diluted" and be much higher in localized areas within the spoils.
- The spoils now likely lie deeper than they did originally and are closer to groundwater. In fact, these soils may be in direct contact with groundwater and are acting as a source of contamination.

Mr. D. Herman  
321 Embarcadero, Pacific Dry Dock Yard II  
StID # 1222  
October 18, 1999  
Page 2.

The Port does not propose any additional site characterization because the samples were collected beneath the source (the tank) and are likely the highest concentrations. In addition, the Port states again that the concentrations are less than the RWQCB order threshold concentrations for the protection of human health. You are reminded that protection of ecological health is also required. You are also reminded that risk evaluation is only part of what is required for the investigation of fuel tank releases. The RWQCB requires the following, as part of the evaluation of a low risk soil or groundwater case:

- The leak must be stopped and free product removed
- The site must be adequately characterized
- The dissolved plume must not be migrating
- Surface water or other sensitive receptors must not be impacted, and
- There should be no significant risk to human health or the environment.

Therefore, unless there is data showing the current extent of soil and groundwater contamination, additional site characterization will be required. Please provide a work plan for additional site characterization or data indicating the current limits of soil and groundwater contamination near both former USTs.

Three monitoring wells are proposed for the site. The location of the wells can use the northerly gradient previously determined at the site. Because of the known gradient and the Port's inability to use existing MW-1, one well should be located near MW-1 and one should be located south of UST GF-11. As mentioned in my prior letter, the well adjacent to UST GF-12 is approved, however, it should be installed after the tank pit spoils are removed. Unless the extent of soil and groundwater contamination has been previously determined, both soil and groundwater samples should be sampled in the monitoring well borings.

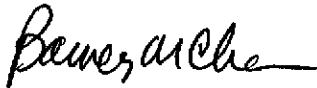
The Port also states that the entire Pacific Dry Dock Yard II site has already been sufficiently characterized and determined not to present an ecological or (human) health risk. The Port has taken this statement out of context. This statement was referring to the non-UST releases identified as being related to operations by the former tenant, Crowley Marine Services (Crowley). Clearly, this was not referring to the underground tank releases of which Crowley and our office had no knowledge of at the time of closure of the non-UST release case. It appears, upon review of past data, that the prior investigation was not extensive enough to characterize the UST release areas.

In regards to your letter dated September 1, 1999 commenting on perceived problems of residual contamination attributed to past Crowley operations, our office has received and reviewed the October 5, 1999 letter from Crowley responding to your claims. Our office does not intend to request any further information or work from Crowley regarding this matter. Our office welcomes your response to their letter.

Mr. D. Herman  
321 Embarcadero, Pacific Dry Dock Yard II  
StID # 1222  
October 18, 1999  
Page 3.

Please provide your written response to this letter **within 30 days or by November 19, 1999.**  
You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files

Ms. Y. Nordhav, Baseline Environmental Consulting, 5900 Hollis St., Suite D, Emeryville,  
CA, 94608

Mr. S. Wilson, Crowley Marine Services, P.O. Box 2287, Seattle, WA 98111-2287  
2PDDIIwp

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

R0423

September 16, 1999  
StID # 1222

Mr. Douglas Herman  
Port of Oakland  
530 Water St., 2<sup>nd</sup> Floor  
Oakland CA 94607

ENVIRONMENTAL HEALTH SERVICES

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

**Re: Work Plan for Pacific Dry Dock Yard II, USTs GF-11 and GF-12, 321 Embarcadero, Oakland CA 94606**

Dear Mr. Herman:

Our office has received and reviewed the September 7, 1999 Baseline work plan referenced above. The work plan follows our meeting where the initial January 1999 work plan by SCA Environmental was replaced with this one, which reflects a risk-based approach for site investigation. Our office would like to first address the requirements of the underground tank removal process then comment on this work plan. To complete the tank removal process, please address the following concerns:

- The underground piping from both underground tanks must be properly closed and appropriate sampling performed. Please provide a work plan, which describes how this will be done.
- The excavated soil samples were returned to the tank pits pending future remediation. Even though over-excavation is not proposed, the spoils should be removed and disposed of properly. Groundwater, if encountered during this removal, should be removed as much as possible, particularly if free product is present.

Prior to applying a risk-based approach for these USTs, you should determine if any additional site characterization is necessary. As you are aware, this is required before a risk-based approach may be applied. You are encouraged to review all past work to see if this data already exists. If necessary, please provide a work plan for additional site characterization or show the limits of soil and groundwater impact based on existing data.

Assuming that no additional characterization is shown necessary, our office has the following comments to the risk-based remedial action plan:

- It is appropriate to look at existing Water Board orders for similar sites when determining clean-up levels for this site ie Order No. 99-045 and 98-072. Therefore, as stated in your work plan, although on-site maximum concentrations of TPHd and benzo(a) pyrene in soil exceed the order action levels, they likely do not pose a risk to human health under current site conditions.
- The ecological risk of the UST releases, although lacking true groundwater samples from monitoring wells, may be estimated by existing grab groundwater data. Doing this, there appears potential TPHd and PAH levels above the cleanup levels, in addition to elevated oil and grease concentration without a site specific clean-up level being proposed.

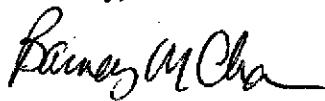
Mr. D. Herman  
StID #1222  
321 Embarcadero, Pacific Dry Dock Yard II  
September 16, 1999  
Page 2.

- The work plan proposes the installation of three monitoring wells located down-gradient of the two tank pits. The well adjacent to UST GF-12 is acceptable. Because groundwater is likely tidally influenced and the existence of MW1 near one of the proposed well, I recommend that the northeast well near UST GF-11 be relocated south of the former tank. Groundwater samples will be analyzed for TPHd, TPHmo, cadmium, chromium, lead, nickel and zinc and PAHs (following silica gel clean-up and glass fiber filtering) and aromatic volatile organics. Please take one shallow soil sample from each well borehole for the same chemical analysis mentioned above. Monitoring well MW1 should be included in your sampling and your gradient determination. You may proceed with the well installations if the amendments are acceptable.

Please provide your written response to this letter within 30 days or by October 18, 1999.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files  
Ms. Y. Nordhav, Baseline Environmental Consulting, 5900 Hollis St., Suite D, Emeryville,  
CA 94608  
PDDIIwp



ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



R0423

ENVIRONMENTAL HEALTH SERVICES

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

July 27, 1999  
StID #1222

Mr. Doug Herman  
Port of Oakland  
530 Water St.  
P.O. Box 2064  
Oakland CA 94604-2064

**Re: Updated Clean-up Levels for 321 Embarcadero, Oakland, CA 94606**

Dear Mr. Herman:

Thank you for sending me a copy of the May 17, 1999 Revised Cleanup Order for the San Francisco International Airport Tenants. As you are aware, our office has considered these proposed cleanup levels for the above site given its similar setting and the absence of any site specific toxicity studies. A number of these proposed cleanup levels are in the modified Table 2, proposed by SCA Environmental, Inc. for this site.

Our office approves the revised Table 2 cleanup levels with the following conditions:

- The proposed soil cleanup level for lead states that the extractable soluble lead concentration should be less than the WET or TCLP concentrations of 5 mg/l. Should soil extraction be necessary, a more appropriate extraction method would be either using an onsite groundwater or deionized water extraction and comparing this concentration against the SF Bay Basin Plan cleanup level.
- The proposed cleanup levels are ecological risk based numbers. You must also perform and pass a human health risk assessment. You may want to use the City of Oakland RBCA numbers for your assessment.
- These levels are approved as soil excavation cleanup levels. Should you choose to reuse soils up to these cleanup levels, you should obtain a waiver or approval from the Water Board.

You are reminded to contact me prior to your field work. I may be reached at (510) 567-6765.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files  
Ms. D. Heinze, Port of Oakland  
Mr. A. Hilliard, SCA Environmental, Inc., Four Embarcadero Center, Suite 480,  
San Francisco, CA 94111

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY  
DAVID J. KEARS, Agency Director

R2 423

July 1, 1999  
StID # 1222

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

Mr. Doug Herman  
Port of Oakland  
530 Water St.  
P.O. Box 2064  
Oakland CA 94604-2064

**Re: Work Plan for Pacific Dry Dock Yard II, 321 Embarcadero, Oakland CA 94606**

Dear Mr. Herman:

This letter follows up my prior December 4, 1998 letter, which commented on the November 30, 1998 Camp Dresser & McKee Draft work plan for remediation of the petroleum contamination from former underground storage tanks, GF-11 and GF-12 at the above site. As you are aware, this work plan called for the over-excavation of the two heating fuel tank pits. Confirmation soil and grab groundwater samples would be taken after the excavation activities. Depending on the extent of underground tank piping, additional excavation and soil sampling would be done after the removal of the piping.

In general, our office approved of the work plan, however, I had a few questions which were noted in my December 4, 1998 letter. These questions were addressed in the SCA Environmental, Inc. January 25, 1999 letter. The following summarizes the responses from your consultant:

- In the absence of any site specific ecological toxicity data, the most conservative values in the SFIA Order 95-136 and its updates of December 11, 1997 and July 16, 1998 will be used for clean-up levels. Table 2 in this work plan reflects the soil clean-up goals for TPHd, TPHg and TPHmo of 267, 26 and 1000 mg/kg, respectively. The 1000 ppm concentration for TPHmo is an arbitrary number, not based upon any toxicity data.
- The recommended clean-up levels for BTEX were referenced incorrectly in Table 2. Their source was actually from the same SFIA order and its updates. I mentioned to Mr. Andy Hilliard of SCA, that he could use either these clean-up levels or the industrial PRG values.
- The industrial PRG values can also be used as clean-up levels for semi-volatile organic compounds.
- I requested clarification as to when excavation would be terminated. Your consultant clarified this by stating the following conditions: unsafe soil conditions or groundwater intrusion, presence of buildings, increasing concentration of contaminant away from UST and sample results not indicative of a typical UST release. The first two items can be determined in the field, while the latter two will require sample analysis, interpretation and regulatory input.
- I had requested that field screening more appropriate for TPHd and TPHmo be used instead of the proposed PID instrument. The addition of a field screening kit applicable to these higher boiling materials is reflected on page 10 of Section 3.10.

Mr. Doug Herman  
321 Embarcadero  
StID #1222  
July 1, 1999  
Page 2.

- I inquired whether saturated soil would be excavated. The short answer is yes. This is due to the shallow groundwater at the site and the amount of contamination expected in these soils. Recall, the underground tanks were at a depth up to 12' bgs and groundwater is expected anywhere from 5-10' bgs. The higher boiling petroleum compounds tend to absorb to soil and would remain even in saturated soil. In addition, the impacted spoils from the excavations was reused to backfill the pits and may be now saturated.
- The sampling section of the work plan clarifies the location of soil samples. Please note that soil samples will not be necessary at locations, which are to be over-excavated.
- The analytical methods proposed have been clarified and methods 8021 and 8310 have been eliminated.

Mr. Hilliard had informed me that he would provide the modified Table 2 stating the clean-up levels, however, our office has not yet received the correction. So as not to delay this work, this letter approves the work plan and its amendments. Because these underground tanks were removed over one year ago, our agency is anxious to see this work performed. Please schedule this work **within the next 45 days or by August 16, 1999.**

Please notify me at least 72 working hours prior to this work. I may be reached at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files

Ms. D. Heinze, Port of Oakland

Mr. R. Smith, Camp Dresser & McKee Inc., 1440 Broadway, Suite 400, Oakland CA 94612

2wpap321Embarcadero

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



120423

December 4, 1998  
StID # 1222

Mr. Doug Herman  
Port of Oakland  
530 Water St.  
P.O. Box 2064  
Oakland CA 94604-2064

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

**Re: Draft Work Plan for Pacific Dry Dock Yard II, 321 Embarcadero Rd., Oakland CA 94606**

Dear Mr. Herman:

Our office has received and reviewed the November 30, 1998 Camp Dresser & McKee Draft Work Plan to address the petroleum hydrocarbon release from the two former underground storage tanks (GF-112 and GF-12) recently removed at the above site. As you are aware, the Port's former tenant, Crowley Maritime, is in the midst of finalizing a Risk Assessment for this site for the non-UST related releases. Their risk assessment does not include any of the recent underground tank data and it should be understood that this UST investigation in the County LOP (Local Oversight Program) is being considered independent of the non-UST (SLIC) release. As such, the work plan will be reviewed as solely a UST issue. In the long run, however, it may be appropriate to evaluate prior groundwater monitoring data to support a closure recommendation for these two underground tank releases. Thus, the request for site characterization, source removal, impact to groundwater and human health and ecological risk assessment is required.

The work plan calls for the over-excavation of each tank pit and the sampling of soil and groundwater. Our office has the following comments and concerns to be addressed:

- Because of the closeness of the Lake Merritt Channel and the Oakland Inner Harbor, soil and groundwater cleanup levels should be protective of human and estuarine life. In the absence of site specific toxicity data, the cleanup levels in the December 11, 1997 SFIA Water Board Order may be used as a starting point. Therefore, the "clean fill" soil concentrations should be replaced with concentrations consistent with the SFIA order. In regards to the semi-volatile levels, industrial PRGs values may be used.
- The main constituents of concern from these tanks appear to be TPHd, TPHmo and semi-volatiles. Therefore, a more appropriate screening tool other than a photoionization detector should be used. Field kits exist which estimate both TPHd and TPHmo would be a better selection.
- Under Conditions Under Which Excavation May Be Terminated the work plan states "Soil sample results do not match a typical leaking UST pattern,..." Please clarify what this means.

Mr. Doug Herman  
321 Embarcadero  
StID #1222  
December 4, 1998  
Page 2.

- The estimated extent of over-excavation states that the tank pits will be excavated to a depth of 10', however, groundwater may be encountered at a shallower depth. Will saturated soils be excavated or will excavation stop at groundwater ?
- In regards to the proposed sampling, based upon the extent of the proposed excavation one soil sample from each sidewall is appropriate. This assumes that groundwater will be encountered. The sampling for the piping run, which is scheduled for removal, should be sampled at a frequency of one sample per every 20 linear feet. Samples from beneath the joints and elbows should be collected within this frequency if possible.
- In regards to the parameters to be analyzed, only those previously identified in the initial samples require analysis. Although it is unclear whether all the listed parameters in Table 4 of the work plan will be run, please note that if analytical method 8260 is run, method 8021 is not necessary and if method 8270 is run, method 8310 is not necessary.

Please address these items of concern prior to scheduling your field work. You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files

D. Heinze, Port of Oakland

M. Heffes, Port of Oakland

Mr. R. Smith, Camp Dresser & McKee Inc., 1440 Broadway, Suite 400, Oakland CA 94612

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



Ro# 423

September 24, 1998  
StID # 1222

Port of Oakland Environmental  
Ms. Diane Heinze  
P.O. Box 2064  
Oakland CA 94604-2064

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

**Re: Underground Storage Tank Fuel Release at 321-325 Embarcadero, Former Pacific Dry Dock, Yard II, Oakland CA 94606**

Dear Ms. Heinz:

Our office has received and reviewed the September 3, 1998 Tank Closure Report for the Port of Oakland tanks, GF-11 and GF-12 at the above site as prepared by ITSI, your consultant. This report details the removal of two 5,000 gallon underground fuel tanks. They initially were believed to contain gasoline, however, it is now believed that they contained diesel and waste oil. Tank GF-12 was located on the north side of the property between buildings 301 and 302 while tank GF-11 was located on the south side of the property just east of Building 303.

It was evident by observation and confirmed through soil and groundwater sampling that a release of petroleum hydrocarbon had occurred. Mr. Douglas Herman of the Port noted this in a prior letter to our office.

Because of this verified release of petroleum hydrocarbon to soil and groundwater, this site has been transferred to the Local Oversight Program (LOP). As you are aware, there remains an on-going investigation regarding the non-UST releases at this site which Crowley Marine Services has undertaken. It appears that their investigation and this underground tank investigation can be done independently. As you are aware, our office is still reviewing the submitted reports for the Pacific Dry Dock (PDD) sites I and II for their potential closure recommendation. This situation is similar to the PDD Yard I site where the underground LOP case is being reviewed for closure concurrent with the non-UST release case. Therefore, although our office has not yet made any decisions, it is possible to close the non-UST (SLIC) site while the LOP UST case remains open.

At this time, our office has been informed that these recently removed petroleum USTs from former Yard II are the sole responsibility of the Port of Oakland. Should you disagree with this opinion, please provide evidence and documentation to show otherwise. The recently sent Notice of Responsibility (NOR) letter reflects this assumption.

Our office has looked at the existing data provided by Crowley as it relates to the recent UST removals. It appears that there is insufficient data to fully characterize the fuel releases from Yard II. Because of this, you are requested to provide a work plan to fully characterize the release and determine the extent of the release in soil and groundwater. You may wish to re-examine the existing data to determine if you agree with the County's appraisal.

Ms. D. Heinze  
321-325 Embarcadero, Former PDD Yard II  
StID # 1222  
September 24, 1998  
Page 2.

Please provide a work plan and/or a technical report examining existing site data to our office within 30 days or by October 26, 1998.

Enclosed please find an ULR form. Please complete and return to our office by October 2, 1998.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

Enclosure (ULR-Ms. Heinze)

C: B. Chan, files

Mr. S. Wilson, Crowley Marine Services, 2401 Fourth Ave., Seattle, WA 98121  
Ms. M. Heffes, Port of Oakland  
Mr. D. Herman, Port of Oakland  
Mr. D. Pantages, ACEH  
Mr. T. Peacock, ACEH  
Mr. H. Gomez, City of Oakland, OES, 505 14<sup>th</sup> St., 7<sup>th</sup> Floor, Oakland CA 94612

UstPDD2

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RO # 1097 (#1441 Embarcadero)

✓ RO # 423 (#321 Embarcadero)

January 21, 1998

**Mr. R. Stephen Wilson**  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

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

**Ref: Environmental Investigation and Remediation at Pacific Dry Docks Yards I and II,  
1441 Embarcadero and 321 Embarcadero, Oakland, CA - 94606**

Dear Mr. Wilson:

This Department is in receipt and has reviewed the reports, Sampling Work Plan, dated November 14, 1997, prepared by Risk-Based Decisions (RBD), Draft Work Plan, dated September 1997, prepared by Geomatrix Consultants, Evaluation of the Work Plan Prepared by Geomatrix, dated December 9, 1997, prepared by RBD and Comments on the Sampling Work Plan, dated December 4, 1997, prepared by Geomatrix for the above referenced sites.

A letter, dated August 27, 1997 was sent to your attention requesting that both the parties, Crowley Marine Services and Port of Oakland confer and submit a mutually acceptable work plan. According to your letter dated, November 14, 1997, this was not feasible as both the parties could not resolve the differences regarding the sampling plan. This Department is concerned about the significant delay this has caused in initiating the required investigations at the referenced site and the inordinate amount of staff-time spent in reviewing the additional work generated by both the parties. Based on the information submitted, this Department has decided that the sampling work plan submitted by RBD is acceptable with the below given modifications. **Please submit a revised work plan incorporating the changes within 20 days from the date of this letter.**

**For Yard I - Western Section**

In the former UST area, diesel, gasoline and benzene (1.3 ppm) were identified at depths between 3.4 ft to 4ft bgs in boring BH12. Since complete information is not available as to the closure of this tank, at least 1 additional shallow and deep sample should be collected from this area and analyzed for TPH as gasoline and BTEX.

The area near the previous sampling location BH10 and BH12 was used for **drum storage**, and since no VOC samples have been collected, at least 1 shallow sample from this area should be analyzed for VOC's, and TRPH. Also, a sample should be collected at shallow depths from each of the two remaining **material storage areas** (marked on the enclosed map) and sampled for VOC's and TRPH since no samples have been collected from these areas previously.



A total of five soil samples were analyzed for **metals** in the western section out of which only one sample (BH9) was from a depth less than 5 feet. Also, two of the soil samples collected from borings, MW1 and MW3 had concentrations of arsenic above the preliminary remediation goals (PRG's) for a residential scenario but less than the background concentrations listed by RBD in their sampling plan. Hence, at least 1 shallow soil sample should be collected from each of the areas near MW1 and MW3 and analyzed for Title 22 metals.

Monitoring wells, MW1, and MW3 should be sampled and analyzed for VOC's, metals and PNA's and one groundwater sample should be collected in the former machine shop area and analyzed for VOC's and metals.

#### **For Yard 1 - Eastern Section**

A shallow soil sample should be collected from the **former paint booth area** (marked in the enclosed map), and analyzed for metals and VOC's.

At least one **groundwater sample** should be collected from each of the former paint storage and the paint booth area (marked in the map), and analyzed for VOC's and metals. Additionally, at least 1 groundwater sample should be collected in the furthest down gradient direction and analyzed for all VOC's, BTEX, PNA's, and metals. This data is needed to later evaluate the risk to marine life.

#### **For Yard 2**

The proposed samples **13a1s and 13a2s** should also be sampled for metals, apart from VOC's due to the previous use of this area for various purposes. Also, 1 deep soil sample (between 3 to 5 ft bgs) should be collected from this area and analyzed for both metals and VOC's.

At least one **groundwater sample** should be collected from each of the following areas:

Degreaser area/machine shop area and analyzed for VOC's, metals, TRPH and SVOC analysis ;

Former sandblast grit storage area analyzed for VOC's and metals analysis; and

Furthest down gradient direction and analyzed for all VOC's, BTEX, PNA's, and metals (This data is needed to later evaluate the risk to marine life).

#### **PCB Issue**

Although it is not confirmed that PCB's were used on site, there is a probability the marine paints and oil used on ships contained PCB's . Hence, collect 1 shallow sample from each of the following areas and analyze for PCB's:

One sample from the area where bilge water was disposed; and

One sample from the sandblast storage area.

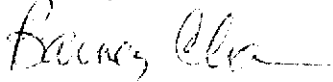
## Screening the Results of the Composite Samples

The screening process proposed for the composite samples is acceptable to this Department except that the adjusted concentrations of the composite sample should be compared to the preliminary remediation goals (PRGs) based on a cancer risk of  $10^{-6}$  for carcinogens and a hazard index of 1 for non-carcinogens. This decision was based on using the PRG concentrations as a screening tool to evaluate data adequacy and not for the purpose of evaluating risk to human health (for which the acceptable risk would be  $10^{-5}$ ).

Please include in the modified sampling plan, revised locations for random samples after excluding the additional target locations. Please note that based on the results of the investigation, additional work may be required prior to evaluating the risk for the referenced sites.

If you have any questions, you may reach me at (510) 567-6765

Sincerely,



Barney Chan  
Hazardous Material Specialist

**Ms. Rachelle Hess**, Port of Oakland, 530 Water ST., Oakland, CA - 94604

**Mr. I. Jamall**, Risk based Decisions, Inc. 910 Florin Rd, Suite 2020, Sacramento, CA - 95831

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



• RO# 1097 (# 1441 Embarcadero)

✓ RO# 423 (# 321 Embarcadero)

January 14, 1998

**Mr. R. Stephen Wilson**  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

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

**Ref: Environmental Investigation and Remediation at Pacific Dry Docks Yards I and II,  
1441 Embarcadero and 321 Embarcadero, Oakland, CA - 94606**

Dear Mr. Wilson:

Please remit \$4000 for Yard II and \$1000 for Yard I to cover the current negative balance for the projects and for continued oversight of the referenced sites. This deposit is authorized by Alameda County ordinance code section 3-141.6 to cover the expenses incurred by County personnel for their oversight duties. Records are maintained for the time County employees commit to a project and deposit will be debited at the rate of \$94.00 per hour for any time dedicated to your project. Any money remaining in your account at the end of the project will be refunded. Additional monies may be needed if the project exhausts the fund. Please submit a check payable to "Treasurer, County of Alameda" with the words "Site Mitigation" written on the check for proper credit. Also, please make sure to include the complete address of the site for which the deposit-refund account is being established.

If you have any questions, you may reach me at (510) 567-6765

Sincerely,

Barney Chan,  
Hazardous Material Specialist

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0423

December 18, 1997

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 150  
Alameda, CA 94602-8317  
(510) 567-8700  
FAX (510) 567-8835

ATTN: R. Stephen Wilson

Crowley Maritime Plaza  
2401 Fourth Ave 11th Floor  
Seattle WA 98121

RE: Project # 1226A - Type M  
at 321 Embarcadero in Oakland 94606

Dear Property Owner/Designee:

Our records indicate the deposit/refund account for the above project has fallen below the minimum deposit amount. To replenish the account, please submit an additional deposit of \$1,000.00, payable to Alameda County, Environmental Health Services.

It is expected that the amount requested will allow the project to be completed with a zero balance. Otherwise, more money will be requested or any unused monies will be refunded to you or your designee.

The deposit refund mechanism is authorized in Section 6.92.040L of the Alameda County Ordinance Code. Work on this project will be debited at the Ordinance specified rate, currently \$94 per hour.

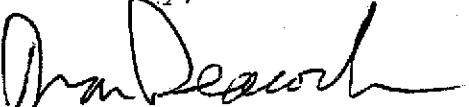
Please be sure to write the following identifying information on your check:

- project #
- type of project and
- site address

(see RE: line above).

If you have any questions, please contact Barney Chan  
at (510) 567-6765.

Sincerely,

  
Tom Peacock, Manager  
Environmental Protection

cc: files/inspector

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



RO# 1097 (1441 EMBARCADERO)

✓ RO# 423 (321 EMBARCADERO)

September 29, 1997  
SLIC StID # 1222 & 1420

Mr. R. Stephen Wilson  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

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

**Re: Environmental Investigation and Remediation at Pacific Dry  
Docks Yards I and II, 1441 Embarcadero and 321 Embarcadero,  
Oakland CA 94606**

Dear Mr. Wilson:

I have received your request for an extension of our office's September 29, 1997 deadline for the submittal of a mutual work plan for additional site assessment for the above referenced sites. I understand that some progress has been made in the meetings with your consultant and that of the Port of Oakland. I further understand that the Port's consultant has prepared their own individual work plan. Because our office would like to see a work plan with both parties input, we will grant the extension requested, November 15, 1997, on the condition that if the mutual work plan is not submitted by this date, we will request that the Port send their consultant's work plan for review.

In addition, you are again requested to submit a copy of the shoreline soils removal report for both sites and a copy of "Attachment 2" referenced in your May 29, 1997 letter.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

c: B. Chan, files

Ms. D. Heinze, Port of Oakland, 530 Water St., P.O. Box 2064,  
Oakland CA 94604

Ms. M. Heffes, Port of Oakland, Legal Department, 530 Water  
P.O. Box 2064, Oakland CA 94604

Ms. R. Hess, Port of Oakland, P.O. Box 2064, Oakland 94604

Ms. Beth Hamilton, Enea, Piunti & Hamilton, 60 S. Market St.,  
Suite 730, San Jose, CA 95113

Mr. I. Jamall, Risk-Based Decisions, Inc., 910 Florin Rd.,  
Suite 202, Sacramento, CA 95831

Mr. Steve Moore, RWQCB

3PDDI&II

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



STD#  
R0# 1097: ~~1420~~: 1441 EMBARCADERO

✓ R0# 423: STD# 1222: 321 EMBARCADERO

August 27, 1997  
SLIC StID # 1222 & 1420

Mr. R. Stephen Wilson  
Crowley Marine Services, Inc.  
2401 Fourth St.  
Seattle, WA 98111

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

**Re: Environmental Investigation and Remediation at Pacific Dry  
Docks Yards I and II, 1441 Embarcadero and 321 Embarcadero,  
Oakland CA 94606**

Dear Mr. Wilson:

Our office has received the Risk Assessment reports for both of the above referenced sites as prepared by Dr. Ijaz Jamall of Risk-Based Decisions, Inc. Prior to reviewing these documents, I verbally requested that you submit a copy of the shoreline soils removal report for both sites. We further request copies of the "Attachment 2" referenced in your May 29, 1997 letter.

You are aware that the Port of Oakland retained the consulting firm, Geomatrix, in order to review the existing data for both sites. Their objective was to determine if sufficient site characterization had been performed prior to completing a risk assessment. Our office was submitted a Geomatrix report detailing extensive additional recommended investigation for both sites. In response to this report, our office has also received your May 29, 1997 letter and the May 28, 1997 Gauntlett Group report which responds to the Geomatrix report, basically stating that no further work is warranted. At this time, our office is in the unfortunate position of determining which recommendation should be taken.

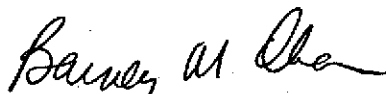
Our office would like the parties to confer and come to a mutually acceptable decision, however, we are prepared to evaluate the information provided as provided. Because the Geomatrix report was not specific in its recommended sampling, our office requests a specific supplemental work plan for any additional site investigation. Please provide **within 30 days or by September 29, 1997** either a work plan or notification that no additional work is recommended.

If no additional report is provided, our office will evaluate **both** submitted reports in consideration as to the future requirements for these sites.

You may contact me at (510) 567-6765 if you have any questions.

Mr. R. Stephen Wilson  
Pacific Dry Dock Yard I & II  
August 27, 1997  
Page 2.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

c: B. Chan, files

Ms. D. Heinze, Port of Oakland, 530 Water St., P.O. Box 2064,  
Oakland CA 94604

Ms. M. Heffes, Port of Oakland, Legal Department, 530 Water  
P.O. Box 2064, Oakland CA 94604

Ms. Beth Hamilton, Enea, Piunti & Hamilton, 60 S. Market St.,  
Suite 730, San Jose, CA 95113

Mr. I. Jamall, Risk-Based Decisions, Inc., 910 Florin Rd.,  
Suite 202, Sacramento, CA 95831

Mr. Steve Moore, RWQCB  
2PDDI&II

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0#423

February 21, 1997  
SLIC ID # 1222

Mr. R. Stephen Wilson  
Manager, Environmental Compliance  
Crowley Maritime Services, Inc.  
P. O. Box 2287  
Seattle, WA 98111-2287

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

**NOTICE OF VIOLATION**

**Re: Request for Technical Reports for Pacific Dry Dock, Yard II,  
321 Embarcadero, Oakland 94606**

Dear Mr. Wilson:

In my last letter to you, dated July 15, 1996, I outlined a number of issues which were intended to continue the subsurface investigation at the above site, both on and offsite. Enclosed, please find a copy of this letter. Along with the specific items mentioned in the letter, it was assumed that you would continue quarterly groundwater monitoring at this site. To date, our office is not aware that any of the items mentioned in the above referenced letter have been addressed, nor have we received any groundwater monitoring reports.

At this time, you are requested to provide a written report and work plan addressing the seven (7) items mentioned in my July 15, 1996 letter and re-initiate groundwater monitoring. Please provide your reports/workplan **within 30 days or by March 25, 1997**. It appears that the last time this site was monitored was 12/95 over one year ago.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

enclosure

cc: Mr. P. Graff, Versar, 7844 Madison Ave., 167 Fair Oaks, CA  
95628

Ms. D. Heinze, Port of Oakland, 530 Water St., Oakland,  
94607

Mr. S. Moore, RWQCB, Surface Water Protection Division  
B. Chan, files NOV321Em





August 2, 1996

Doug Herman  
Port of Oakland  
530 Water St.  
Oakland CA 94607

DEPARTMENT OF ENVIRONMENTAL HEALTH  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6777

**RE: Abandoned Underground Storage Tanks at  
321 Embarcadero, Oakland 94606 (Our site #1222)**

### NOTICE OF LEGAL OBLIGATION

Dear Mr. Herman:

Recently we discussed the abandoned underground tanks that remain in place at 321 Embarcadero. This parcel is owned by the Port of Oakland. The former tenant, Crowley Marine Services, has removed the one tank that they claim to have operated at this address. Visual inspections of the site and reports from environmental investigations indicate that at least two tanks remain. No permit to operate these tanks has been submitted to this office.

The UST laws and regulations require that the owner either apply for a permit and properly monitor the tanks for leaks, or properly close the tanks. It is clear that the Port has no intention of operating these tanks. So, by **August 23, 1996** you must submit completed "A" and "B" tank information forms (enclosed) and submit a written plan for closure of the tank (forms and additional information enclosed).

You may contact me at (510)567-6770 with any questions regarding the UST closure permit processes.

Sincerely,

Pamela J. Evans  
Senior Hazardous Materials Specialist

Enclosures

c: Gordon Coleman, ACDEH  
Don Atkinson-Adams, ACDEH  
Barney Chan, ACDEH

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY



DAVID J. KEARS, Agency Director

20423

July 15, 1996  
SLIC ID # 1222

ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6700

Mr. R. Stephen Wilson  
Manager, Environmental Compliance  
Crowley Maritime Services, Inc.  
P. O. Box 2287  
Seattle, WA 98111-2287

**Re: Status of Investigation at Pacific Dry Dock, Yard II,  
321 Embarcadero, Oakland 94606**

Dear Mr. Wilson:

This letter serves to reply to your cover letter dated July 2, 1996 wherein you stated you would welcome the opportunity to meet to discuss what additional work, if any, would be necessary to lead the above referenced site to closure.

Following our office's review of the file for this site, I have the following concerns which should be addressed prior to considering closure:

1. The subject of the sediments in the estuarine portion of Yards I & II still must be addressed, even though our office is not the lead agency. Concurrent to any request for site closure, you should also be contacting the Surface Water Division of the Regional Water Quality Control Board (RWQCB) to determine what additional work they will require. At a minimum, specific cleanup levels for the metals: mercury, copper, lead and zinc were given by the RWQCB for the sediments. Please keep our office aware of your progress in the remediation of the shoreline soils. Site closure should be for both the onsite and estuarine portions.
2. The subject of underground tanks has been previously discussed with you whereby all existing tanks were claimed to be the responsibility of the Port of Oakland. Even if this is the case, you should determine if any of the existing tanks serve as a source of continuing groundwater contamination.
3. Based on the continuing presence of total petroleum as diesel and chlorinated solvents detected in groundwater monitoring wells, please consider the need to determine the extent of groundwater contamination.
4. As an estimate of groundwater impact to Lake Merritt Channel, the levels of contamination being detected in MW4 should be evaluated as to its potential risk to estuarine life. Although temporary groundwater sampling points were installed at this site, the true impact to surface water may require a permanent

Mr. R. Stephen Wilson  
321 Embarcadero, Pacific Dry Dock Yard II  
SLIC # 1222  
July 15, 1996  
Page 2.

monitoring well. Please comment on the need to install additional wells.

5. Please have PNA's (polynuclear aromatics) run on the next sampling of MW4 due to the presence of TPHd and motor oil in this well.

6. Stained soils have been noticed in several areas on this site, please address the remediation of these areas.

7. A baseline human health and aquatic risk assessment should be performed on this site. This will determine whether risk and additional work is necessary at this site.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: Mr. P. Graff, Versar, 7844 Madison Ave., 167 Fair Oaks, CA  
95628  
Mr. D. Heinze, Port of Oakland, 530 Water St., Oakland,  
94607  
Mr. S. Moore, RWQCB, Surface Water Protection Division  
G. Coleman, files  
RA321Em

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



RO#423

ARNOLD PERKINS, DIRECTOR

January 17, 1996

Dan Schoenholz  
Port of Oakland  
530 Water St.  
Oakland CA 94607

Alameda County Health Care Agency  
Department of Environmental Health  
Div. of Environmental Protection  
1131 Harbor Bay Pkwy, Suite#250  
Alameda CA 94502-6577 [CC430-451]  
Ph. (510) 567-6700 FAX (510) 337-9335

**RE: 321 Embarcadero Av., Oakland and other Port of Oakland Sites**

Dear Mr. Schoenholz:

Recently we discussed underground tanks that remain in place at 321 Embarcadero. The former tank operator, Crowley Marine Services, has removed the one tank that they claim to have operated at this address. Visual inspections of the site and reports from environmental investigations indicate that three (3) to five (5) tanks remain.

At such time that Port of Oakland determines that the number of tanks is definitely more than or less than three, or identifies another responsible party to be billed for tank fees, this agency will continue to bill the Port for three tanks at 321 Embarcadero Ave.

I am also interested in knowing whether the following Port of Oakland facilities operate any remaining underground tanks or generate hazardous waste, including waste oil and parts cleaning solvent, and batteries:

1755 Embarcadero  
2801 7th St.  
5190 7th St.

Berth 30  
801 Maritime

Any information or referrals you can provide for these sites would be helpful. You can reach me regarding these sites or 321 Embarcadero at 567-6770.

Sincerely,

Pamela J. Evans  
Senior Hazardous Materials Specialist

c: Norma Arreguin, ACDEH  
Don Atkinson-Adams, ACDEH  
Barney Chan, ACDEH

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0423

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510) 567-6700

September 22, 1995  
SLIC ID # 1222

Mr. R. Stephen Wilson  
Manager, Environmental Compliance  
Crowley Maritime Services, Inc.  
P. O. Box 2287  
Seattle, WA 98111-2287

Re: Comment on Draft Addendum to Site Investigation Workplan for  
Pacific Dry Dock, Yard II, 320 Embarcadero, Oakland 94606

321

Dear Mr. Wilson:

This letter serves to comment on the above referenced work plan addendum prepared by your consultant, Versar. I have spoken with Mr. Phil Cox of Versar and understand that a signed copy of this draft is going to be sent to me. I also understand that no corrections have been made to this draft. This being the case, I would like to comment on this addendum which proposes to install an additional four monitoring wells at this site.

Our office concurs with this work plan and I understand that this field work will commence on Monday, September 25, 1995. Please note that our office has the following comments/requests:

Please add either Total Oil and Grease or TPH as motor oil and the metals; mercury, copper, lead and zinc to the analytes to be tested for in your soil and groundwater samples.

You should also be aware that the soil contamination detected near the presumed tanks between area 2 buildings must be addressed. The proposed wells do not reflect groundwater downgradient to this area.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Barney M. Chan".

Barney M. Chan  
Hazardous Materials Specialist

cc: Mr. P. Cox, Versar, 7844 Madison Ave., 167 Fair Oaks, CA  
95628

Mr. D. Schoenholz, Port of Oakland, 530 Water St., Oakland,  
94607

Mr. S. Moore, RWQCB, Surface Water Protection Division  
G. Young, files well1321Em

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0423

RAFAT A. SHAHID, Director

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Environmental Protection Division  
1131 Harbor Bay Parkway, #250  
Alameda, CA 94502-6577  
(510) 567-6700

June 29, 1995  
SLIC # 1222

Mr. R. Stephen Wilson  
Manager, Environmental Compliance  
Crowley Maritime Services, Inc.  
P. O. Box 2287  
Seattle, WA 98111-2287

**Re: Status of Subsurface Investigation at Pacific Dry Dock Yard  
II, 321 Embarcadero, Oakland CA 94606**

Dear Mr. Wilson:

Thank you for the submittal of the June 14, 1995 Groundwater Monitoring Well Installation report prepared by Versar, your consultant. I have reviewed this report. Based on its results, at a minimum, you should continue to monitor these wells on a quarterly basis. Please submit a quarterly groundwater report within 45 days of each quarterly monitoring event.

Our office has a number of questions relating to this site which we require clarification. It appears that our office and that of the Port of Oakland reviewed a June 13, 1991 Versar report which detailed the results of a number of shallow borings soil samples at this site. These borings identified areas of both organic (petroleum) and inorganic (metals) contamination. This report further recommended the installation of six monitoring wells and up to 19 borings in areas of known or suspected contamination. Both our office (Mr. Paul Smith) and the Port of Oakland ( Mr. Dan Schoenholz) responded with letters commenting on this work plan. In September 1994, I was informed by Mr. Larry Kleinecke that Versar had initiated this work. It was also at this time that I met you at the site when I oversaw the removal of an underground fuel tank. At this time, we noticed evidence of additional fuel tanks which you stated belonged to the Port of Oakland. **Please verify that any existing tanks at this site are property and responsibility of the Port of Oakland.**

No report ever was received for the work which occurred in September 1994 (other than the tank removal), therefore, I assume that the results of this investigation are to be included in the forthcoming Problem Assessment Report (PAR) mentioned in your June 22, 1995 coverletter to the June 14 Versar report.

Mr. R. Stephen Wilson  
SLIC # 1222  
321 Embarcadero, Oakland  
Pacific Dry Dock, Yard II  
June 29, 1995  
Page 2

Our office has the following concerns/requests to which we request a written response:

1. Please provide evidence that any remaining underground tanks are not the responsibility or property of Crowley Marine Services. This should be in the form of a written agreement with the Port of Oakland.
2. Please inform our office if the work outlined in the June 1991 Versar report has been completed. Have there been any changes as to the contents of this work plan? If not, when will the other three monitoring wells be installed? Will they be located as shown in Figure 3-1 in the 1991 report? When will all the results of the borings be reported to our office?
3. Our office understands that the offshore release of materials from this site are being dealt with through the Regional Water Quality Control Board, Surface Water Protection Division and this issue is separate from the on-site subsurface release of which the County has assumed lead. Please confirm this belief.

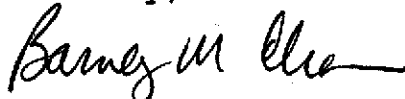
It appears that our office has not been informed of the progress of this site investigation in a timely fashion. Also, proposed work has not occurred in a timely fashion. If a June 1991 work plan was reviewed and commented on by our office and work only recently completed, or if work was performed in September 1994 and we have not yet received a written report, this is not acceptable. To this end, our office requests a written update on this site, including response to the above items, within 30 days or by July 31, 1995. Please also include in your PAR, all analytical results, your work plan for additional assessment and a timetable for its implementation.

Failure to submit the requested information may subject Crowley Marine Services to civil liability and referral of this site to the Water Board or the District Attorney's Office for enforcement.

Mr. R. Stephen Wilson  
SLIC # 1222  
321 Embarcadero, Oakland  
Pacific Dry Dock II  
June 29, 1995  
Page 3

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: G. Jensen, Alameda County DA Office  
Mr. P. Cox, Versar, 7844 Madison Ave., 167 Fair Oaks, CA  
95628  
Mr. D. Schoenholz, Port of Oakland, 530 Water St., Oakland  
94607  
Mr. S. Moore, RWQCB, Surface Water Protection Division  
J. Makishima, files

PAR321Em



ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0423

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

September 29, 1994  
StID #1222

Mr. Stephen Wilson  
Crowley Marine Services  
2401 Fourth Ave.  
P.O. Box 2287  
Seattle, WA 98111

Re: Copy of Charges for Alameda County Oversight of <sup>321</sup>~~320~~  
Embarcadero, Oakland CA 94606, PDDII.

Dear Mr. Wilson:

As requested, enclosed please find copies of all charged actions performed by our office in regards to the oversight of the above referenced site. I hope this satisfies your inquiry and will facilitate the submittal of a check for the previously requested \$1000.00. As you can see, the current account is in arrears in the amount of \$303.75.

You may contact me at (510) 567-6765 should you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

cc: G. Jensen, Alameda County District Attorney Office  
E. Howell, files

2dep325

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0423

RAFAT A. SHAHID, Assistant Agency Director

August 2, 1994

Alameda County  
Health Care Services Agency  
Dept. Of Environmental Health  
1131 Harbor Bay Pkwy 2nd Flr.  
Alameda Ca 94502-6577

Mr. R. Stephen Wilson  
Crowly Maritime Plaza  
P.O. Box 6287  
Seattle, WA 98111

**RE: Request for Additional Deposit for County Oversight of  
321 ~~320~~ Embarcadero , Oakland CA 94606 former Pacific Dry  
Dock , Yard II**

Dear Mr. Wilson:

This letter is in response to your inquiry as to how your previous \$1000.00 deposit was spent. Enclosed please find a copy of all three account sheets for this project with a description of each billing activity. As you can see, the balance of funds is in arrears and in order to continue our oversight of this project, an additional \$1000.00 deposit was requested in our May 18, 1994 letter. I hope the enclosed documents answers your question and hope to be receiving your additional deposit shortly.

Please be aware, our offices have recently moved to: **1131 Harbor Bay Parkway, Room 250, Alameda CA 94502.**

If you have any questions, you may reach me at (510) 567-6700.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

enclosure (Mr. Wilson)

cc: E. Howell, files

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



RO 1097 (1441 Emb.)

✓ R0423 (321 Emb.)

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Division  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(510) 271-4320

October 4, 1992

Mr. George A. Brooks  
Manager, Environmental Control  
Crowley Maritime Corporation  
Crowley Maritime Plaza  
Post Office Box 2287  
Seattle, Washington 98111

Re: Pacific Dry Dock Yard II located at 320 Embarcadero,  
Oakland, CA 94606

Dear Mr. Brooks:

This is a follow up to August 13, 1992 correspondence sent to you from this office. The work plan was approved conditional to the inclusion of six items stated in that correspondence. Upon review of the file for the above project it became apparent that an initial deposit/refund account had never been established.

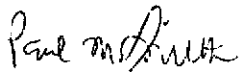
The deposit refund mechanism in which fees associated with the regulatory oversight, of a project can be billed to a Responsible Party, is authorized by Alameda County Ordinance Code Section 3-140.5 (z). You are requested to remit \$ 1000.00 to cover expenses incurred by this Department in the review of the 320 Embarcadero site. The funds will be billed against at the rate of \$ 71.00 per hour. Any unused portion of funds charged will be returned to you at the completion of the project.

Additionally, please provide an update of your intentions regarding the implementation of the approved work plan and

Mr. Brooks  
October 5, 1992  
page 2 of 2

include a timetable for both the implementation of the proposed work, the removal of the underground storage tanks and the completion of the HMMPs for the 321 and the 1441 Embarcadero sites. Please provide the above to this office within 30 days of the receipt of this letter.

Sincerely,



Paul M. Smith  
Senior Hazardous Materials Specialist

cc:

- Mr. John Dunn, Facility Manager, Pacific Dry Dock, 1441 Embarcadero, Oakland, CA 94606
- Mr. Rich Hiett, San Francisco Regional Water Quality Control Board, 2101 Webster St., 5th floor, Oakland, CA 94612
- Mr. Dan Schoenholz, Port of Oakland, 530 Water St., Oakland, CA 94607
- Mr. Gil Jensen, Alameda County District Attorneys Office, 7677 Oakport, 4th floor, Oakland, CA 94621
- Ms. Yvonne M. Lembi, Versar Inc., 5330 Primrose Drive, Suite 228, Fair Oaks, CA 95628-3520.

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0423

321 Embarcadero  
Oakland, CA

RAFAT A. SHAHID, /

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Division  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(510) 271-4320

August 13, 1992

Mr. George A. Brooks  
Manager, Environmental Control  
Crowley Maritime Corporation  
Crowley Maritime Plaza  
Post Office Box 2287  
Seattle, Washington 98111

**Re: Pacific Dry Dock Yard II located at 320 Embarcadero,  
Oakland, CA 94606**

Dear Mr. Brooks:

Alameda County has performed a review of the Site Investigation Work Plan dated June 13, 1991 prepared by Versar Inc. We have also had the opportunity to perform a site inspection at the above site.

The work plan outlines results of a previous subsurface investigation performed by Versar, Inc. Results of 20 soil samples collected indicate subsurface contamination at five locations as high as 109,000 ppm of Total Petroleum Hydrocarbons (TPH), 61 ppm total Chromium, 1,900 ppm Copper, 7,500 ppm Lead, 26 ppm Mercury, 0.21 ppm Tetrachloroethene and 0.30 ppm of bis(2-ethylhexyl) phthalate.

Based upon the results outlined above Versar is proposing to perform approximately 19 additional borings and install 6 monitoring wells. The proposal is hereby approved with the following inclusions:

1) The proposal specifies that 5 wells four inch wells will be installed and that one well will be a two inch inside diameter well. The work plan does not specify the location of the two inch well. You are requested to clarify this point.

2) Please specify the soil sampling depths, well installation depths and well screening intervals to be observed.

3) The listing for the analysis of future soil and groundwater samples to be collected did not specify analysis for total chromium. Because sample results from PDDII-1 indicated a level of total chromium exceeding ten times the soluble limit threshold concentration specified in Title 22 of the California Code of Regulations, you are required to also analyze all samples for

Mr. Brooks  
August 13, 1992  
page 2 of 3

this substance. Additionally, regarding groundwater samples to be collected, the work plan specifies that "not all of the samples will be analyzed for the listed constituents". You are required to analyze each groundwater sample collected for all pollutants previously identified at the site.

4) Regarding the site safety plan. You are requested to specify the monitoring equipment to be used during the proposed drilling/ monitoring well installation.

5) You are requested to have your Consultant notify this office in advance of the boring work to be performed at the site so that a representative from this Department can be present to observe some phase of the work being performed.

6) The initial subsurface report prepared by Versar did not include the original analytical data or chain of custody. When preparing the soils report following the next phase of work please include this information and any Quality Assurance and Quality Control data relevant to these data.

Regarding the site inspection performed by this Office on May 5, 1992, the following issues were noted:

1) In the area of the powerhouse building is an old boiler and ancillary piping containing what appears to be asbestos wrapping. Will this material be removed when Pacific Dry Dock vacates the premises?

2) There are several underground storage tanks (usts) in front of the power pack shop. The law requires that underground storage tanks be either properly permitted (which includes monitoring and performing annual tank integrity tests) or removed. Please specify your intentions regarding these tanks. Based upon results of the initial Versar study it appears that petroleum hydrocarbon soil contamination in the area of these usts has been associated with fuel tank activity

3) Behind the area of the warehouse where supplies and hazardous materials are stored is a metal bin containing several ruptured and dried up asphalt roofing material containers. The asphalt must be properly used or disposed of.

4) Numerous hazardous material and waste containers were noted at several locations throughout the facility. Based upon the threshold reporting quantities specified in California Assembly Bill 2185, businesses storing hazardous materials above 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet (compressed gasses) are required to prepare a Hazardous Materials

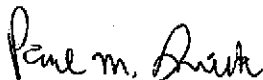
Mr. Brooks  
August 13, 1992  
page 3 of 3

Management Plan (HMMP). Because materials containing such quantities are currently stored at both Pacific Dry Dock locations, the law requires that each site complete an HMMP. I am aware that it is your intention to vacate the above premises however, upon inspection, it was quite apparent that several businesses continue to function at the site.

Please complete an HMMP for the 321 Embarcadero and also for the 1441 Embarcadero facility within 30 days of the receipt of this letter by September 15, 1992. Enclosed is an HMMP form for your review.

If you have any questions regarding the content of this letter please feel free to contact me at (510) 271-4320.

Sincerely,



Paul M. Smith  
Senior Hazardous Materials Specialist

cc:

- Mr. John Dunn, Facility Manager, Pacific Dry Dock, 1441 Embarcadero, Oakland, CA 94606
- Mr. Rich Hiett, San Francisco Regional Water Quality Control Board, 2101 Webster St., 5th floor, Oakland, CA 94612
- Mr. Dan Schoenholz, Port of Oakland, 530 Water St., Oakland, CA 94607
- Mr. Gil Jensen, Alameda County District Attorneys Office, 7677 Oakport, 4th floor, Oakland, CA 94621
- Ms. Yvonne M. Lembi, Versar Inc., 5330 Primrose Drive, Suite 228, Fair Oaks, CA 95628-3520.

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0423

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Program  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(415)

July 1, 1991

Amy Loftus  
Blymyer Engineers, Inc.  
1829 Clement Ave.  
Alameda, CA 94501

Dear Ms. Loftus:

This letter is being sent in response to your letter dated June 20, 1991 requesting information for indicated sites located in the 94606 zip code.

Review of our files showed the following:

1. 499 Embarcadero

Insight Designs - This company performs photodeveloping, etching, and tooling. Hazardous materials are stored and hazardous waste is generated at this site. It was last inspected on May 6, 1991.

The Boardwalks - This company performs plating. Hazardous materials are stored and hazardous waste is generated at this site. It was last inspected on May 6, 1991.

In addition to those noted above several other businesses located at this same address also handle hazardous materials. However, no known ground contamination has occurred at this site.

2. 1905 Dennison St.

Bytech Designs - This business stores hazardous materials, but does not generate hazardous waste. Underground tanks do exist at this site, but are no longer in use. These tanks were closed in place in 1987 with the approval of this office. No contamination was discovered.

(R0423) 3. 321 Embarcadero

Crowley Environmental Inc. / Pacific Drydock and Repair Co. This facility was an active drydock and boat repair yard until it ceased operations in May, 1991. The number of



Amy Loftus  
Blymeyer Engineers, Inc.  
July 1, 1991  
Page 2 of 3

underground tanks at this site is unknown. Soil samples taken throughout 1989 and 1990 showed considerable hydrocarbon contamination. Also, lead and mercury were present in one sample. Groundwater contamination has not yet been determined.

A complete site assessment proposal has been submitted to this office by Versar, Inc. of Sacramento. Work is expected to begin immediately upon approval of the plans.

Groundwater levels in this area are anticipated at between 3 and 6 feet and heavily dependent on tidal influences. Flow direction is unknown, but would be expected to flow from shoreline to harbor.

Please find attached a site map showing the proposed locations of groundwater monitoring wells.

- (R01061) 4. 2100 Livingston St.  
Kilpatrick's Bakeries, Inc. - No hazardous materials are currently handled at this facility. All underground tanks were removed from this site before 1991. During removal of the last tank, soil taken from the excavation was shown to be contaminated by petroleum hydrocarbons. This office has requested a Site Assessment Proposal and the submission deadline is July 30, 1991.
- (R0868) 5. 1951 23rd Ave.  
Discount Auto - This business performs auto service and repair. Hazardous materials are stored and hazardous waste is generated. On December 1, 1988, four underground tanks were removed from this site. Groundwater was reached during the excavation at 8 feet beneath surface grade. Samples taken from the excavation showed soil contamination as high as 3500 ppm TPH (Total Petroleum Hydrocarbons) and 3500 ppm TOG (Total Oil and Grease), and Groundwater contamination at 120ppm TPH. This office is awaiting a Preliminary Site Assessment report.
6. 800 Kennedy St.  
Holt Graphics, Inc. - During the removal of an underground tank on January 3, 1991, soil samples were shown to be contaminated with 140 ppm TPH. This office will request a Site Assessment Proposal that includes at least one groundwater monitoring well. No other underground tanks are located at this site.
7. 1951 Dennison St.  
Haslett Company - This business has a warehouse that stores hazardous consumer products. It was last inspected on August 17, 1991. No known contamination has occurred.

Amy Loftus  
Blymeyer Engineers, Inc.  
July 1, 1991  
Page 3 of 3

- 8. (R02445) Port of Oakland - Embarcadero Cove - 1211 Embarcadero, Oakland  
This is a state superfund site. The California Department of Health Services is the lead agency for remediation. Petroleum and pesticide contamination is extensive in soil and groundwater. Enclosed is a map of the site showing locations of monitoring wells. Current contamination levels and a tidal investigation study completed in September 1990 may be available from DOHS. ours.

Our office has no files pertaining to Continental Western at 2211 Frederick St., or Rhodes Jamieson Batch Plant at 333 Kennedy St.

This letter is limited to information available in this department and does not reflect any other information which may be available from other governmental agencies or businesses. If you have any additional questions, please contact Cathy Gates in this office at 271-4320.

Please find enclosed a copy of the invoice sent to our Billing unit.

Sincerely,

*Dennis J. Byrne*  
Dennis Byrne, Senior HMS  
Hazardous Materials Division

DB:CG:cg

encl

ALAMEDA COUNTY  
HEALTH CARE SERVICES

DAVE KEARS  
~~XXXXXXXXXXXX~~ AGENCY  
Agency Director



Beard

R0423

470-27th Street, Third Floor  
Oakland, California 94612  
(415) 874-7237

September 16, 1986

Mr. Robert Hartsock  
Pacific Dry Dock and Repair Co.  
321 Embarcadero  
Oakland, CA 94606

SECOND NOTICE OF VIOLATION

Dear Mr. Hartsock:

On September 15, 1986, an inspection was conducted of your facilities at 321 Embarcadero, Oakland, by this department. The following violations of the California Administrative Code, Title 22, Division 4, Chapter 30, were still not corrected from the notice of June 19, 1986:

1. Waste not properly classified as hazardous, i.e. caustic, dirty solvent in violation of 66305.
6. A Biennial Report is not properly filed with the Department by March 1 in violation of 66493.
7. Hazardous waste containers are not marked in accordance with requirements of 49CFR 172.304 as amended November 1, 1983, in format:

Hazardous Waste-State and Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the Generator's:

Name and Address \_\_\_\_\_.

Manifest Number \_\_\_\_\_.

This is in violation of 66504.

Your attention is directed to Sections 25183, 25189, and 25191 of the California Hazardous Waste Control Law, which provides for civil and criminal penalties of up to \$25,000 per day, per violation, for violations of the California Hazardous Waste Control Law and regulations.

September 16, 1986  
Pacific Dry Dock & Repair Co.  
Mr. Robert Hartsock  
Page Two

If you have any questions concerning this matter, please contact  
Thomas Peacock, at 874-7237.

Sincerely,

*Rafat A. Shahid*

Rafat A. Shahid, Manager  
Hazardous Materials Program

RAS:pasp

cc: Dwight Hoenig, DOHS  
Gil Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection

ALAMEDA COUNTY  
HEALTH CARE SERVICES

DAVE KEARS

AGENCY  
Agency Director



R0423

470-27th Street, Third Floor  
Oakland, California 94612  
(415)874-7237

June 19, 1986

Mr. Robert Hartsock  
Pacific Dry Dock and Repair Co.  
321 Embarcadero  
Oakland, CA 94606

Dear Mr. Robert Hartsock:

On May 28, 1986, an inspection was conducted of your facilities at 321 and 1441 Embarcadero, Oakland, by this department. The following violations of the California Administrative Code, Title 22, Division 4, Chapter 30, were discovered:

1. Waste not properly classified as hazardous, i.e. caustic, dirty solvent in violation of 66305.
2. No hazardous waste determination made in violation of 66471.
3. EPA identification number not applied for and received in violation of 66472.
4. Manifest not prepared for transporting the waste off site in violation of 66480.
5. No manifests are kept, no Biennial Reports are kept, there are no test results, waste analysis, or other determinations made in violation of 66492.
6. A Biennial Report is not properly filed with the Department by March 1 in violation of 66493.
7. Hazardous waste containers are not marked in accordance with requirements of 49CFR 172.304 as amended November 1, 1983, in format. Hazardous Waste-State and Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the Generator's:

June 18, 1986  
Pacific Dry Dock & Repair Co.  
Mr. Robert Hartsock

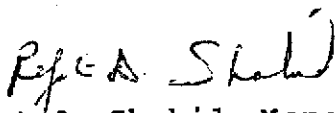
Name and Address \_\_\_\_\_  
Manifest Number \_\_\_\_\_  
This is in violation of 66504.

In accordance with 66328, a Plan of Correction is required to be submitted to this Department, within 14 days, stating the actions to be taken and the expected dates of completion.

Your attention is directed to Sections 25183, 25189, and 25191 of the California Hazardous Waste Control Law, which provides for civil and criminal penalties of up to \$25,000 per day, per violation, for violations of the California Hazardous Waste Control Law and regulations.

If you have any questions concerning this matter, please contact Thomas Peacock, at 874-7237.

Sincerely,



Rafat A. Shahid, Manager  
Hazardous Materials Program

RAS:mn-c

cc: Dwight Hoenig, DOHS