

Southwest Division  
Naval Facilities Engineering Command  
Contracts Department  
1220 Pacific Highway  
San Diego, California 92132-5190

Contract No. N68711-92-D-4670

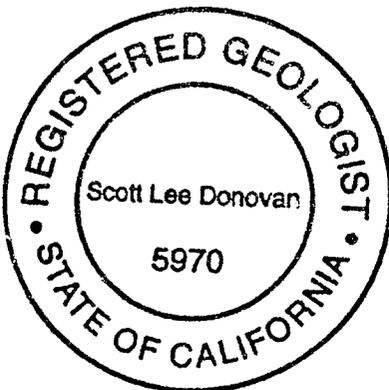
**COMPREHENSIVE LONG-TERM ENVIRONMENTAL  
ACTION NAVY  
CLEAN II**

**TECHNICAL MEMORANDUM  
CONTINUED GROUNDWATER  
MONITORING ACTIVITIES  
AT THE  
FORMER LONG BEACH NAVAL COMPLEX  
LONG BEACH, CALIFORNIA**

**CTO-0177/0110  
May 2000**

Prepared by:

BECHTEL NATIONAL, INC.  
1230 Columbia Street, Suite 400  
San Diego, California 92101-8502



Signature: \_\_\_\_\_

*Scott L. Donovan*

Date: \_\_\_\_\_

*6/1/00*

Scott L. Donovan, CTO Leader

## **TECHNICAL MEMORANDUM**

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This technical memorandum recommends continued use of the final Work Plan for Groundwater Monitoring at Installation Restoration Program (IRP) Sites 9, 12, and 13, herein referred to as the Work Plan (BNI 1999); provides notification of future destruction of all groundwater monitoring wells at the former Long Beach Naval Shipyard; and provides notification of groundwater sampling to be added at IRP Site 3, former Long Beach Naval Station. This technical memorandum has been prepared by Bechtel National, Inc., on behalf of the Department of the Navy, Southwest Division Naval Facilities Engineering Command. The work described herein will be performed in accordance with Contract Task Order-0177 issued under the Comprehensive Long-Term Environmental Action Navy II Program, contract No. N68711-92-D-4670.

### **CONTINUED USE OF WORK PLAN**

The Work Plan was issued during March 1999 to support the performance of four quarterly groundwater sampling events, the installation of groundwater monitoring wells, and the destruction of other groundwater monitoring wells at former Long Beach Naval Shipyard. The four quarterly sampling events were completed, and the Annual Groundwater Monitoring Report (BNI 2000) (the report) recommends continued groundwater monitoring, as a result. The record of decision for the subject sites (IRP Sites 9, 12, and 13) will also present a requirement for continued groundwater monitoring.

The Work Plan has been reviewed, and it has subsequently been determined that no modification to it is required to perform the tasks included in this technical memorandum. And, because additional groundwater sampling will probably be required, the Work Plan will again be followed. Its continued use is also recommended for destruction of the groundwater monitoring wells at the former Long Beach Naval Shipyard.

Extended use of the Work Plan is recommended through March 2001 when its applicability will again be reviewed.

### **DESTRUCTION OF ALL GROUNDWATER MONITORING WELLS**

Because the Port of Long Beach is constructing a pier terminal, all the land in the former Long Beach Naval Shipyard (see attached Figure 2-1 of the Work Plan) will be modified by grading activities. This will require destruction of 52 groundwater monitoring wells. The Port of Long Beach will replace wells required for continued groundwater monitoring.

Groundwater monitoring wells not currently part of a monitoring program are recommended for permanent destruction during July 2000. Approval will be required from the Los Angeles Regional Water Quality Control Board.

The first set of groundwater monitoring wells scheduled for permanent destruction includes: MW-24, MW-28, MW-44, MW-45, MW-FW-09 through MW-FW-14, MW-10-01 through MW-10-04, MW-10-06, MW-SGI-06, MW-SGI-15, MW-9-02, MW-11-02, and MW-11-03.

Destruction of groundwater monitoring wells MW-FW-05, MW-SGI-08, MW-SGI-16, and MW-1 through MW-5 is required by January 2001 when fill soil will be placed over the existing ground surface. Building demolition will begin around these wells during June 2000.

Technical Memorandum

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Destruction of groundwater monitoring wells MW-9-01, MW-9-03 through MW-9-11, MW-SGI-07, MW-SGI-14, MW-SGI-17, and MW-27 is required by May 2001 when fill soil will be placed over the existing ground surface. Building demolition around these wells will begin during September 2000.

Destruction of monitoring wells MW-12-01 through MW-12-04, MW-FW-08, MW-43, and MW-SGI-10 through MW-SGI-13 is required by July 2001 when fill soil will be placed over the existing ground surface. Demolition of the existing ground surface around these wells will begin during January 2001.

### **ADDITION OF GROUNDWATER SAMPLING AT IRP SITE 3 AT FORMER LONG BEACH NAVAL STATION**

Four quarterly groundwater sampling events are to be performed at IRP Site 3 at the former Naval Station. Samples will be collected from two groundwater monitoring wells and submitted to an analytical laboratory for volatile organic carbon (VOC) analyses using U.S. Environmental Protection Agency Method 8260. The Work Plan is proposed for this because it is a small amount of work and because the analytical method for VOCs is part of the Work Plan.

### **REFERENCE**

- Bechtel National, Inc. 1999. Final Work Plan for Groundwater Monitoring at IRP Sites 9, 12, and 13, Former Long Beach Naval Shipyard, Long Beach, California.
- . 2000. Working Draft, Annual Groundwater Monitoring Report, IRP Sites 9, 12, and 13, Former Long Beach Naval Shipyard, Long Beach, California. May.
- BNI. *See* Bechtel National, Inc.



BECHTEL NATIONAL INC.

CLEAN II TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N-68711-92-D-4670

Document Control No. CTO-177/0110

File Code: 0218.1

TO: Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Selby, Code 02R.RS
1220 Pacific Highway
San Diego, CA. 92132-5190

DATE: June 1, 2000
CTO #: 177
LOCATION: Former Long Beach Naval Complex

FROM: Bong T. Kown, Project Manager

DESCRIPTION: Technical Memorandum Continued Groundwater Monitoring Activities
DTD May 2000 for

TYPE: Contract Deliverable X CTO Deliverable Change Notice/Project Note
Other

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**IN REPLY REFERENCE: CTO-177/0110**

June 1, 2000

Contracting Officer  
Naval Facilities Engineering Command  
Southwest Division  
Mr. Richard Selby, Code 02R.RS  
1220 Pacific Highway  
San Diego, CA 92132-5190

Subject: Technical Memorandum  
Continued Groundwater Monitoring Activities at the  
Former Long Beach Naval Complex  
Long Beach, California

Dear Mr. Selby:

We are pleased to submit the Technical Memorandum for Continued Groundwater Monitoring Activities at the Former Long Beach Naval Complex dated May 2000. This work was performed under Contract No. N68711-92-D-4670.

If further information is required, please contact me at (619) 744-3058 or Scott Donovan, CTOL, at (619) 744-3019.

Very truly yours,

  
Bong T. Kown  
Project Manager

BTK/SLD/lm  
Attachments



Grid Location	Well ID	IRP Site Number	Location Description	Boring Number	Boring Elevation	TOCMLLW Elevation	Date of Installation	Reason for Installation	Screened Interval (ft) bgs	Casing Diameter (inches)	Above Grade/Flush
B7	MW-24	00008	North of Building 210	1734784.03	849070.16	0.66	9/27/91	Site Inspection for LBNSY	8 to 19	2	Flush
B10	MW-27	00009	Southeast corner of Bldg 201	1734867.13	849125.86	-0.87	9/27/91	Site Inspection for LBNSY	8 to 19	2	Flush
B13	MW-28	00010	In Parking Lot H by storm drain pumps	1738285.06	848260.04	-4.17	9/27/91	Site Inspection for LBNSY	3.8 to 13.6	2	Above
F16	MW-43	00012	East side of Parking Lot E	1734370.80	8493617.10	2125	8/27/91	Site Inspection for LBNSY	16.8 to 26.8	2	Above
D16	MW-44	00012	South of Building 197 within locked fenced area	1735002.27	8494004.22	19.83	8/27/91	Site Inspection for LBNSY	19.5 to 29.5	2	Above
G18	MW-45	00016	South side of IRP Site 12, access from outside former shipyard	1734071.03	8494143.16	2107	9/27/91	Site Inspection for LBNSY	16 to 26	2	Above
D10	MW-9-01	00009	South of Building 129 and just north of Sullivan	1734403.82	8491965.08	-0.83	8/9/94	Remedial Investigation for LBNSY	5 to 20	4	Flush
D11	MW-9-02	00009	Approximately 100 feet east of Building 133	1734672.38	8492248.65	1.07	8/9/94	Remedial Investigation for LBNSY	5 to 17	4	Above
B10	MW-9-03	00008	South of Building 216	1735006.08	849137.04	-2.81	8/10/94	Remedial Investigation for LBNSY	5 to 20	4	Flush
B10	MW-9-04	00009	North of Building 216	1735073.33	8491996.26	-0.51	8/9/94	Remedial Investigation for LBNSY	5 to 20	4	Above
B10	MW-9-05	00009	Approximately 80 feet northwest of Building 216	1735116.39	8491561.40	-1.15	8/15/94	Remedial Investigation for LBNSY	5 to 20	4	Above
B11	MW-9-06	00009	Approximately 80 feet northeast of Building 216	1735153.84	8491786.53	-0.82	8/9/94	Remedial Investigation for LBNSY	5 to 20	4	Above
B11	MW-9-07	00009	Approximately 200 feet northeast of Building 216	1735191.05	8491904.68	-1.85	8/9/94	Remedial Investigation for LBNSY	5 to 20	4	Above
D10	MW-08-08	00008	West of Building 129	1734756.19	8491846.73	0.70	3/22/99	Remedial Investigation for LBNSY	5 to 20	4	Above
B9	MW-08-09	00009	Northwest of Building 128	1734809.01	849197.91	1.60	3/20/99	Remedial Investigation for LBNSY	5 to 20	4	Above
E10	MW-08-10	00009	Northwest of Building 132	1734834.34	8492022.30	3.70	3/22/99	Remedial Investigation for LBNSY	5 to 20	4	Above
C9	MW-08-11	00009	Southeast of Building 128	1734836.37	8491313.11	4.24	4/17/99	Remedial Investigation for LBNSY	5 to 20	4	Above
B13	MW-10-01	00010	Northwest portion of Parking Lot H	1735441.48	8492534.54	-4.61	7/29/94	Remedial Investigation for LBNSY	4.5 to 16.5	4	Above
B13	MW-10-02	00010	Northwest end of Parking Lot H	1735484.12	8492843.69	-4.49	7/29/94	Remedial Investigation for LBNSY	4.5 to 16.5	4	Monument damaged
B13	MW-10-03	00010	Northwest portion of Parking Lot H	1735532.73	8492760.88	-6.18	7/29/94	Remedial Investigation for LBNSY	4.5 to 16.5	4	Above
B13	MW-10-04	00010	Near southeast corner of Building 142	1735223.54	8492506.82	-6.18	7/29/94	Remedial Investigation for LBNSY	4.5 to 16.5	4	Flush
C13	MW-10-05	00010	South of southeast corner of Parking Lot H	1735151.28	8492858.81	-5.2	7/29/94	Remedial Investigation for LBNSY	4.5 to 16.5	4	Flush
D14	MW-11-02	00011	West of Parking Lot F	1734779.36	8493158.41	16.35	7/29/94	Remedial Investigation for LBNSY	15 to 30	4	Above
F14	MW-11-03	00011	West of Parking Lot E in Oil Production Easement	1734205.10	8493342.53	18.7	7/29/94	Remedial Investigation for LBNSY	15 to 30	4	Above
D16	MW-12-01	00012	East of Building 197	1735109.84	8493716.87	9.10	3/24/99	Remedial Investigation for LBNSY	15 to 30	4	Above
E16	MW-12-02	00012	South of Building 314	1734544.17	8493798.95	2153	3/24/99	Remedial Investigation for LBNSY	15 to 30	4	Above
F14	MW-12-03	00012	West of Parking Lot E	1734137.04	8493548.84	23.09	3/24/99	Remedial Investigation for LBNSY	15 to 30	4	Above
G15	MW-12-04	00012	West of Parking Lot X	1734248.61	8493772.31	22.19	3/23/99	Remedial Investigation for LBNSY	15 to 30	4	Above
D7	MW-FW-08	00000	At north end of Drydock Number 3	1733911.71	8490922.38	3.39	3/17/94	Remedial Investigation for NAVSTA	15 to 30	4	Flush
B16	MW-FW-08	00000	At north end of Parking Lot B	1735761.32	8493492.84	16.36	3/18/94	Remedial Investigation for NAVSTA	20 to 40	4	Flush
C18	MW-FW-09	00000	Approximately 400 feet east of Parking Lot B, outside of former shipyard	1735731.00	8494314.00	19.56	7/26/95	Remedial Investigation for NAVSTA	19.2 to 33.2	4	Flush
H4	MW-FW-10	00000	West of Building 303	1735466.69	8493860.19	2173	3/14/94	Remedial Investigation for NAVSTA	16 to 31	4	Flush
H17	MW-FW-11	00000	Approximately 400 feet east of Building 312, outside of former shipyard	1734013.33	8494593.07	19.46	7/27/95	Remedial Investigation for NAVSTA	23.3 to 33.3	4	Flush
K16	MW-FW-12	00000	Southeast corner of Pier Echo	1732668.85	8494771.25	26.48	3/14/94	Remedial Investigation for NAVSTA	18 to 31	4	Above
F10	MW-FW-13	00000	Southeast corner of Building 131	1733271.69	8491609.89	3.04	3/18/94	Remedial Investigation for NAVSTA	5 to 18	4	Flush
F7	MW-FW-14	00000	East of Drydock Number 3	1733366.00	8491800.35	6.36	6/17/94	Remedial Investigation for NAVSTA	8.5 to 20.4	4	Flush
B9	MW-SGI-08	00008	North of Building 128	1734682.90	8491327.83	-0.26	6/26/97	SGI for IRP Sites 9, 12, and 13	4.5 to 16.5	4	Above
C8	MW-SGI-07	00008	West of central portion of Building 128	1734633.44	8491186.39	0.19	6/26/97	SGI for IRP Sites 9, 12, and 13	4.5 to 16.5	4	Above
D8	MW-SGI-06	00008	North of Drydock Number 2	1734067.89	8491321.24	2.86	6/26/97	SGI for IRP Sites 9, 12, and 13	14.1 to 29.1	4	Above
G15	MW-SGI-10	00012	North of Building 303 in Parking Lot X	1734114.21	8493781.41	2153	9/8/97	SGI for IRP Sites 9, 12, and 13	9 to 24	4	Above
G15	MW-SGI-11	00012	Approximately 100 feet northeast of Building 303	1734027.58	8493966.26	20.69	9/9/97	SGI for IRP Sites 9, 12, and 13	8.5 to 23.5	4	Above
E16	MW-SGI-12	00012	North end of Parking Lot E	1734580.69	8493497.87	17.41	12/11/97	SGI for IRP Sites 9, 12, and 13	15 to 30	4	Above
E16	MW-SGI-13	00012		1734728.00	8493800.69	19.44	12/11/97	SGI for IRP Sites 9, 12, and 13	15 to 30	4	Above
C9	MW-SGI-14	00009	West of Building 128	1734494.26	8493246.29	2.52	12/9/97	SGI for IRP Sites 9, 12, and 13	5 to 20	4	Above
B10	MW-SGI-15	00009	North end of 11th Street	1735042.66	8491804.79	-1.28	12/9/97	SGI for IRP Sites 9, 12, and 13	5 to 20	4	Above
D9	MW-SGI-16	00009	Approximately 80 feet north of Building 130	1734179.43	8491798.08	3.25	12/10/97	SGI for IRP Sites 9, 12, and 13	5 to 20	4	Above
D10	MW-SGI-17	00009	North of Building 131 near Sullivan Avenue	1734329.03	8491920.07	1.9	12/10/97	SGI for IRP Sites 9, 12, and 13	5 to 20	4	Above
G7	MW-1	UST	Near middle of west side of Building 210	1734267.33	8490323.73 (S74MILLWPT)			UST Investigation	5 to 20	4	Flush
C7	MW-2	UST	Near middle of west side of Building 210	1734306.60	8490745.66 (S28MILLWPT)			UST Investigation	4.5 to 20	4	Flush
G7	MW-3	UST	Near middle of west side of Building 210	1734410.42	8490711.83 (S74MILLWPT)			UST Investigation	4 to 20	4	Flush
C7	MW-4	UST	Near middle of west side of Building 210	1734424.85	8490615.02 (S44MILLWPT)			UST Investigation	5 to 25	4	Flush
C7	MW-5	UST	Near middle of west side of Building 210	1734505.21	8490676.76 (S44MILLWPT)			UST Investigation	6 to 20	4	Flush

**EXPLANATION**

EXPLORATION SYMBOLS - APPROXIMATE LOCATION OF:

- MW-12-01 MONITORING WELLS CURRENTLY UTILIZED FOR GROUNDWATER MONITORING (SEE ATTACHED TECHNICAL MEMORANDUM FOR REQUIRED DESTRUCTION DATES)
- MW-45 MONITORING WELLS REQUIRING DESTRUCTION DURING JULY 2000. PROPOSED FOR PERMANENT DESTRUCTION

TOPOGRAPHIC SYMBOLS:

- IRP SITE BOUNDARY
- LBNSY PROPERTY BOUNDARY
- x-x- FENCE
- WALL
- Y TOP SLOPE
- 128 STRUCTURE (LBNSY BUILDING DESIGNATION)

NOTES:

- SITE MAP MODIFIED FROM "TERMINAL ISLAND U.S. NAVAL FACILITIES" (REV 1-24-94).
- LBNSY PROPERTY BOUNDARIES ARE REPRODUCED FROM THOSE SHOWN ON "REAL ESTATE SUMMARY MAP" MW/FAC DWG NO. 6117951.

0 500 1000  
APPROXIMATE SCALE IN FEET