

VAPOR INTRUSION IN AN AUTOMOBILE MANUFACTURING PLANT IN BRAZIL

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AREA 1

158 Vapor Extraction Points

AREA 2

Month	Mass Extracted CH ₄ (kg)	Mass Accumulated CH ₄ Extracted (kg)
Jan-17	392.16	392.16
Feb-17	390.74	782.90
Mar-17	367.85	1150.75
Apr-17	339.93	1490.68
May-17	286.92	1777.60
Jun-17	246.14	2023.74
Jul-17	187.76	2211.50
Aug-17	28.27	2239.77
Sep-17	0.00	2239.77
Oct-17	29.79	2269.56
Nov-17	44.85	2314.41
Dec-17	12.72	2327.13
Jan-18	28.32	2355.45
Feb-18	0.00	2355.45
Mar-18	6.66	2362.11
Apr-18	67.31	2429.42
May-18	35.99	2465.41
Jun-18	137.52	2602.93

Total extracted: 2.6ton of CH₄

Results and Lessons Learned:

AREA 1: Over the implementation of the vapor extraction points in Area 1, some technical construction aspects were important to guarantee the efficient extraction of vapors from the sub slab, like the concrete and plastic sealings, the appropriate granulometry of the sand filter around the extraction pipe and also the depth of installation.

AREA 2: The operation of the SSD system in Area 2 extracted 2.6 ton of methane after 1.5 years of operation. As a result, the risk in the area is under control. After this period of operation, there are still some remaining areas with methane concentrations, which are associated with high methane production. The elimination of these spots is still a challenge.