



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

N30519_000251
NFD POINT MOLATE
SSIC NO. 5090.3.A

5090
Ser 06CM.FA/314
27 Apr 00

Ms. Linda Dorn
Project Manager
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: METHANE SURVERY AT SITE 1 NAVAL FUEL DEPOT POINT MOLATE

Dear Ms. Dorn:

Enclosed is the Methane Survey conducted at Site 1, NFD Point Molate. This document has also been provided to Mr. Kent Kitchingman of the City of Richmond and Mr. Don Gosney, the RAB Community Co-chair. Please contact Ms. Michelle Gallice Sondrup at 619-562-0971 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Faiq Aljabi".

FAIQ ALJABI
Environmental Baseline Team Leader
By direction of the Commander

Enclosure: 1. Methane Survey at Site 1, Naval Fuel Depot (NFD) Point Molate,
Richmond, California

5090
Ser 06CM.FA/314
27 Apr 00

Blind copy to: (w/encl)
Mr. Kent Kitchingman, City of Richmond
Mr. Don Gosney, RAB Community Co-Chair
06CM
06CM.MS
06CM.VL (w/o encl)
4MG
Chron file (w/o encl)
Read file (w/o encl)

Writer: M. Sondrup, 06CM.MS, 532-0971
Typist: N. Lilley, 06BU.NL, 4/27/00

J:/common/mls/Letter-Methane.doc



Tetra Tech EM Inc.

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

April 24, 2000

Ms. Michelle Gallice Sondrup
Department of the Navy
Southwest Division
Naval Facilities Engineering Command
1230 Columbia, Suite 1100
San Diego, California 92101

**Subject: Methane Survey at Site 1, Naval Fuel Depot (NFD) Point Molate, Richmond, California
CLEAN Contract No. N62474-94-D-7609, Contract Task Order 280**

Dear Ms. Gallice Sondrup:

Tetra Tech EM Inc. (TtEMI) conducted a methane gas survey at the Site 1 landfill at Naval Fuel Depot (NFD) Point Molate in January 2000. This letter summarizes the results of the survey.

TtEMI submitted a letter dated November 18, 1999 to Mr. Timothy Crist of the California Integrated Waste Management Board (CIWMB) outlining the proposed methane survey for the Site 1 landfill at NFD Point Molate. In a December 1, 1999, telephone conversation, Ms. Rebecca Ng of Contra Costa Health Services (the local enforcement agency) stated that a surface sweep should be added to the survey, but that it was otherwise adequate. In a December 14, 1999, telephone conversation, Mr. Crist concurred that the proposed survey would be adequate for identifying future requirements for gas monitoring. The proposed methane survey and surface sweep were conducted in January 2000.

On January 17, 2000, two soil gas samples (from temporary drive points into the Site 1 landfill waste) and one surface sweep sample were collected. The drive points were advanced to 12 feet below ground surface and samples were collected in Summa canisters using the methodology and locations outlined in the letter that described the proposed methane survey. The surface sweep was conducted by attaching Teflon® tubing to a Summa canister such that it was within 6 inches of the ground surface, and walking along the surface of the landfill with the canister's valve open until it was filled with air. The drive point samples were identified as SG02-02 and SG02-01, and the surface sweep sample was identified as Site1. These samples were analyzed by Air Toxics Ltd. using American Society for Testing and Materials (ASTM) method 1945 for methane. The results for these samples are attached. Methane was not detected in any of the samples.

On January 18, 2000, methane concentrations were also measured from existing wells within the area of Site 1. Table 1 (attached) summarizes the wells and methane concentrations. Methane concentrations were measured with a Landtec GA-90. The Landtec GA-90 was calibrated by the supplier on January 17. A calibration check was conducted in the field on January 18 using a calibration gas made up of 15 percent methane and 15 percent carbon dioxide. The instrument calibration response was 14.8 percent methane and 15 percent carbon dioxide, the Landtec GA-90 was not adjusted. Methane concentrations exceeded 5 percent in wells ERM-EW1 and MW02-06. Well ERM-EW1 is not within the landfill waste, and the methane concentration is assumed to be a result of free fuel product in the well. Well MW02-06 is within the landfill waste, and the methane concentration is likely a result of waste breakdown.

Ms. Michelle Gallice Sondrup
March 21, 2000
Page 2

Based on the high concentrations of methane measured in well MW02-06 within the landfill waste, TtEMI recommends including gas venting and perimeter monitoring in Alternatives 2 and 3 for the Final Engineering Evaluation and Cost Analysis (EE/CA).

If you have any questions, please call me at (303) 312-8884.

Sincerely,

A handwritten signature in cursive script that reads "Brian Schuller".

Brian Schuller
Project Manager

BLS/jed

cc: Mike Wanta, TtEMI

Enclosure

**TABLE 1
NFD POINT MOLATE
JANUARY 2000 SOIL GAS FIELD SCREENING RESULTS**

Well Name	Time	Methane	Carbon Dioxide	Oxygen	Comments
BR02-18	14:27	0.0%	0.4%	20.8%	
BR02-19	14:38	0.0%	0.1%	20.9%	Well is artesian to about 10 inches below TOC.
ERM-EW1	13:50	8.5%	3.4%	17.8%	
MW02-01	14:18	0.0%	4.0%	16.5%	
MW02-06	14:04	21.6%	23.0%	0.0%	
MW02-13	14:35	0.0%	0.0%	21.0%	Well is artesian to TOC. Air from inside box was screened.
MW02-15	14:43	0.0%	0.4%	20.9%	Additional well added to compensate for poor conditions in wells MW02-13 and BR02-19
PZ02-01	13:58	0.0%	0.7%	20.6%	
PZ02-02	14:21	0.0%	80.0%	19.8%	
PZ02-03	14:24	0.0%	10.0%	21.0%	
PZ02-04	14:13	0.0%	5.0%	16.2%	
PZ02-04A	14:11	0.2%	0.2%	20.5%	
PZ02-05	14:08	0.0%	0.0%	20.8%	

Notes:

TOC Top of Casing

AIR TOXICS LTD.

ID#: 0001171-04A

Modified EPA Method 3C GC/TCD

Sample Name:	Lab Blank	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/25/00

Compound	Det. Limit (%)	Amount (%)
Methane	0.10	Not Detected

Notes:

Initial Canister Pressure (P_i) = 0.005 mm Hg	(absolute)
Canister Pressure after Sampling (P_s) = NA	(gauge)
Canister Pressure after Pressurization (P_{11}) = 258 mm Hg	(gauge)

Canisters are leak-checked according to Section 4.1 of the method.

AIR TOXICS LTD.

ID#: 0001171-03A

Modified EPA Method 3C
GC/TCD

Sample Name: Site 1 AS001 Date of Collection: 1/17/00
Dil. Factor: 1.32 Date of Analysis: 1/25/00

Compound	Det. Limit (%)	Amount (%)
Methane	0.13	Not Detected

Notes:

Initial Canister Pressure (P_{i1}) = 0.005 mm Hg (absolute)
Canister Pressure after Sampling (P_1) = 10 mm Hg (gauge)
Canister Pressure after Pressurization (P_{i2}) = 258 mm Hg (gauge)

Canisters are leak-checked according to Section 4.1 of the method.

AIR TOXICS LTD.

ID#: 0001171-02A

Modified EPA Method 3C
GC/TCD

Sample Name: **SQ02-02AS001** Date of Collection: **1/17/00**
 Dil. Factor: **1.34** Date of Analysis: **1/26/00**

Compound	Det. Limit (%)	Amount (%)
Methane	0.13	Not Detected

Notes:

Initial Canister Pressure (P_i) = 0.005 mm Hg (absolute)
 Canister Pressure after Sampling (P_s) = 0.0 mm Hg (gauge)
 Canister Pressure after Pressurization (P_u) = 258 mm Hg (gauge)

Canisters are leak-checked according to Section 4.1 of the method.

AIR TOXICS LTD.

ID#: 0001171-01A

Modified EPA Method 3C GC/TCD

Sample Name: SG02-01AS001
Dil. Factor: 1.68

Date of Collection: 1/17/00
Date of Analysis: 1/25/00

Compound	Det. Limit (%)	Amount (%)
Methane	0.17	Not Detected

Notes:

Initial Canister Pressure (P_{i1}) = 0.005 mm Hg (absolute)
 Canister Pressure after Sampling (P_1) = 150 mm Hg (gauge)
 Canister Pressure after Pressurization (P_{i2}) = 258 mm Hg (gauge)

Canisters are leak-checked according to Section 4.1 of the method.

@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0001171

Work Order Summary

CLIENT: Mr. Ted Wall
 Tetra Tech
 1099 18th Street, Suite 1960
 Denver, CO 80202

BILL TO: Accounts Payable
 Tetra Tech
 135 Main Street, Suite 1800
 San Francisco, CA 94105

PHONE: 303-312-8812
FAX: 303-295-2818
DATE RECEIVED: 1/18/00
DATE COMPLETED: 2/1/00

P.O. # 992064
PROJECT # G0069112B0404 Pl. Molate Site 1 CH4 Gas

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	SG02-01AS001	Mod. Method 3C	150 mm Hg
02A	SG02-02AS001	Mod. Method 3C	0.0 mm Hg
03A	Sire 1AS001	Mod. Method 3C	10 mm Hg
04A	Lab Blank	Mod. Method 3C	NA

CERTIFIED BY: 
 Laboratory Director

DATE: 2/1/00

Certification numbers: CA ELAP - 1149, NY ELAP - 11291, UT ELAP - E-217

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630
 (916) 985-1000 • (800) 985-5955 • FAX (916) 985-1020