Message

From: Davis, Eva [Davis.Eva@epa.gov]
Sent: 9/9/2015 8:02:35 PM
To: d'Almeida, Carolyn K. [dAlmeida.Carolyn@epa.gov]; Wayne Miller [Miller.Wayne@azdeq.gov]
CC: Steve Willis [steve@uxopro.com]
Subject: RE:

I agree that all of the data taken as a whole raises more questions then are answered -

From: d'Almeida, Carolyn K.
Sent: Wednesday, September 09, 2015 2:54 PM
To: Davis, Eva; Wayne Miller
Cc: Steve Willis
Subject: RE:

Thanks Eva.

Yes, the concentrations are very low, which is why we didn't think to much of the data set before. The concentrations found at ST12 are also generally low, or there is indication of blank contamination, though the results are fairly consistent over time. There are also low levels of pesticides as well which is not expected at the fuels spill site and must come from an upgradient source. Curiously, the data at ST 12 mirrors the data at SS17. Given the rise in water table and lack of data points between the two sites, we have enough to call into question the conceptual site model for SS17.

From: Davis, Eva
Sent: Wednesday, September 09, 2015 9:02 AM
To: d'Almeida, Carolyn K.; Wayne Miller
Cc: Steve Willis
Subject: RE:

These methylene chloride concentrations are so low and mostly uniform, you could almost believe they are lab contamination. The one PCE hit is also very low, hard to see that as the source of PCE at ST-12. But you need to look at the characterization that was done holistically – were an adequate number of borings completed in what looks to be the right places? What was the criteria for locating the soil borings? Were the analytical samples obtained from the zones with the highest PID readings or just at certain pre-determined depths, meaning that higher concentrations within the core may have been missed?

From: d'Almeida, Carolyn K.
Sent: Wednesday, September 02, 2015 3:22 PM
To: Wayne Miller; Davis, Eva
Cc: Steve Willis
Subject:

I'm looking at the 1999 SS-17 RI report and there are some solvents detected, methylene chloride, and even some PCE reported – on page 94 and 95

Summary of Detected VOCs, SS-17
OU-6 Expanded Investigation
Williams Air Force Base, Arizona

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LOCATION	SAMPLE NO.	DATE	MATRIX	TEST GROUP	BEGIN DEPTH (FT.)	END DEPTH (FT.)	PARAMETER	VAL. RESULT	VAL. QUALIFIER	DETECTION LIMIT	UNIT	SOIL HBGL	EPA PRG RES SOIL
SS17-BH07	F5041	12/9/96	SOIL	VOC	10	10.5	CHLOROMETHANE	0.003	J	0.012	MG/KG	100	1.20
SS17-BH07	F5041	12/9/96	SOIL	VOC	10	10.5	METHYLENE CHLORIDE	0.002	J	0.012	MG/KG	180	7.80
SS17-BH07	F5042	12/9/96	SOIL	VOC	60	60.5	CHLOROMETHANE	0.003	J	0.01	MG/KG	100	1.20
SS17-BH07	F5046	12/10/96	SOIL	VOC	110	110.5	METHYLENE CHLORIDE	0.002	J	0.013	MG/KG	180	7.80
SS17-BH08	F5052	12/10/96	SOIL	VOC	30	30.5	METHYLENE CHLORIDE	0.002	J	0.011	MG/KG	180	7.80
SS17-BH08	F5054	12/11/96	SOIL	VOC	100	100.5	2-BUTANONE	0.004	J	0.012	MG/KG	70000	7100.00
SS17-BH08	F5056	12/11/96	SOIL	VOC	140	140.5	2-BUTANONE	0.002	J	0.011	MG/KG	70000	7100.00
SS17-BH08	F5057	12/11/96	SOIL	VOC	170	170.5	2-BUTANONE	0.002	J	0.012	MG/KG	70000	7100.00
SS17-BH08	F5057	12/11/96	SOIL	VOC	170	170.5	METHYLENE CHLORIDE	0.002	J	0.012	MG/KG	180	7.80
SS17-BH09	F5139	12/12/96	SOIL	VOC	10	10.5	ACETONE	0.026	B	0.012	MG/KG	12000	2100.00
SS17-BH09	F5139	12/12/96	SOIL	VOC	10	10.5	TETRACHLOROETHENE	0.003	J	0.012	MG/KG	27	5.40
SS17-BH10	F5072	12/13/96	SOIL	VOC	40	40.5	METHYLENE CHLORIDE	0.002	J	0.011	MG/KG	180	7.80
SS17-BH11	F5081	12/16/96	SOIL	VOC	100	100.5	ACETONE	0.12	B	0.012	MG/KG	12000	2100.00
SS17-BH12	F5089	12/17/96	SOIL	VOC	5	5.5	CHLOROMETHANE	0.002	J	0.011	MG/KG	100	1.20
SS17-BH12	F5090	12/17/96	SOIL	VOC	10	10.5	ACETONE	0.12	B	0.013	MG/KG	12000	2100.00
SS17-BH12	F5099	12/17/96	SOIL	VOC	10	10.5	CHLOROMETHANE	0.002	J	0.013	MG/KG	100	1.20
SS17-BH13	F5103	12/17/96	SOIL	VOC	60	60.5	CHLOROMETHANE	0.002	J	0.013	MG/KG	100	1.20
SS17-BH13	F5104	12/17/96	SOIL	VOC	100	100.5	CHLOROMETHANE	0.003	J	0.013	MG/KG	100	1.20
SS17-BH14	F5110	12/18/96	SOIL	VOC	10	10.5	TOLUENE	0.002	J	0.011	MG/KG	23000	790.00
SS17-BH15	F5119	12/19/96	SOIL	VOC	5	5.5	ACETONE	0.032		0.011	MG/KG	12000	2100.00
SS17-BH15	F5119	12/19/96	SOIL	VOC	5	5.5	TOLUENE	0.005	J	0.011	MG/KG	23000	790.00
SS17-BH15	F5120	12/19/96	SOIL	VOC	10	10.5	ACETONE	0.03		0.011	MG/KG	12000	2100.00
SS17-BH15	F5120	12/19/96	SOIL	VOC	10	10.5	METHYLENE CHLORIDE	0.035		0.011	MG/KG	180	7.80
SS17-BH15	F5120	12/19/96	SOIL	VOC	10	10.5	TOLUENE	0.01	J	0.011	MG/KG	23000	790.00
SS17-BH15	F5121	12/19/96	SOIL	VOC	30	30.5	ACETONE	0.063		0.011	MG/KG	12000	2100.00
SS17-BH15	F5121	12/19/96	SOIL	VOC	30	30.5	TOLUENE	0.003	J	0.011	MG/KG	23000	790.00
SS17-BH15	F5122	12/19/96	SOIL	VOC	50	50.5	ACETONE	0.056		0.011	MG/KG	12000	2100.00
SS17-BH15	F5122	12/19/96	SOIL	VOC	50	50.5	METHYLENE CHLORIDE	0.012		0.011	MG/KG	180	7.80
SS17-BH15	F5123	12/19/96	SOIL	VOC	100	100.5	ACETONE	0.027		0.014	MG/KG	12000	2100.00
SS17-BH15	F5123	12/19/96	SOIL	VOC	100	100.5	METHYLENE CHLORIDE	0.018		0.014	MG/KG	180	7.80

Table 2-6

Summary of Detected VOCs, SS-17
OU-6 Expanded Investigation
Williams Air Force Base, Arizona

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LOCATION	SAMPLE NO.	DATE	MATRIX	TEST GROUP	BEGIN DEPTH (FT.)	END DEPTH (FT.)	PARAMETER	VAL. RESULT	VAL. QUALIFIER	DETECTION LIMIT	UNIT	SOIL HBGL	EPA PRG RES SOIL
SS17-BH16	F5129	12/19/96	SOIL	VOC	5	5.5	ACETONE	0.049		0.011	MG/KG	12000	2100.00
SS17-BH16	F5129	12/19/96	SOIL	VOC	5	5.5	M,P-XYLENE	0.003	J	0.011	MG/KG	NC	NC
SS17-BH16	F5129	12/19/96	SOIL	VOC	5	5.5	METHYLENE CHLORIDE	0.016		0.011	MG/KG	180	7.80
SS17-BH16	F5129	12/19/96	SOIL	VOC	5	5.5	TOLUENE	0.003	J	0.011	MG/KG	23000	790.00
SS17-BH16	F5129	12/19/96	SOIL	VOC	5	5.5	XYLENE (TOTAL)	0.003	J	0.011	MG/KG	230000	320.00
SS17-BH16	F5130	12/19/96	SOIL	VOC	10	10.5	ACETONE	0.17		0.012	MG/KG	12000	2100.00
SS17-BH16	F5130	12/19/96	SOIL	VOC	10	10.5	METHYLENE CHLORIDE	0.047		0.012	MG/KG	180	7.80
SS17-BH16	F5131	12/19/96	SOIL	VOC	40	40.5	ACETONE	0.053		0.012	MG/KG	12000	2100.00
SS17-BH16	F5131	12/19/96	SOIL	VOC	40	40.5	METHYLENE CHLORIDE	0.038		0.012	MG/KG	180	7.80
SS17-BH16	F5132	12/19/96	SOIL	VOC	100	100.5	ACETONE	0.05		0.011	MG/KG	12000	2100.00
SS17-BH16	F5132	12/19/96	SOIL	VOC	100	100.5	METHYLENE CHLORIDE	0.1		0.011	MG/KG	180	7.80
SS17-BH16	F5133	12/20/96	SOIL	VOC	130	130.5	ACETONE	0.034		0.012	MG/KG	12000	2100.00
SS17-BH16	F5133	12/20/96	SOIL	VOC	130	130.5	METHYLENE CHLORIDE	0.048		0.012	MG/KG	180	7.80
SS17-BH16	F5135	12/20/96	SOIL	VOC	170	170.5	ACETONE	0.098		0.012	MG/KG	12000	2100.00
SS17-BH16	F5135	12/20/96	SOIL	VOC	170	170.5	METHYLENE CHLORIDE	0.046		0.012	MG/KG	180	7.80
SS17-BH16	F5136	12/20/96	SOIL	VOC	130	130.5	ACETONE	0.03		0.012	MG/KG	12000	2100.00
SS17-BH16	F5136	12/20/96	SOIL	VOC	130	130.5	METHYLENE CHLORIDE	0.081		0.012	MG/KG	180	7.80

Carolyn d'Almeida
Remedial Project Manager
Federal Facilites Branch (SFD 8-1)
US EPA Region 9
(415) 972-3150

"Because a waste is a terrible thing to mind…"