N60211_000396
CROWS LANDING
SSIC NO. 5090.3.A

Tetra Tech EM Inc.

1099 18th Street, Suite 1960 ◆ Denver, CO 80202 ◆ (303) 295-1101 ◆ FAX (303) 295-2818

August 25, 1999

Ms. Francesca D'Onofrio
Department of Toxic Substances Control
Region 1
10151 Croydon Way, Suite 3
Sacramento, California 95827-2106

Subject: **National Aeronautics and Space Administration (NASA) Crows Landing Flight Facility, Investigation-Derived Wastewater Disposal CLEAN II Contract No. N62474-94-D-7609, Contract Task Order 219**

Dear Ms. D'Onofrio:

This letter is a follow-up to a previous letter submitted on April 5, 1999. The April 5, 1999, letter evaluated the results from analysis of a wastewater sample collected at the National Aeronautics and Space Administration (NASA) Crows Landing Flight Facility and proposed discharge of the water to the ground.

The sample was collected from a tank that temporarily stored equipment decontamination water from predesign field investigations and monitoring well purge water from groundwater sampling at Installation Restoration Program (IRP) Site 17, Underground Storage Tank (UST) Cluster 1, and UST 117. The sample was collected on March 9, 1999, and was analyzed for volatile organic compounds (VOC), total petroleum hydrocarbons extractable (TPH-E), and total petroleum hydrocarbons purgeable (TPH-P). Benzene (32.2 micrograms per liter) was the only compound detected above California maximum contaminant levels (MCLs) established for groundwater.

The surface discharge proposal was based on Regional Water Quality Control Board (RWQCB) guidance contained in the Designated Level Methodology for Waste Classification and Cleanup Level Determination (DLM). The DLM evaluation indicated that surface discharge of water in the tank would not adversely affect soil or groundwater quality. However, RWQCB rejected the proposal and required additional sampling to demonstrate that benzene is no longer detected in the water before it could be discharged to the ground.

In response to RWQCB concerns, Tetra Tech EM Inc. (TtEMI) collected an additional sample from the tank on August 8, 1999, and analyzed it for benzene, toluene, ethylbenzene, and total xylenes (BTEX). None of these compounds were detected in the sample. TtEMI will therefore discharge the water to the ground at its earliest convenience.

contains recycled fiber and is recyclable

Analytical results from the March 9 and August 8, 1999, wastewater samples are submitted as Attachment A.

If you have questions or comments regarding this notification, please call me at (303) 312-8815.

Sincerely,

Keith Reamer
Installation Coordinator

KR/dw

Attachment

cc: Hubert Chan, EFA West
Don Chuck, Moffett Federal Airfield
Brian Staab, NASA
Connie Romine, RWQCB
Steve Annecone, TtEMI

ATTACHMENT A

ANALYTICAL RESULTS

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
Tetra Tech EM Inc.
Attention: Todd Bechtel
1099 18th Street, Ste 1960
Denver CO 80202
Tel: (303)295-1101 Fax: (303)295-2818

Service ID #: 801-991877
Collected by:
Collected on: 02/15-16/99

Received: 02/17/99
Extracted: 02/18/99
Tested: 02/17-24/99
Reported: 02/26/99

Sample Description: Water
Project Description: G0069-219C02 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	CRDL (PQL)	Analysis Result Baker Tank 99-01877-1	117-MW-06MD 99-01877-2
AMMONIA	350.2	mg/L	0.1	-	0.07J
NITROGEN, TOTAL KJELDAHL (TKN)	351.3	mg/L	0.1	-	<0.1
ORTHOPHOSPHATE	365.2	mg/L	0.05	-	0.03J
HETEROTROPHIC PLATE COUNT	SM9215	CFU/mL	1	-	1,400
CLP METALS-ROUTINE					
IRON, DISSOLVED	CLP-Metal	µg/L	100	-	40.6J
MANGANESE, DISSOLVED	CLP-Metal	µg/L	15.0	-	3.2J
GASOLINE + BTXE + MTBE					
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.43	<0.05
BENZENE	8020	µg/L	0.5	32.2	<0.5
ETHYLBENZENE	8020	µg/L	0.5	2.6	<0.5
TOLUENE	8020	µg/L	0.5	16.1	<0.5
XYLENE (TOTAL)	8020	µg/L	1	19	<1
MTBE	8020	µg/L	5	<5	<5
Dilution Factor				1	1
DIESEL	M8015E	mg/L	0.5	<0.5	<0.5
JP-5	M8015E	mg/L	0.5	1 (a)	<0.5
MOTOR OIL	M8015E	mg/L	0.5	<0.5	<0.5

Component Analyzed	Method	Unit	CRDL (PQL)	Analysis Result CL1-MW-07MD 99-01877-3	CL1-MW-09MS 99-01877-4
AMMONIA	350.2	mg/L	0.1	<0.1	0.1
NITROGEN, TOTAL KJELDAHL (TKN)	351.3	mg/L	0.1	0.1	0.1
ORTHOPHOSPHATE	365.2	mg/L	0.05	<0.05	0.07
HETEROTROPHIC PLATE COUNT	SM9215	CFU/mL	1	2,700	86,000
CLP METALS-ROUTINE					
IRON, DISSOLVED	CLP-Metal	µg/L	100	49.8J	130
MANGANESE, DISSOLVED	CLP-Metal	µg/L	15.0	2.3J	13.5J

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APCL Analytical Report

Component Analyzed	Method	Unit	CRDL	Analysis Result Baker Tank 99-01877-1	117-MW-06MD 99-01877-2	CL1-MW-09MS 99-01877-4
CLP VOA - ROUTINE						
Dilution Factor				1	1	1
ACETONE	CLP-VOA	µg/L	10	43	2J	2J
BENZENE	CLP-VOA	µg/L	10	21	<10	80
BROMODICHLOROMETHANE	CLP-VOA	µg/L	10	<10	<10	<10
BROMOFORM	CLP-VOA	µg/L	10	<10	<10	<10
BROMOMETHANE	CLP-VOA	µg/L	10	<10	<10	<10
2-BUTANONE	CLP-VOA	µg/L	10	5J	<10	<10
CARBON DISULFIDE	CLP-VOA	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	CLP-VOA	µg/L	10	1J	3J	1J
CHLOROBENZENE	CLP-VOA	µg/L	10	<10	<10	<10
DIBROMOCHLOROMETHANE	CLP-VOA	µg/L	10	<10	<10	<10
CHLOROETHANE	CLP-VOA	µg/L	10	<10	<10	<10
CHLOROFORM	CLP-VOA	µg/L	10	1J	0.5J	11
CHLOROMETHANE	CLP-VOA	µg/L	10	<10	<10	<10
1,1-DICHLOROETHANE	CLP-VOA	µg/L	10	<10	<10	<10
1,2-DICHLOROETHANE	CLP-VOA	µg/L	10	<10	<10	<10
1,1-DICHLOROETHENE	CLP-VOA	µg/L	10	<10	<10	<10
1,2-DICHLOROETHENE (TOTAL)	CLP-VOA	µg/L	10	<10	<10	<10
1,2-DICHLOROPROPANE	CLP-VOA	µg/L	10	<10	<10	<10
CIS-1,3-DICHLOROPROPENE	CLP-VOA	µg/L	10	<10	<10	<10
TRANS-1,3-DICHLOROPROPENE	CLP-VOA	µg/L	10	<10	<10	<10
ETHYLBENZENE	CLP-VOA	µg/L	10	1J	<10	<10
2-HEXANONE	CLP-VOA	µg/L	10	<10	<10	<10
4-METHYL-2-PENTANONE	CLP-VOA	µg/L	10	5J	<10	0.5J
METHYLENE CHLORIDE	CLP-VOA	µg/L	10	<10	<10	0.7J
STYRENE	CLP-VOA	µg/L	10	<10	<10	<10
1,1,2,2-TETRACHLOROETHANE	CLP-VOA	µg/L	10	<10	<10	<10
TETRACHLOROETHENE	CLP-VOA	µg/L	10	<10	<10	<10
TOLUENE	CLP-VOA	µg/L	10	7J	2J	<10
1,1,1-TRICHLOROETHANE	CLP-VOA	µg/L	10	<10	<10	<10
1,1,2-TRICHLOROETHANE	CLP-VOA	µg/L	10	<10	<10	<10
TRICHLOROETHENE	CLP-VOA	µg/L	10	<10	<10	<10
VINYL CHLORIDE	CLP-VOA	µg/L	10	0.4J	<10	<10
XYLENE (TOTAL)	CLP-VOA	µg/L	10	11	<10	<10

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APCL Analytical Report

Submitted to:
Tetra Tech EM Inc.
Attention: Keith Reamer
1099 18th Street Suite 1960
Denver CO 80202
Tel: (303)312-8815 Fax: (303)295-2818

Service ID #: 801-995226
Collected by:
Collected on: 08/08/99

Received: 08/10/99
Extracted: N/A
Tested: 08/11/99
Reported: 08/16/99

Sample Description: Water
Project Description: G0069-219-C02 NASA Crows landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result TB-1 99-05226-1	WW-08-08 99-05226-2
BTXE					
Dilution Factor				1	1
BENZENE	8021	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8021	µg/L	0.5	<0.5	<0.5
TOLUENE	8021	µg/L	0.5	<0.5	<0.5
O-XYLENE	8021	µg/L	0.5	<0.5	<0.5
M/P-XYLENE	8021	µg/L	1	<1	<1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory