BP PRODUCTS NA, INC.
WHITING REFINERY

INDUSTRIAL HYGIENISTS

(DAYS) MICHELLE SEMOTAN (BP)
(NIGHTS) TIM CARROLL (BP)
(DAYS) CHARLIE GRIFFIN (CONTRACTOR)
(NIGHTS) MIKE GALVIN (CONTRACTOR).

AIR MONITORING PERFORMED BY IH PERSONNEL ABOVE.
@ LOCATIONS INDICATED.

Location #1 Far Southeast side of Beach

AREARAE # 116 (Battery Change at 9:16 am) 3/26

OVM BADGE # NK 8275 (0816 - 1817) 3/25/14

OVM BADGE # NF 1864 (1817 -

OVM BADGE # NF 1957 (0703 -) 3/26/14

NOTES: Battery (AreaRAE) changed @ 1817 on 3/25/14
Datalog download @ 11:15 pm / 3-25-14

DATE	TIME	UltraRAE (ppm)	ppbRAE
3/25/14	0825 am	ND - 0.05 ppm	4-117 ppb
	1154 am	ND - 0.05 ppm	111-169 ppb
	2:48 pm	ND	46-111 ppb
	9:01 pm	ND	55-91 ppb
	11:15 pm	ND	75-131 ppb
3/26/14	3:00 am (w/ EPA)	ND (ND)	—
	1:56 am	—	0-0 ppb
	5:19 AM	ND	17 - 68 ppb
	7:03 am (w/ EPA)	ND (ND)	41-64 ppb
	9:12 am	ND	0-7 ppb
	10:55 am	ND	68-81 ppb
	1:50 pm	ND	ND
	2:37 pm	ND	ND

LOCATION #2: MID-BEACH

AREARAE # 113 / Battery change 3/26 at 9:22am

OVM BADGE # NF8286 (0844-1810) 3/25/14

OVM BADGE # NF1952 (1810- 5:44 AM

OVM BADGE # NF1726 (07:13-) 3/26/14

NOTES: Battery (AREARAE) change @ 1810 on 3/25/14
Datalog download @ 11:04 pm on 3/25/14

DATE	TIME	UltraRAE	ppbRAE
3/25/14	0845 am	ND	56-279 ppb
	1201 pm	ND	114-124 ppb
	2:57 pm	ND	45-116 ppb
	8:58 pm	ND	3-15 ppb
	11:02 pm	ND	52-138 ppb
3/26/14	2:55 am (w/ EPA)	ND (ND)	—
	1:52 AM	—	0-0 ppb
	5:15 AM	ND	@17-22 ppb
	7:13 am (w/ EPA)	ND (ND)	15-19 ppb
	9:23 am	ND	2-16 ppb
	11:02 am	ND	34-36 ppb
	1:55 pm	ND	ND
	2:40 pm	ND	ND

LOCATION 3: NORTHWEST BEACH

AreaRAE # 103 (Battery Change 9:33 3/26)

No OVM BADGE

NOTES: Battery (AreaRAE) change @ 1805 on 3/25/14

Datalog download @ 10:58 pm 3/25/14

DATE	TIME	UltraRAE	ppbRAE
3/25/14	9:41 am	0.05 ppm	219 - 317 ppb
	12:07 pm	ND	253 - 684 ppb
	3:03 pm	ND	63 - 119 ppb
	8:55 pm	ND	ND - 25 ppb
	10:42 pm	ND	10 - 38 ppb.
3/26/14	2:50 am (w/ EPA)*	ND (ND)	—
	*EPA reps, took photo @ Location #3		
	1:47 AM	—	64 - 141 ppb
	5:12 AM	ND	20 - 30 ppb
	7:22 AM (w/EPA)	ND (ND)	44 - 60 ppb
	9:32 Am	ND	67 - 124 ppb
	11:08 am	ND	38 - 41 ppb
	1:58 pm	ND	ND
	2:42 pm	ND	ND - 6 ppb

Location 4: Ramp at beach by tent, hanging on fence

AreaRAE #108 (Battery changed 3/25/14 5:40pm 3/26/14 9:40am)

3/25/14 Badge #NK8265 8:53am - 5:39 pm

3/25/14 (Nights) Badge # NF2008 5:40 pm - 5:41

- AREARAE UNABLE TO DOWNLOAD. AREARAE WAS NOT CLEARED

3/26/14 Badge# NF1653 7:32am -

Cleared AreaRAE, set to automatic download

		UltraRAE	ppbRAE
3/25/14	8:50 am	ND	269-713 ppb
	12:12 pm	ND	211-256 ppb
	3:05 pm	ND	154-427 ppb
	8:50 pm	ND	27-261 ppb
	10:40 pm	ND	56-150 ppb
3/26/14	3:05 am (w/ EPA)	ND (ND)	—
	2:03 AM	—	72-142 ppb
	5:26 AM	ND	50-130 ppb
	7:33 am	ND	148-360 ppb
	9:38 am	ND	17-56 ppb
	11:10 am	ND	43-46 ppb
	2:00 pm	ND	ND
	2:44 pm	ND	ND

LOCATION #5: Middle of walkway @ #6 Separator

Matt Riggs

OVM Badge # NF1913 on 3/25/14 10:09 am – 6:31 pm
OVM Badge # NF1821 on 3/25/14 6:35 pm – 5:38
Badge # NF1655 on 3/26/14 7:37 am

DATE	TIME	UltraRAE	ppbRAE
3/25/14	10:10 am	ND	700 ppb – 1.9 ppm
	12:15 pm	ND	892 ppb – 1.9 ppm
	3:10 pm	ND	614 ppb – 1.0 ppm
	8:30 pm	ND	ND – 90 ppb
	10:30 pm	ND	75 – 230 ppb
	11:30 pm	ND	66 – 210 ppb
3/26/14	2:30 am (w/ EPA)	ND (ND)	—
	2:12 AM	—	277 – 512 ppb
	5:30 AM	ND	40 – 66 ppb
	7:39 am	ND	85 – 91 ppb
	9:46 am	ND	49 – 57 ppb
	11:13 am	ND	86 – 105 ppb
	1:36 pm	ND	ND
	3:23 pm	ND	59 – 95 ppb

Survey of #6 Separator Walkways

		UltraRAE	ppb RAE
3/25/14	10:33am	0.05 ppm	0.5 ppm - 2.0 ppm
	10:36 am	ND - 0.1 ppm	0.4 ppm - 3.1 ppm
	12:19 pm	ND	297 ppb - 2.5 ppm
	12:24 pm	ND	852 ppb - 1.6 ppm
	3:17 pm	ND	134 ppb - 2.9 ppm
	3:21 pm	ND	210 ppb - 1.6 ppm
	8:30 pm	ND	90 ppb - 300 ppb
	10:30 pm	ND	75 ppb - 1.35 ppm
	11:30 pm	ND	60 ppb - 610 ppb
3/26/14	2:30 am	ND	—
	2:12 AM	—	63 ppb - 1.8 ppm
	5:31 AM	ND	40 - 617 ppb
	7:51 Am	ND	114 - 377 ppb
	9:56 am	ND	72 - 163 ppb
	9:59 am	ND	93 - 331 ppb
	11:15 am	ND	70 - 96 ppb
	11:20 am	ND	64 - 296 ppb
	2:24 pm	ND	ND - 135 ppb
	2:26 pm	ND	ND - 56 ppb

Location 6: Outfall
AreaRAE # 114
3/25/14 Badge # NF1902 10:20 am - 6:40 pm
BATTERY CHANGE @ 6:40 pm 3/25/14
3/25/14 BADGE # NF 1888 6:40 pm -
DATALOG DOWNLOAD @ 12:23 am 3/25/14
↳ AREARAE WAS TAKEN OFF THE UNIT WHEN DOWNLOADED
↳ NOT ALL DATA WAS DOWNLOADED, AREARAE WAS NOT CLEARED
Battery change 3/26/14 9:53 am. 3/26/14 OVM#NF1748 7:43am -

		UltraRAE	ppb RAE
3/25/14	10:20 am	ND - 0.05 ppm	1.0 ppm - 2 ppm
	12:27 pm	ND	523 ppb - 1.6 ppm
	3:23 pm	ND	314 ppb - 625 ppb
	8:30 pm	0 - 0.05 ppm	700 ppb - 1000 ppb
	10:30 pm ~~11:30 pm~~	ND ~~ND~~	370 ppb - 890 ppb ~~181 ppb - 410 ppb~~
	11:30 pm	ND	181 ppb - 410 ppb
3/26/14	2:40 am (w/ EPA)	ND (ND)	—
	2:15 AM	—	398 ppb - 911 ppb
	5:33 am	ND	180 - 240 ppb
	7:45 am	ND	181 - 211 ppb
	9:47 am	ND	49 - 81 ppb
	11:16 am	ND	63 - 87 ppb
	1:36 pm	ND	ND
	3:25 pm	ND	4 - 13 ppb

Location 7: Standard Ave & Dickey Rd

AreaRAE #102 (battery changed 7:00 pm (3/25/14) 8:41 pm (3/26/14))

3/25/14 Badge #NF1870 10:58 am – 7:00 pm

3/25/14 (Nights) Badge # #NF1939 7:00 pm –

DATALOG DOWNLOADED @ 11:57 pm 3/25/14 (CLEARED DATA ON AREARAE)

3/26/14 Badge # NF1933 8:39 am –

		UltraRAE	ppb RAE
3/25/14	11:06 am	ND	280 ppb
	12:41 pm	ND	180-222 ppb
	3:46 pm	ND	168-190 ppb
	9:13 pm	ND	47-60 ppb
	11:54 pm	No METER	111 - 127 ppb
3/26/14	0218 am (w/ EPA)	ND (ND)	—
	1:36 AM	—	0-30 ppb
	5:04 AM	ND	10 - 27 ppb
	8:41 am	ND	2-56 ppb
	10:21 am	ND	123-130 ppb
	11:36 am	ND	86-112 ppb
	2:11 pm	ND	6-29 ppb
	3:39 pm	ND	45-91 ppb