



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 16, 1999

Commanding Officer
Engineering Field Activity, West
Naval Facilities Engineering Command
Attn: Mr. Stephen Chao
900 Commodore Drive
San Bruno, CA 94066-2402

Dear Mr. Chao:

The U.S. Environmental Protection Agency has conducted an inspection of the East-Side Aquifer Treatment System (EATS) at Moffett Federal Airfield. This inspection was performed by TRC, a subcontractor to TechLaw Inc., under an EPA contract. EPA performed this inspection to assess whether the remedial action as constructed, is consistent with the Remedial Design. Results of the inspection are enclosed.

Based on the inspection, it appears that the flow rate may be exceeding the system design at some times. Once the flow rate is increased past 40 gpm., the piping at the discharge point starts leaking treated water through a raised pipe prior to discharge. Inspection of the design drawings indicates that the effluent of the LGAC is discharged to the storm drain through a 2-inch PVC pipe which is elevated 1'-8" above the LGAC canister influent line, bent through one three way "T" and one 90-degree elbow and discharged. The top side of the "T" is a 2-foot pipe that is open to the atmosphere (Photos 1 and 2). As the flow rate is increased to above 40 gpm., some of the effluent is discharged through the open pipe. Please explain this phenomenon and how it can be addressed.

If you have any questions regarding the inspection, please call Roberta Blank at (415) 744-1685. Thank you for your continued cooperation.

Sincerely,

A handwritten signature in cursive script that reads "Roberta Blank".

Roberta Blank
Remedial Project Manager, Moffett

cc: Joseph Chou, RWQCB

Enclosure (6 pgs)

INSPECTION OF EAST-SIDE AQUIFER TREATMENT SYSTEM AT MOFFETT FEDERAL AIR FIELD, MOUNTAIN VIEW, CALIFORNIA

Groundwater Treatment Plant Process Description

1. The groundwater treatment plant utilizes an air stripper to remove chlorinated solvents from the groundwater and a liquid phase granular activated carbon (LGAC) system to polish the liquid effluent from the air stripper prior to discharge.
2. Extracted groundwater from five extraction wells (located in the southern Operable Unit 5 (OU5) plume) is pumped to the plate (i.e. low profile) air stripper for removal of chlorinated solvents. Due to the elevated metals concentration in the groundwater, anti-scalant is added to the air stripper influent stream. The treated liquid effluent is pumped through four bag filters directly to two 2,000-pound LGAC units. The water is then discharged to the Moffett Federal Airfield storm sewer system under a National Pollutant Discharge Elimination System (NPDES) permit.
3. Ambient air is pumped to the air stripper to remove volatile chlorinated solvents from the groundwater. The air containing chlorinated solvent vapors is then discharged to the atmosphere without further treatment. No sampling of the effluent air is conducted to insure compliance with the Bay Area Air Quality Management District (BAAQMD) rules and regulations. The facility operates under an exemption from the BAAQMD since the daily emissions of chlorinated solvents are below one pound per day.
4. According to the Definitive Design Report, the maximum groundwater influent flow rate is anticipated to be 29 gallons per minute. A system design flow rate of 50 gpm was selected to provide additional capacity in the event of unexpectedly high well yields and to accommodate future additional extraction wells, if necessary. During the inspection, it was observed that the system was operating at levels of 29 to 40 gpm without problems.

Summary of Observations

1. The treatment system appeared to be installed properly. The treatment train followed the design schematics provided to TRC.. An adequate number of sampling ports for sampling influent and effluent groundwater was installed.
2. According to Mr. Ramirez, the influent and effluent water is sampled and analyzed for volatile organic compounds and total petroleum hydrocarbons on a weekly basis. The sampling is performed to verify system performance and to ensure compliance with the NPDES permit.
3. The Groundwater Treatment Plant (with the exception of the LGAC system) is located inside a secondary containment area. The water inside the secondary containment is collected through a sump and pumped to the influent line of the system for treatment. The LGAC system is located outside the secondary containment area as outlined in the Definitive Design Report.
4. The design capacity of the system appears to be adequate. At the time of the Site visit, the system was running at a capacity higher than the maximum influent flow rate of 29 gpm. This

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INSPECTION RESULTS OF THE
EAST-SIDE AQUIFER TREATMENT SYSTEM

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AVAILABLE.

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QUESTIONS MAY BE DIRECTED TO:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
NAVAL FACILITIES ENGINEERING COMMAND
SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

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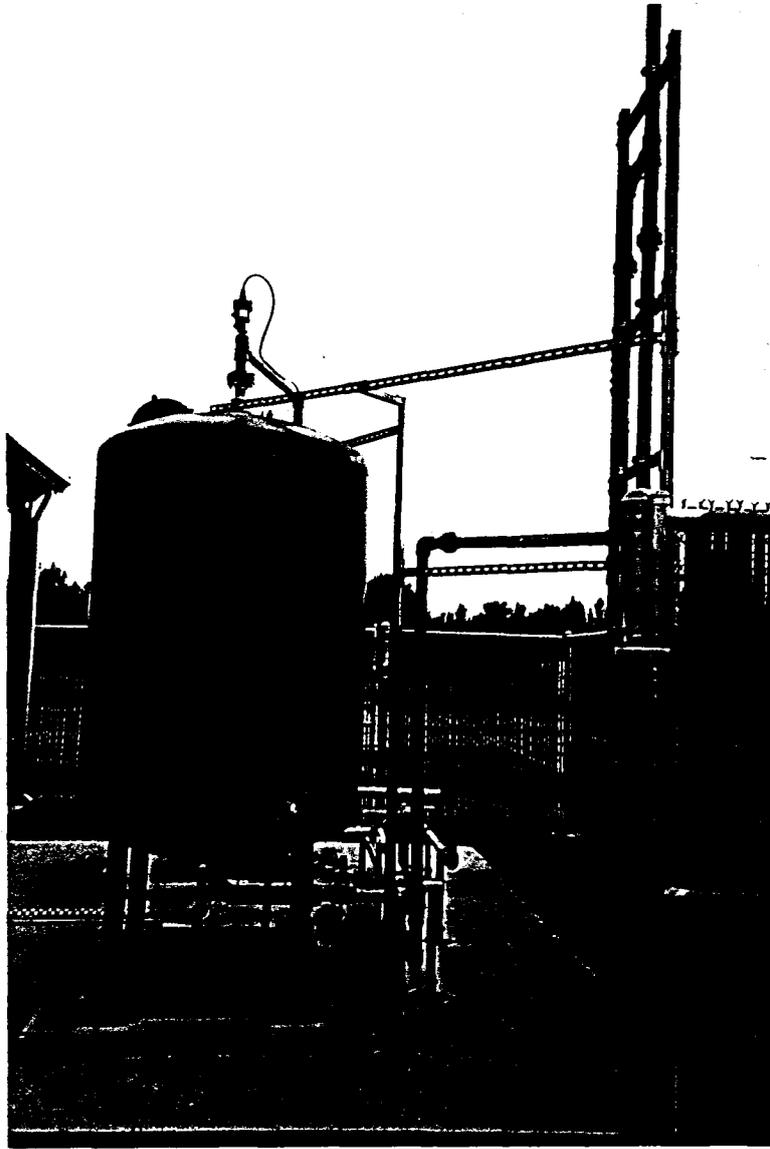


Photo 1. 9/8/99, 11:00 a.m. (northwest)
LGAC systems and effluent discharge piping

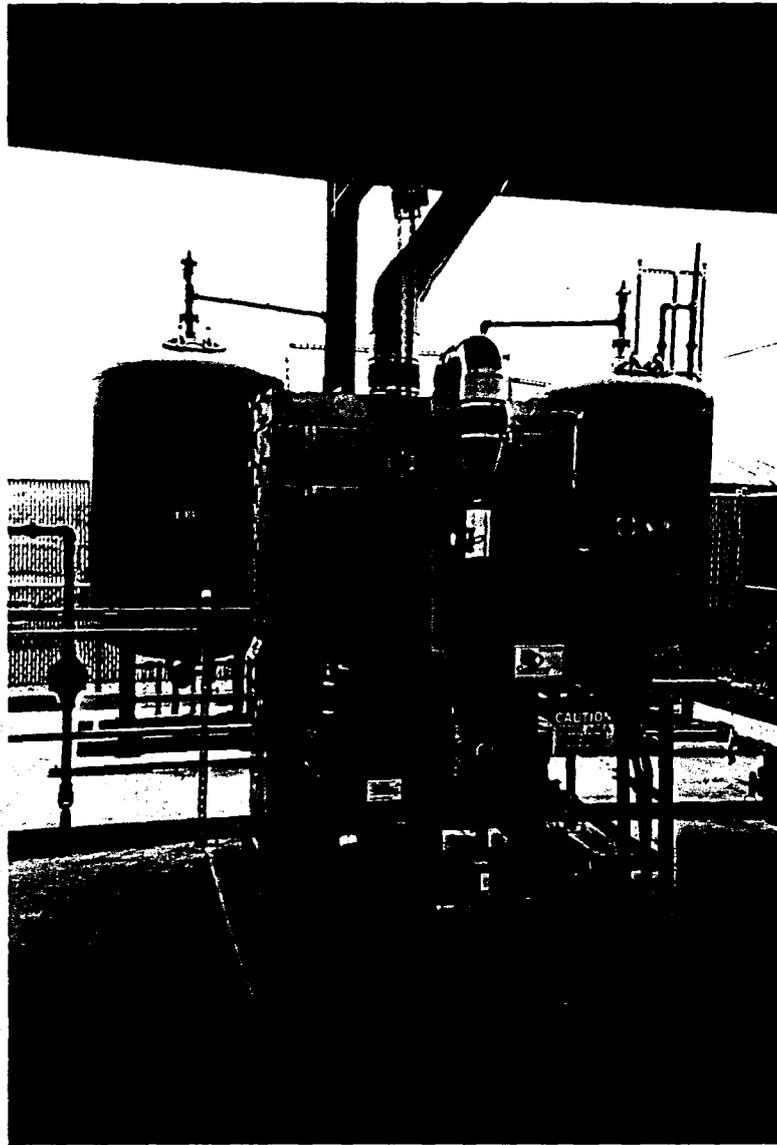


Photo 2. 9/899, 11:00 a.m. (northeast)
Air stripper with the LGAC system in the background

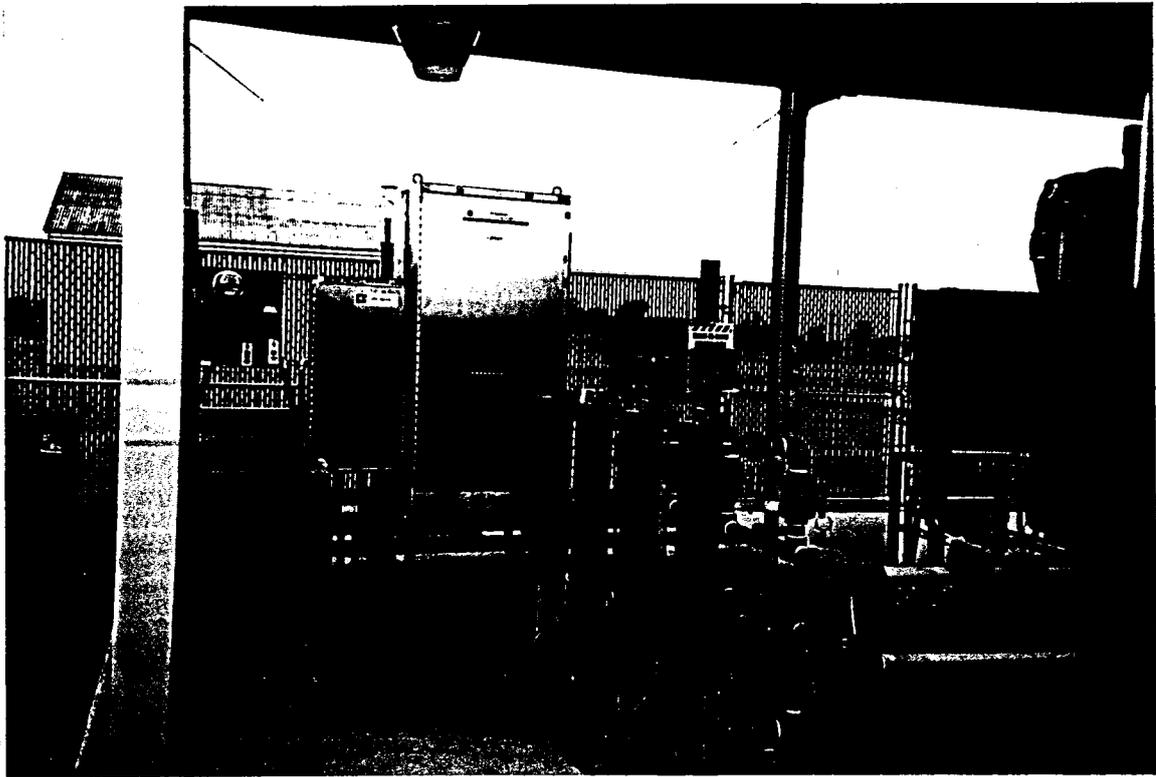


Photo 3. 9/8/99, 11:00 a.m. (southwest)
Bag filters, control panel in the background

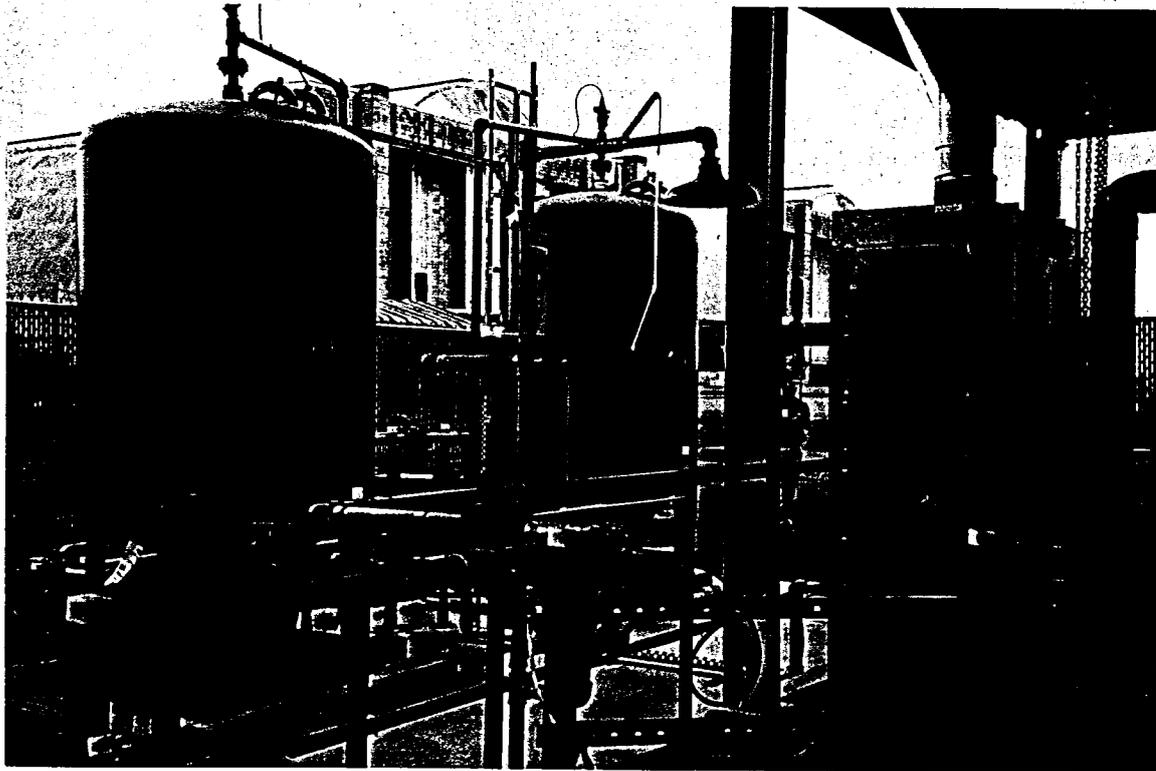


Photo 4. 9/8/99, 11:00 a.m. (east)
Air stripper and vent on the RHS and LGAC system to the LHS