302 W. 5th Street, Suite 310
San Pedro, CA 90731
Tel: (310) 519-4000
Fax: (310) 519-4029

23 November 2015

Ms. Hamide Kayaci, Remedial Project Manager, HPNS
Base Realignment and Closure Program Management Office, West
33000 Nixie Way, Bldg 50
San Diego, California 92147

Subject: Monthly Landfill Gas Monitoring Letter Report for November 2015
Post-Removal Action, Parcel E-2 Industrial Landfill
Hunters Point Naval Shipyard, San Francisco, California
Contract Number N62473-09-D-2626
Contract Task Order 0007

Dear Ms. Kayaci,

The routine monthly landfill gas monitoring event at Parcel E-2 was performed on Thursday, November 19, 2015. For this event, monitoring via GEM-2000 landfill gas analyzer and photo-ionization detector was performed at gas monitoring probe locations GMP08A, GMP23 and GMP24. GMP08A is located along the fence line of the perimeter of the landfill while GMP23 and GMP24 are located within the UCSF compound as shown on Figure 1.

The results for the routine monthly monitoring event were as follows:

Methane

- Methane was detected by the field monitoring equipment in GMP08A, GMP23, and GMP24 at 0.0%, 0.1%, and 0.0% by volume in air, respectively

Per the project's Final Interim Landfill Gas Monitoring and Control Plan (TetraTech, 2004), the methane action levels are as follows:

- The HPNS action level for GMPs along the fence line, in the UCSF compound, and along Crisp Ave. is 2.5% by volume in air
- The regulatory action level for the concentration of methane gas migrating from the landfill must not exceed 5% by volume in air at the property boundary or an alternative boundary approved in accordance with 27 CCR §20925

Since all methane readings were below the action levels during this monitoring period, no further action is required.

NMOCs

- NMOCs were detected by the field monitoring equipment in GMP08A, GMP23, and GMP24 at 0.0 ppmv, 0.0 ppmv, and 0.0 ppmv, respectively

Per the project's Final Interim Landfill Gas Monitoring and Control Plan (TetraTech, 2004), the NMOC action level at these locations is as follows:

- 500 ppmv in GMPs

Since all NMOC readings were below the action level during this monitoring period, no further action is required.

Monitoring-Related Notes

- The GEM-2000 landfill gas analyzer was checked for calibration before and after this monitoring event

The above monitoring information will be included in the Quarterly Report for the fourth calendar quarter of 2015, to be prepared in January 2016.

The field data sheet and a figure of the monitoring points for this project are included in this report. Please let me know if you have comments or questions about this monitoring event or the data included herein. You can reach me at (310) 519-4000 or by e-mail at howard@ckyinc.com.

Sincerely,

Howard Wittenberg
CKY Inc., Project Manager

Enclosures: Field Data Sheet
Figure of Monitoring Points

CKY INC.

Landfill Gas Control System, Parcel E-2, Hunters Point Shipyard
Contract N62473-09-D-2626 CTO 0007

Landfill Gas Monitoring Log

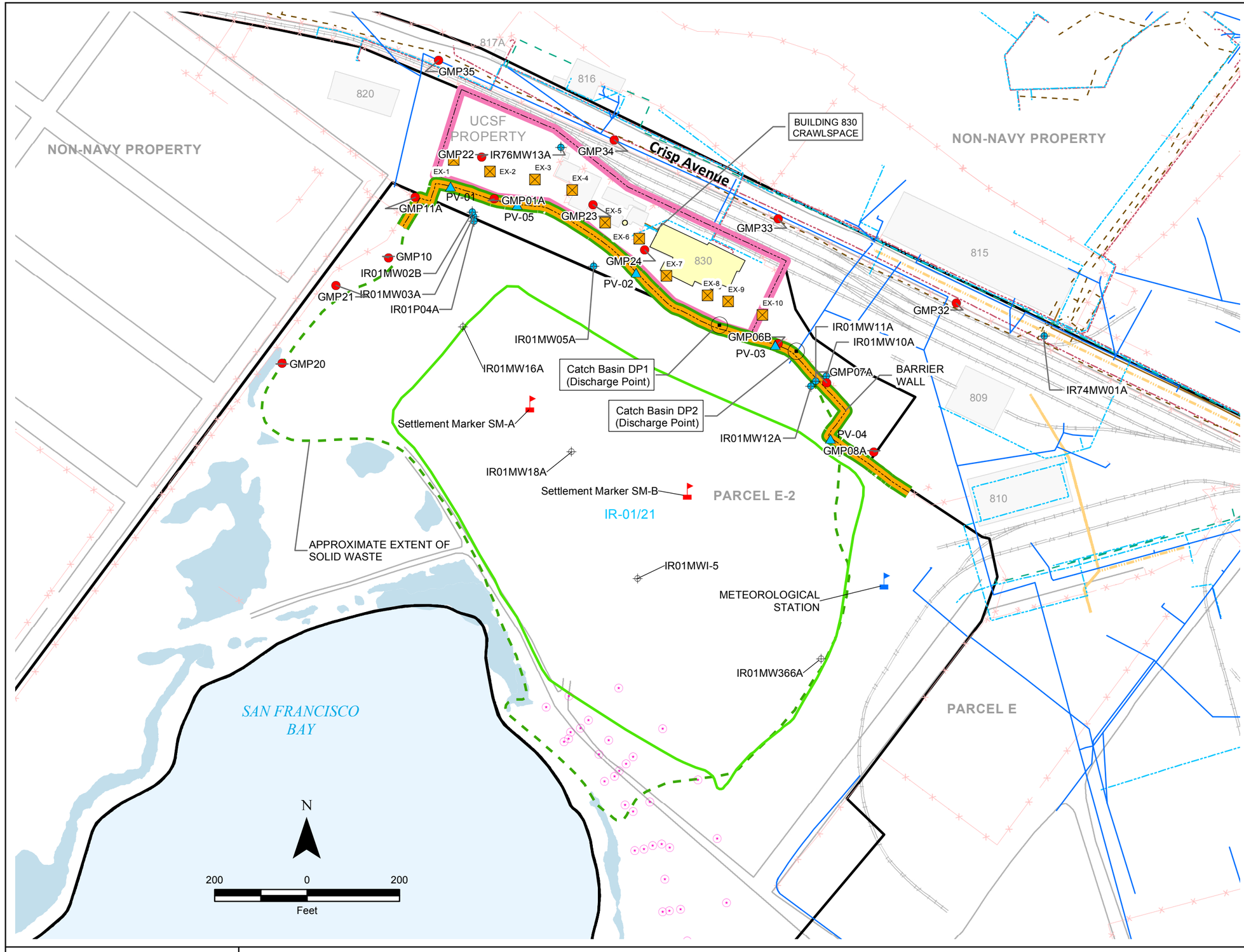
Weather: clear

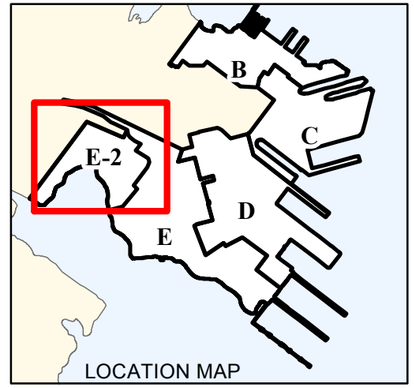
Name: Brian Weeks

Sampling Location						GEM-2000				PID			
Location ID	Description (for example, GMP, Well, Carbon, Hydrosil)	Date	Time	Temp (°F)	Barometric Pressure (in. Hg)	Methane (%)	CO_2 (%)	O_2 (%)	Percent of LEL	Non-Methane VOCs (ppmv)	Bckgrd. NMOCs (ppmv)	Soil Gas Pressure (in. H_20)	Notes (e.g., active extraction, flow rate, probe damage, instrument issues)
GMP08A	Gas Monitoring Probe	11/19/15	846	60	30.35	0.0	7.6	0.3	0.0	0.0	0.0	0.0	
GMP23	Gas Monitoring Probe	11/19/15	811	52	30.36	0.1	16.9	1.0	0.0	0.0	0.0	0.0	
GMP24	Gas Monitoring Probe	11/19/15	821	54	30.36	0.0	15.8	0.0	0.0	0.0	0.0	0.0	

Legend:

%: percent by volume in air
°F: degrees Fahrenheit
CO_2: carbon dioxide
GEM-2000: CES-LANDTEC landfill gas meter
in. Hg: inches of mercury
in. H_20: inches of water
LEL: lower explosive limit
NA: not applicable
NMOC: non-methane organic compound
O_2: oxygen
PID: photoionization detector
ppmv: parts per million by volume
VOC: volatile organic compound





Legend

- Gas Monitoring Probe
- Extraction Well
- Monitoring Well with Water Level Measurement
- Other Monitoring Well
- Passive Vent
- Catch Basin Discharge Point
- Grouted Section of HDPE Barrier Wall
- Groundwater Extraction System Piezometer
- HDPE Barrier Wall and Extraction Trench
- Meteorological Station
- Settlement Marker
- Surface/Building Air Monitoring Location
- Limit of Landfill Cap
- Approximate Extent of Solid Waste
- Storm Water Line
- Water Line
- Saltwater Line
- Steam Line
- Sanitary Sewer Line
- Electric Line
- Gas Line
- Fence Line
- Parcel Boundary
- Wetland (Surveyed in October 2001)
- Building
- Road
- Rail Line
- UCSF Property
- Non-Navy Property
- Industrial
- Open Space
- Research and Development
- Residential

Notes:

EW	Groundwater extraction well
EX	Gas extraction well
GMP	Gas monitoring probe
HDPE	High-density polyethylene
IR	Installation Restoration
PV	Passive Vent
UCSF	University of California, San Francisco

CKY Incorporated

Monthly Landfill Gas Monitoring Report
Hunters Point Naval Shipyard
San Francisco, California

FIGURE 1
Site Map and
Landfill Gas Monitoring Locations