

5090
Ser 1842.2/5199
3 Oct 1995

California Regional Water Quality Control Board
San Francisco Bay Region
Attn: Mr. James Nusrala
2101 Webster Street, Suite 500
Oakland, California 94612

Subj: INSTALLATION RESTORATION PROGRAM (IRP), NAVAL FUEL DEPOT,
POINT MOLATE (NFDPM), CA; BIOPAD

Encl: (1) PRC ltr dtd September 28, 1995; NFD Point Molate, Bioremediation Pad
Area Groundwater Sampling Results

Dear Mr. Nusrala:

Enclosure (1) is forwarded in response to the RWQCB's request for sampling of groundwater prior to using the Bioremediation Pad. We can discuss any comments or questions at the next RPM meeting. If you have any questions in the mean time, call me at (415) 244-2552.

Sincerely,

Original signed by:
DEAN SAKAKIHARA
By direction

Copy to (w/encl):

California Department of Toxic Substances Control (Attn: Randy Adams)
Fleet Industrial Supply Center, Oakland (Attn: R. Hegarty, Code 714)
PRC Environmental Management, Inc. (Attn: Jeff Reichmuth) (w/o encl)

Blind copy (w/o encl) to:

184, 1842, 1842.2
Admin Record (4 copies)
Chron, pink, green
File: NFD Point Molate

September 28, 1995



Mr. Dean Sakakihara
Department of the Navy
Engineering Field Activity West
Naval Facilities Engineering Command
900 Commodore Drive, Building 206, Second Floor
San Bruno, California 94066-2402

CLEAN Contract Number N62474-88-D-5086
Contract Task Order (CTO) 0248

Subject: Naval Fuel Depot (NFD) Point Molate, Bioremediation Pad Area Groundwater Sampling Results

Dear Mr. Sakakihara:

On May 3, 1995, PRC Environmental Management, Inc. (PRC) collected groundwater samples from three Naval Fuel Depot Point Molate (NFD Point Molate) groundwater monitoring wells. These samples were collected prior to commencing work on the biopad and provide a baseline assessment of groundwater quality in this vicinity.

Samples were collected from monitoring wells MW11-20, MW11-22, and MW11-23 and were each analyzed for the following parameters:

- Semivolatile organic compounds (SVOC)
- Total extractable petroleum hydrocarbons (TPH-extractable)
- Total purgeable petroleum hydrocarbons (TPH-purgeable)
- Anions including chloride, fluoride, ortho phosphate, sulfate, nitrite, and nitrate
- Biochemical oxygen demand

Analytical results for each of these parameters are presented in the enclosure to this letter. Results for SVOC and TPH analyses were reviewed by an independent validation company to ascertain the quality of this data.

Please call me at (303) 295-1101 with any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Reichmuth".

Jeff Reichmuth, P.E.
Project Manager

Enclosure

cc: David West, PRC

ANALYTICAL DATA

TABLE E-2
 NAVAL FUEL DEPOT POINT MOLATE
 BASELINE BIOPAD SURVEY
 ANALYTICAL RESULTS OF TPH PURGEABLE IN GROUNDWATER

PRC Sample ID Lab Samp Id Matrix Units Date Received Date Analyzed	MW11-20 (14.0) 9505012-03A WATER UG/L 05/03/95 05/18/95			MW11-22 (12.5) 9505012-02A WATER UG/L 05/03/95 05/18/95			MW11-23 (19.0) 9505012-01A WATER UG/L 05/03/95 05/18/95								
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
TPH - BENZENE	8			0.5	U		0.5	U							
TPH - TOLUENE	0.5	U		0.5	U		0.5	U							
TPH - ETHYLBENZENE	1			0.5	U		0.5	U							
TPH - TOTAL XYLENES	4	J-K		0.5	UJ-K		0.5	UJ-K							
TPH - GASOLINE	50	UJ-K		50	UJ-K		50	UJ-K							
OTHER COMPONENTS *	500	YX		170	YX		140	YX							

TABLE E-3
 NAVAL FUEL DEPOT POINT MOLATE
 BASELINE BIOPAD SURVEY
 ANALYTICAL RESULTS OF TPH EXTRACTABLE IN GROUNDWATER

PRC Sample ID	MW11-20 (14.0)			MW11-22 (12.5)			MW11-23 (19.0)								
Lab Samp Id	9505012-03B			9505012-02B			9505012-01B								
Matrix	WATER			WATER			WATER								
Units	UG/L			UG/L			UG/L								
Date Received	05/03/95			05/03/95			05/03/95								
Date Analyzed	05/10/95			05/10/95			05/10/95								
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
TPH - JP-4 (C7-C18)	50	UJ-S		50	U		50	U							
TPH - JP-5 (C8-C16)	50	UJ-SK		50	UJ-K		50	UJ-K							
TPH - DIESEL F-76 (C8-C28)	50	UJ-S		50	U		50	U							
TPH - WEATHERED DIESEL(C8-C2)	50	UJ-SK		50	UJ-K		530	J-K							
TPH - BUNKER FUEL (C10-C28)	500	UJ-S		1800			500	U							
OTHER COMPONENTS *	840	Y,UJS		570	Y		380	Y							

TABLE E-4
NAVAL FUEL DEPOT POINT MOLATE
BASELINE BIOPAD SURVEY
ANALYTICAL RESULTS OF ANIONS
AND BIOCHEMICAL OXYGEN DEMAND IN GROUNDWATER

PRC Sample ID Matrix Units	MW11-20(14.0) Water mg/L		MW11-22(12.5) Water mg/L		MW11-23(19.0) Water mg/L	
	Result	Val	Result	Val	Result	Val
Chloride	110		26		26	
Fluoride	0.59		0.66		0.63	
Ortho phosphate	0.32		0.57		0.16	
Sulfate	11		12		2.4	
Nitrite as N	0.050	U	0.050	U	0.050	U
Nitrate as N	0.23		0.050	U	0.090	
Biochemical oxygen demand	13		12		10	

**NFD POINT MOLATE
LABORATORY AND VALIDATION QUALIFIERS**

Laboratory Organic Qualifiers

- U This flag indicates that the analyte was not detected at the reported quantity.
- B This flag is used when a given target compound was detected in the associated method blank as well as in the sample. It indicates that there was possible/probable blank contamination.
- J This flag indicates that the value was qualitatively identified but reported at an estimated quantity.
- D This flag indicates all compounds were identified in an analysis at a secondary dilution factor.
- P This flag is used for a pesticide/Aroclor target analyte when there is greater than 25 percent difference for detected concentrations between the primary and confirmatory gas chromatograph (GC) columns.

Laboratory Inorganic Qualifiers

- U This flag indicates that the analyte was not detected at the reported quantity.
- N This flag indicates that the spiked sample recovery was not within control limits.
- E The flag is used when the reported value was estimated because of the presence of interference. An explanation must be noted on the cover page or "Form I" if it is applicable to an isolated sample.
- B This flag indicates the reported value was less than the Contract Required Detection Limit (CRDL) but greater than the Instrument Detection Limit (IDL).
- S This flag indicates the reported value was determined by the MSA.
- M This flag indicates the criterion for the precision of the duplicate injection for the sample was not met.
- W This flag indicates that the post-digestion spike recovery of the furnace atomic absorption analysis (FAAA) was out of control limits (85 to 115 percent), while the sample absorbance was less than 50 percent of the spiked absorbance.
- * This flag is used when the duplicate sample analysis is not within control limits.
- + This flag indicates the correlation coefficient for the MSA was less than 0.995.

**NFD POINT MOLATE
LABORATORY AND VALIDATION QUALIFIERS**

Validation Organic Qualifiers

- U** This flag indicates that the compound was analyzed for but not detected. The associated value is either the sample quantitation limit or the sample detection limit
- R** This flag is used when the quality controls (QCs) indicate that the data are not usable (compound may or may not be present). Re-analysis is necessary to determine the existence of the compound.
- N** This flag indicates presumptive evidence of presence of material.
- J-E** This flag indicates the value was estimated due to being out of the calibration range.
- J-D** This flag indicates the value was estimated due to the sample being diluted and there were suspected problems associated with the dilution. (Not to be used when a sample is diluted and there are no suspected problems.)
- J-H** This flag indicates the value was estimated due to a method holding time violation.
- J-I** This flag indicates the value was estimated due to interferences.
- J-S** This flag indicates the value was estimated due to surrogate recovery being out of QC limits.
- J-M** This flag indicates the value was estimated due to matrix spike (MS) recoveries being out of QC limits.
- J-N** This flag indicates the value was estimated due to lack of calibration for the compound; however, there was presumptive evidence of the presence of the compound.
- J-K** This flag indicates the value was estimated due to calibration or GC/MS tuning criteria being out of QC limits.
- J-L** This flag indicates the value was estimated due to internal standard recoveries being out of QC limits.
- J-T** This flag indicates the value was estimated due to only tentative identification of a target compound.
- J-V** This flag indicates the value was estimated due to not being able to exactly verify the value when recalculated.

**NFD POINT MOLATE
LABORATORY AND VALIDATION QUALIFIERS**

- J-*** This flag indicates the value was estimated due to precision of laboratory-matrix spike duplicate sample analyses being out of QC limits.
- UJ-H** This flag indicates the sample quantitation limit was estimated due to method holding time violation.
- U-JB** This flag indicates the sample quantitation limit was estimated due to blank contamination. The associated value was less than 5 or 10 times (depending on the compound) the amount found in the blank and was at or above the Contract Required Quantitation Limit (CRQL).
- U-B** This flag indicates the sample value was initially detected at a value less than the CRQL and the value was less than 5 or 10 times the amount in the blank. The result was an undetected value at the CRQL, which became an estimate sample quantitation limit.

Validation Inorganic Qualifiers

- U** This flag indicates the analyte was analyzed for but was not detected above the level of the associated value.
- R** This flag is used when QCs indicate the data were not usable (the analyte may or may not be present). Re-analysis is necessary to determine the existence of the analyte.
- J-H** This flag indicates the value was estimated due to a method holding time violation.
- J-K** This flag indicates the value was estimated due to calibration criteria being out of QC limits.
- J-I** This flag indicates the value was estimated due to problems encountered with the laboratory control sample.
- J-*** This flag indicates the value was estimated due to precision of laboratory duplicate samples analyses being out of QC limits.
- J-N** This flag indicates the value was estimated due to matrix spike recoveries being out of QC limits.
- J-W** This flag indicates the value was estimated due to graphite furnace atomic absorption QC limits being exceeded, such as post digestion spike recoveries being out of QC limits.
- J-D** This flag indicates the value was estimated due to inductively coupled plasma (ICP) serial dilution criteria being exceeded.

**NFD POINT MOLATE
LABORATORY AND VALIDATION QUALIFIERS**

- J-V** This flag indicates the value was estimated due to not being able to verify the value when recalculated.
- J-+** This flag indicates the value was estimated due to the correlation coefficient for the analyte when the method of standard addition (MSA) was < 0.995 .
- J-B** This flag indicates the value was estimated since the value was $< \text{CRDL}$ but $> \text{IDL}$.
- J-E** This flag indicates the value was estimated since the value was $< \text{CRDL}$.
- J-M** This flag indicates the value was estimated due to duplicate injection precision criteria not being met.
- U-B** This flag indicates the analyte was undetected due to blank contamination. The value was $> \text{IDL}$ but $< \text{CRDL}$ and < 5 times the level of blank contamination.
- UJ-B** This flag indicates the analyte was undetected due to blank contamination. However, the value was $> \text{CRDL}$ and < 5 times the level of blank contamination.
- U-Z** This flag indicates the analyte was undetected but the value was estimated due to negative blank problems. The blank absolute value was $> \text{IDL}$ and the sample value was $< \text{IDL}$.
- J-Z** This flag indicates the analyte was estimated due to negative blank problems. The blank absolute value was $> \text{IDL}$ and the sample value was < 5 times the blank absolute value.