



**DEPARTMENT OF THE NAVY**  
SOUTHWEST DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
1220 PACIFIC HIGHWAY  
SAN DIEGO, CA 92132 - 5190

5090  
Ser 06CH.AM/0798  
May 15, 2003

Ms. Adriana Constantinescu  
Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Mr. Farhad Azimzadeh  
Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Dear Ms. Constantinescu and Mr. Azimzadeh:

**SUBJECT: WEST-SIDE AQUIFERS TREATMENT SYSTEM AIR STRIPPER  
BYPASS MODIFICATION CERTIFICATION REPORT, NPDES PERMIT  
NO. CAG912003, ORDERS NO. 99-051 AND R2-2002-062 SELF-  
MONITORING PROGRAM, FORMER NAVAL AIR STATION MOFFETT  
FIELD, MOFFETT FIELD, CALIFORNIA**

Please find enclosed the letter report, stamped by a professional engineer registered in the State of California, certifying the adequacy of the air stripper bypass modifications to the West-Side Aquifers Treatment System (WATS) at Former Naval Station (NAS) Moffett Field to comply with the National Pollutant Discharge Elimination System (NPDES) No. CAG912003, Orders No. 99-051 and R2-2002-062 Self-Monitoring Program permit requirements. The final Operation and Maintenance (O&M) Manual incorporating these modifications will be submitted within 60 days from the initiation of discharge.

If you have questions or comments, please contact me at (619) 532-0911.

Sincerely,

A handwritten signature in black ink that reads "Andrea Espinoza".

ANDREA M. ESPINOZA  
BRAC Environmental Coordinator  
By direction of the Commander

Enclosure: 1. WATS Air Stripper Bypass Modification Certification Report

5090  
Ser 06CH.AM/0798  
May 15, 2003

Copy to:  
Ms. Alana Lee  
U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street, SFD-73  
San Francisco, CA 94105

Mr. Tom Mohr  
Santa Clara Valley Water District  
5905 Winfield Boulevard  
San Jose, CA 95123-2428

Mr. Don Chuck  
NASA M/S 218-1  
Ames Research Center  
Moffett Field, CA 94035

ROICC-SFBA Former NAS Moffett Field  
Attention: Mr. Gary J. Munekawa  
P.O. Box 68  
Building 107  
Moffett Field, CA 94035

5090  
Ser 06CH.AM/0798  
May 15, 2003

Blind copy to:  
06CH  
06CH.AE  
06CH.MP  
05G.DS (2 copies)  
06CH Chron File  
Serial File  
Read File

Writer: M. Parker, 06CH.MP, 2-0945  
Typist: N. Lilley, 06BU.NL, 05/15/03, 1816

e-mail/NPDES 05-15-03 WATS Certif Cover Letter.doc



## FOSTER WHEELER ENVIRONMENTAL CORPORATION

May 13, 2003  
DCN: FWSD-RACII-03-1407  
CTO 0048

Ms. Andrea Espinoza  
BRAC Environmental Coordinator  
Southwest Division  
Naval Facilities Engineering Command  
BRAC Operations Office  
1230 Columbia Street, Suite 1100  
San Diego, CA 92101-8517

**Subject: West-Side Aquifers Treatment System (WATS) Air Stripper Bypass Modification Certification Report, Former Naval Air Station (NAS) Moffett Field, Formerly Moffett Federal Airfield, California (Moffett), Per the National Pollutant Discharge Elimination System (NPDES) General Permit, Order No. 99-051 and R2-2002-062, NPDES Permit No. CAG912003.**

Reference: SWDIV Contract No. N68711-98-D-5713, CTO No. 0048

Dear Ms. Espinoza:

This Letter Report certifies the adequacy of the design and modifications made to the West-Side Aquifers Treatment System (WATS) to comply with the NPDES permit requirements.

The treatment system was modified in order to eliminate Volatile Organic Compound (VOC) air emissions, especially trichloroethene (TCE), from the WATS air stripper.

The WATS has undergone modification as detailed in the letter from Mr. Lawrence Lansdale, US Navy to Ms. Adriana Constantinescu and Mr. Farhad Azimzadeh, RWQCB, dated March 31, 2003 and entitled "Proposed Changes and Improvements and Start-up Phase Notification for the West-Side Aquifers Treatment System (WATS)." The air stripper bypass was completed on May 12, 2003. In accordance with the NPDES Self-Monitoring Program, the modified system has undergone an initial run (May 12, 2003) to ensure compliance with discharge limits. Based on the analytical results from the first day start-up sample, the treated effluent from the modified system conforms to the NPDES discharge limits for VOCs.

### Component Adequacy

Prior to this modification, WATS consisted of three major unit operations designed to remove or destroy influent volatile organic compounds (VOCs), primarily TCE, cis-1,2-



1230 Columbia Street; Suite 500; San Diego, CA 92101  
Tel (619) 234-8690 Fax (619) 234-8591

dichloroethene (cis-1,2-DCE), and vinyl chloride (VC). The units consisted of an advanced oxidation process (AOP), air stripper, and liquid phase granulated activated carbon (GAC) adsorbers connected in series. This modification to WATS entailed bypassing the air stripper from the treatment train, so that extracted groundwater is now treated with the AOP and GAC. The GAC consists of a total of four 2000-lb GAC units (total of 8000 lbs. GAC), with the units arranged in two parallel trains and each train has two 2000-lb GAC units in series.

With two parallel trains of two 2000-lb GAC units in series, WATS operates under doubled GAC removal capacity. The intent is to ensure protectiveness of the environment. Also, monthly sampling would continue to monitor for lead GAC breakthrough. With this modification, WATS should remain fully compliant with the discharge limitations of the current NPDES permit under normal operating conditions and the current influent VOCs and concentrations.

During the first day start-up phase, effluent samples to the modified WATS were collected to determine the adequacy of the system. The results from these effluent samples were all non-detect for VOCs, total petroleum hydrocarbons – extractable (TPH-e), and total petroleum hydrocarbons – purgable (TPH-p). The complete analytical results from the first day start-up phase will be included in the Start-Up Report for the WATS modification.

### **O&M Manual**

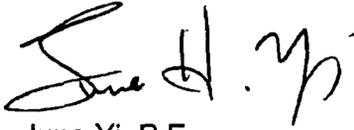
These modifications will be incorporated into the existing O&M manual, which is scheduled to be issued within 60 days from the completion of the start-up phase. A copy of the O&M manual will be maintained at the site trailer located at Moffett.

Additional maintenance and testing requirements from the modification, if any, will be incorporated into the O&M Manual as appropriate. Also to be addressed in the O&M manual will be the modified sampling required for monitoring the completed modification. The sample locations for the complete treatment system are listed below.

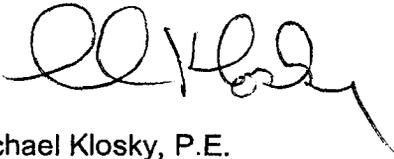
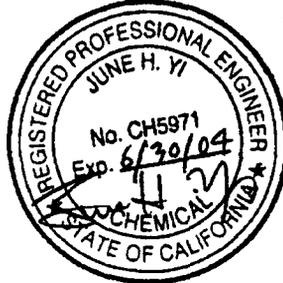
<b>Sample Port</b>	<b>Sample Location</b>
SP-1	System Influent
SP-2	After 1 <sup>st</sup> oxidation stage (between T-101 and T-102)
SP-3	After 2 <sup>nd</sup> oxidation stage (between T-102 and T-103)
SP-4	After 3 <sup>rd</sup> oxidation stage (between T-103 and air stripper)
SP-5	Between air stripper and GAC system
SP-B2	GAC Vessel V-307 effluent
SP-B3	GAC Vessel V-308 effluent
SP-B4	GAC Vessel V-309 effluent
SP-B5	GAC Vessel V-310 effluent
SP-6	WATS Effluent
SP-SDA1	SDA Influent
SP-SDA2	SDA filtered water

If you have any questions, please do not hesitate to contact me at 949-756-7559.

Sincerely,



June Yi, P.E.  
Foster Wheeler Environmental  
California P.E. CH5971



Michael Klosky, P.E.  
Foster Wheeler Environmental  
Georgia P.E. 026305

