



## TEXAS WATER COMMISSION

PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION

April 24, 1992

CERTIFIED MAIL

Mr. Jose L. Flores  
Airport Director  
City of Laredo  
International Airport  
518 Flightline, Building No. 132  
Laredo, Texas 78041

Re: Subsurface Release of Jet Fuel at the Laredo International  
Airport Fuel Farm, 518 Flightline, Laredo (Webb County), Texas  
(LPST ID No. 95021)

Dear Mr. Flores:

We have completed our review of the following correspondence and reports:

- August 21, 1990 line tightness results prepared by Trinity Testing Laboratories, Inc. (received on October 23, 1991);
- October 17, 1991 response from Mr. Peter H. Vargas, City Manager of the City of Laredo (received on October 23, 1991);
- October 24, 1991 proposals you submitted (received on October 28, 1991);
- November 5, 1991 correspondence from Mr. Vargas (received on November 12, 1991);
- November 19, 1991 correspondence from Mr. Vargas (received on November 21, 1991);
- November 20, 1991 letter from you (received on November 21, 1991); and
- January 31, 1992 Phase II RAP Report prepared by your consultant, the JBL GROUP (received on February 13, 1992).

After careful review of all the information provided and pursuant to Title 31, Texas Administrative Code (TAC), Section 334.78-334.81, we conclude the following actions should be pursued in order to further address the contamination at this site:

1. We do not concur with Mr. Vargas' proposal for further deferral of assessment activities based upon the analytical data submitted to date. Based upon the documented presence of phase-separated hydrocarbons (PSH) in the tankpit; the analytical results of groundwater samples collected on July 25, 1990 and December 11, 1991; and the documented groundwater flow direction, the beneficial-use UST system still appears to be the source of the hydrocarbon contamination in the fuel farm area. Additionally, the presence of 3.056 ppm (parts per million) benzene in the December 11, 1991 groundwater sample collected from Monitor Well No. 1 suggests that the release probably occurred more recently than 1954 or even several decades ago. If actual analytical data collected during future investigative activities conclusively indicates that a "non-beneficial" source is contributing to the contaminant plume, you will not be required to address the portion of the contamination resulting strictly from other sources. Therefore, without further delay, you are requested to proceed with the installation of a sufficient number of monitor wells in appropriate locations to fully delineate the contaminant plume (as previously requested). In addition to the locations proposed by the JBL GROUP, monitor wells should also be emplaced in the following general areas:

- a. north of the interceptor tank and
- b. west of Monitor Well No. 1.

During the drilling process, collected soil samples should be screened for the presence of hydrocarbons and selected duplicate samples should be submitted to the laboratory for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), and total petroleum hydrocarbons (TPH) using only EPA-approved methods. Following the installation of the additional wells, representative groundwater samples should be collected from all existing monitor wells which do not contain phase-separated hydrocarbons (PSH) and these samples should subsequently be analyzed for BTEX and TPH. The analytical results of these groundwater samples should be used to prepare BTEX and TPH isoconcentration maps.

There should be at least one uncontaminated upgradient and one uncontaminated downgradient monitor well at this site. (Please note that "uncontaminated" signifies non-detectable levels of contamination, not contaminant levels below established action levels.) If sample analyses indicate any perimeter well is impacted with hydrocarbons, the extent of contamination beyond that well must be determined with additional monitor wells. Therefore, following the emplacement of all of the above-requested wells, prepare a proposal for any additional wells necessary for complete plume definition.

2. Provide an updated groundwater gradient map on a site map drawn to scale which includes: all existing monitor wells (labelled), plotted groundwater-elevation measurements, labelled equipotential contours, arrow(s) indicating predominant flow path(s), the date of measurement, a North arrow, a bar scale, and a legend.
3. Prepare a cumulative table of groundwater-level measurements which includes: a) the measurement date, b) the monitor well designations, c) the surveyed top-of-casing elevations, d) depth to phase-separated product, if applicable, e) the static groundwater level measurements, f) the apparent phase-separated product thicknesses, if applicable, g) the corrected phase-separated product thicknesses, if applicable, h) the calculated groundwater elevations, and i) a footnote indicating the correction factor used to adjust apparent product thicknesses, if applicable. As subsequent measurements are collected, all newly-acquired data should be incorporated into the existing table to provide a complete historical summary of the fluctuations in groundwater levels and phase-separated product thicknesses.
4. Submit copies of the signed laboratory reports displaying the results of all sample analyses and copies of all corresponding chain-of-custody documentation. Also, provide a detailed description of the sampling methodology and handling procedures employed.
5. Submit copies of the signed State of Texas Well Reports (Form No. WWD-012) for all newly-installed monitor wells.
6. As previously requested in our October 4, 1991 letter, on a site map drawn to scale, depict and label only the following information:
- a. the pumping facility;
  - b. the jet fuel tanks;
  - c. the aviation gas tanks;
  - d. the fuel interceptor tank;
  - e. all piping associated with the pumping facility, the UST systems, the fuel interceptor, and the storm sewer (with the burial depths of the piping clearly labelled);
  - f. the existing monitor and recovery well locations;
  - g. the numbered vapor monitor points and the "5 ft. soil sample" location;
  - h. a North arrow;
  - i. a bar scale; and
  - j. a legend.

*Now*  
Please indicate which USTs are currently still in service. Also, describe the function of the interceptor tank, detail the flow process, and discuss any potential release sources associated with the interceptor tank or lines which have not yet been fully investigated.

*Continuous*  
7. As proposed by the JBL GROUP, continue to recover all PSH until product no longer accumulates in any of the monitor or recovery wells. Indicate the final disposition of all recovered fluid.

8. Continue to conduct groundwater sampling events on a quarterly basis as outlined in our October 4, 1991 letter. Each future sampling event should also include:

- Continuous*
- One (1) total dissolved solids (TDS) analysis on a sample collected from Monitor Well No. 4 in order to confirm previously documented results,
  - Collection of groundwater samples from every existing monitor well which does not contain PSH for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), and total petroleum hydrocarbons (TPH),
  - A cumulative table of groundwater-level measurements as indicated in Item No. 3 above,
  - An account of the volume and disposition of all waste generated during site activities, and
  - A brief summary of the status of ongoing investigation and remediation activities.

*Now*  
Provide an explanation of the reasons that groundwater samples were not collected from Monitor Well No. 4 during the December 11, 1991 sampling event.

*Now*  
10. Submit a copy of the chain-of-custody documentation for the groundwater samples collected on December 11, 1991. (The chain-of-custody form provided by the JBL GROUP references a soil sample collected on December 18, 1991.)

*Year*  
11. As proposed, conduct a twenty-four (24) aquifer pump test to determine the capacity of the well, the hydraulic characteristics of the aquifer and the radius of influence. Recovery measurements should be made in the observation wells after the pump has been shut off to assist in calculating the aquifer coefficients. Submit all test results and calculations used in making these determinations. Apply this information to the design of a remediation system.

- Spec*
12. Based upon the above-referenced pump test, develop a more detailed RAP proposal. The RAP should include a discussion of remedial alternatives which may be feasible for the site along with their estimated costs. For the preferred method, please provide a detailed description of system design and operation, and reasons why that method is preferred. Cost comparisons should be based upon potential flow rates and actual contaminant levels at this facility.

The following is general information which this Office must receive in order to approve a proposal to utilize in-situ bioreclamation technology at a UST site:

1. Population counts for total and contaminant-degrading indigenous bacteria. If "cultured" microbes are proposed to be utilized in a bioreclamation process, then a description of how the microbes were selected and cultured should be provided as well as assurances that they are not pathogenic. If indigenous, contaminant-degrading microbes are present, then an explanation should be provided detailing how the addition of the cultured microbes will benefit the bioreclamation cleanup (including time and cost factors).
2. A characterization of the background groundwater quality and also a characterization of the quality of the impacted groundwater. This includes chemical analyses for cations, anions, dissolved oxygen, pH, etc. This is something which should be monitored during and after site cleanup. It is especially important that analyses for nitrogen as nitrate, nitrite, and ammonia be performed as well as for phosphate.
3. A determination of the nutrient requirements (and moisture requirements for unsaturated zone cleanups) necessary for optimal growth of the contaminant-degrading microbes and details of how this determination was calculated. Also include a description of any nutrient solution to be used to enhance microbial growth.
4. The estimated extent and rate of biodegradation that can be expected to be achieved.
5. A determination of any potential adverse geochemical or biological reactions that may result due to the bioreclamation process and details regarding how this determination was made and what precautions can be taken to prevent the adverse reactions from occurring. Also, perform an assessment to determine if any site-specific toxins are present which could inhibit a bioreclamation cleanup.
6. If aerobic microbes are to be utilized, then provide a detailed description of the method by which oxygen will be applied to the subsurface. If hydrogen peroxide is to be used, then the results of a hydrogen peroxide stability test must be provided.

This test should determine if phosphate pretreatment of the subsurface is needed to precipitate iron in groundwater which will catalyze the decomposition of the hydrogen peroxide.

7. A detailed description of all laboratory studies as well as sample collection, preservation, and analytical methodologies. Documentation on existing microbial and nutrient laboratory studies proposed for the site should be submitted. Any proposal for a bench scale treatability study utilizing soils, groundwater, and contaminant from the specific release site should have approval from this Office prior to conducting the study.

The following is general information which this Office must receive in order to approve a proposal to install a Class V ReInjection well at a UST release site. Proposed new Class V wells must be registered with the Texas Water Commission (TWC) prior to construction of the wells to assure authorization by rule. The TWC has the discretion to regulate Class V wells through the existing registration program, as provided by rule, or to develop more appropriate regulatory approaches for specific categories of Class V wells.

At the present time, Class V reInjection wells will be regulated primarily through a registration process. The following information should be included with each request to utilize Class V ReInjection wells:

1. The name of the facility;
2. The name and address of the legal contact;
3. The ownership of the facility;
4. The nature, type and operating status of the injection well(s);
5. The location of the injection well(s) including a legible map (Latitude and Longitude, if available);
6. The depth and construction of the injection well(s);
7. Site history (date, contaminant, and quantity of spill or leak);
8. Geohydrologic information (including written description, water level map, strike and dip cross sections, available drillers and/or electric logs, groundwater velocities, and nearby surface water bodies);
9. Inventory of all water wells within 1/4 mile area of review;
10. Alternative means of disposal of treated groundwater other than reInjection;

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11. Description of recovery and treatment system along with analysis of untreated groundwater;
12. Background water quality data (Basic groundwater chemical analysis);
13. Proposed concentration of water to be injected;
14. Injection volume and injection pressures;
15. Injection zone;
16. Proposed monitoring and sampling frequencies;
17. Location of monitor wells (including monitor well installation data if available); and
18. Estimated clean-up time.

Copies of the Class V Well registration information must be provided not only to this Office but also to the appropriate TWC District Field Office and to Mr. Steve Musick of our Groundwater Section. Please include the LPST ID Number on the Class V request.

Your failure to provide a complete response to our previous requests is a violation Title 31, TAC, Chapter 334. Further delays in responding to this Office may result in the initiation of formal enforcement action against the City of Laredo. Enforcement options available include enforcement orders, referral to the Office of Attorney General for litigation, and/or administrative penalties of up to \$10,000 per day for every day of violation. This constitutes your final warning regarding potential enforcement action.

A written response to this letter that adequately addresses the completion of the aforementioned items should be submitted to this Office within forty-five (45) days from the date of this letter. The LPST ID Number should be included on all correspondence.

Pursuant to 31 TAC Section 334.82 (b), if you determine that contamination from the release has migrated off-site, then you are required to notify the affected landowner(s). Please provide documentation that the affected landowner(s) have been notified.

Copies of all correspondence with this Office must be provided to our District 11 Field Office in Weslaco to the attention of Mr. Bill Morris. You are also required to notify Mr. Morris at 512/968-3165 at least forty-eight (48) hours in advance of conducting any significant on-site investigation or remediation activities including excavation, the installation of soil borings/monitor wells, or the performance of quarterly sampling activities.

Mr. Jose L. Flores  
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Should you have any questions regarding this letter, please contact Ms. Anne S. Miller of my staff at 512/371-6241. Your cooperation in this matter will be appreciated.

Sincerely,



Chet Clarke  
Unit Leader, Remediation Unit III  
Responsible Party Remediation Section  
Petroleum Storage Tank Division

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cc: Mark Simmons, Corps of Engineers, Fort Worth District  
(CESWF-ED-GH, P.O. Box 17300, Fort Worth, TX 76102-0300)  
Federico Pena, Aero Center, Laredo International Airport  
(Hanger 182, P.O. Box 2608, Laredo, TX 78041-2608)  
Bill Morris, TWC District 11 Field Office  
(813 E. Pike Blvd., Weslaco, Texas 78596-4935)

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