神奈川県平塚市における地下水モニタリング(平成31年冬季~令和元年秋季) の結果について

1. 地下水モニタリングの概要

神奈川県平塚市においては、平成 16 年にA事案区域である旧相模海軍工廠化学実験部跡地 近傍の井戸水から有機ヒ素化合物が検出されたことを受け、要調査地域を設定し、地下水の飲 用自粛を呼びかけるとともに、当該地域において、有機ヒ素化合物が検出された井戸を中心と して、地下水モニタリングを実施している。

同地域における要調査地域の範囲については、平成 23 年度に見直しを実施しており、現在 は要調査地域内及びその外縁部周辺の計 18 箇所で地下水モニタリングを実施している。

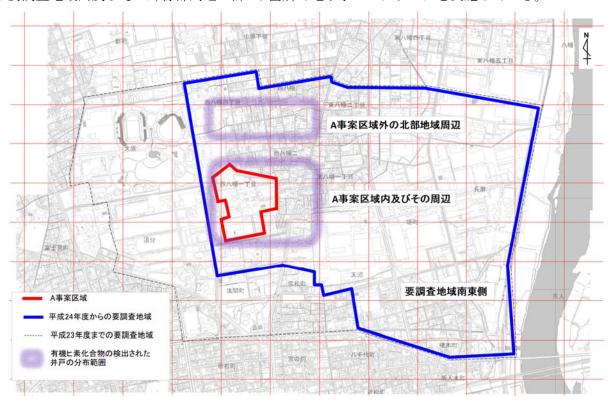


図1 平塚地区における要調査地域範囲及び外縁部周辺位置関係

2. 要調査地域における地下水の流れ及び地下水モニタリング結果について

平成 16 年以降、要調査地域における地下水の流れの方向に大きな変化はなく、地下水は西北西から東南東に向かって流れている。また、有機ヒ素化合物の検出された井戸の分布範囲は、A事案区域内から東方向に広がる範囲(A事案区域内及びその周辺)とA事案区域外の北部地域から東南東方向に広がる範囲(A事案区域外の北部地域周辺)の二つに広がっている(図 1 参照)。

平成31年冬季~令和元年秋季は、A事案区域内及びその周辺で4箇所、A事案区域外の北部地域周辺で5箇所、要調査地域南東側で1箇所、要調査地域外縁部周辺で8箇所のモニタリング井戸(合計18箇所)において地下水モニタリングを実施した。その結果、有機ヒ素化合物の

うち、DPAA(ジフェニルアルシン酸)は検出されておらず、PAA(フェニルアルソン酸)及び PMAA(フェニルメチルアルシン酸)は 7 箇所の井戸で検出されているが、いずれも $0.001\sim0.055$ mg-As/L と低濃度であり、濃度上昇は認められない。なお、要調査地域外縁部周辺では有機ヒ素化合物は検出されていない。

(1) 地下水の流れ

平成 31 年冬季~令和元年秋季の地下水位標高は、要調査地域の北西部では約 4.8~6.2m、東部では約 1.9~2.7mであった。地表面から地下水面までの深さは、A事案区域内及びA事案区域外の北部地域のいずれも、概ね 2.4~6.3m程度であった。平塚地区では令和元年 10 月の台風に伴う雨の影響で、令和元年秋季の地下水位標高は、ほとんどの地点で過去最高となった。しかしながら、要調査地域における地下水流向に大きな変化はなく、令和元年秋季も地下水は西北西から東南東に向かって流下している。(図 2 - 1、図 2 - 2、図 2 - 3、図 2 - 4 参照)

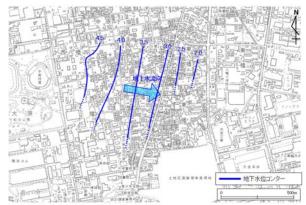


図2-1 地下水の流れと地下水位等高線 冬季:平成31年2月測定 (地下水位等高線の単位:標高m)

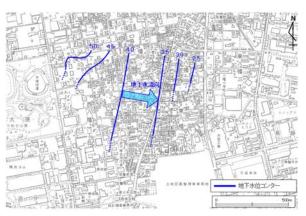


図2-2 地下水の流れと地下水位等高線 春季:令和元年5月測定 (地下水位等高線の単位:標高m)

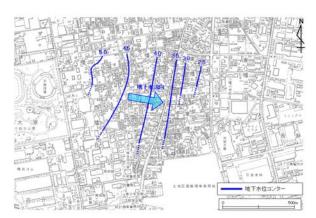


図2-3 地下水の流れと地下水位等高線 夏季:令和元年8月測定 (地下水位等高線の単位:標高m)

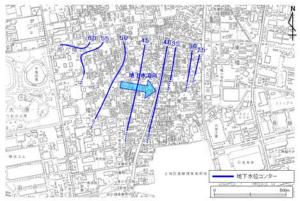


図2-4 地下水の流れと地下水位等高線 秋季:令和元年11月測定 (地下水位等高線の単位:標高m)

(2) 有機ヒ素化合物の分析結果

ア A事案区域内及びその周辺

本区域内で平成 16 年以降有機ヒ素化合物の濃度が 0.01mg-As/L を超えたモニタリング 井戸は 3 箇所であり、要調査地域を見直した平成 24 年春季以降の最大濃度は 0.029mg-As/L (平成 24 年冬季、春季) である。

上記 3 箇所のうち、平成 31 年冬季 2 箇所、令和元年春季 2 箇所、夏季 2 箇所、秋季 2 箇所で有機ヒ素化合物の濃度が 0.01mg-As/L を超過したが、その濃度は $0.011\sim0.020$ mg-As/L の範囲であり、濃度推移はこれまでの調査結果とほぼ同様に横ばいの傾向にある。

本区域では、有機ヒ素化合物のうち PAA を主体とした汚染となっており、その推移は、 緩やかな低下傾向にある。

イ A事案区域外の北部地域周辺

本区域内で平成 16 年以降有機ヒ素化合物の濃度が 0.01mg-As/L を超えたモニタリング 井戸は 5 箇所であり、要調査地域を見直した平成 24 年春季以降の最大濃度は 0.143mg-As/L (平成 26 年春季) である。

現在モニタリング対象としている 5 箇所のうち、平成 31 年冬季 1 箇所、令和元年春季 3 箇所、夏季 2 箇所、秋季 2 箇所で有機ヒ素化合物の濃度が 0.01mg-As/L を超過したが、その濃度は $0.017\sim0.060$ mg-As/L の範囲である。

本区域では、有機ヒ素化合物のうち PMAA 及び PAA による汚染となっており、PAA が検出される井戸の分布域は PMAA に比べ狭く、地下水の流れの上流側に集中して存在している。また、地下水の流れの中流地域では、平成 18 年から PAA が検出されるようになり、緩やかな濃度上昇が見られたが、平成 26 年春季をピークに濃度低下し、現在は横ばい傾向にある。一方、PMAA については濃度に大きな変化はない。これらは今回も同様であり、全体としてみると、有機ヒ素化合物の濃度は、ほぼ横ばい傾向にある。

ウ 要調査地域南東側

要調査地域南東側では、平成31年冬季~令和元年秋季のモニタリングにおいては、有機ヒ素化合物は検出されていない。

工 要調査地域外縁部周辺

要調査地域外縁部周辺では、平成31年冬季~令和元年秋季のモニタリングにおいては、有機ヒ素化合物は検出されていない。

有機ヒ素化合物分析結果一覧表(単位:mg-As/L、定量下限値:いずれも0.001mg-As/L)

A事案区域内及びその周辺

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採水	,	H16		H17			Н	18			Н	19			Н	20			H:	21			H	22			H:	23			H:	24			H:	25	
休小	5/31	10/15	1/26	4/28	7/11	1/26	5/26	8/30	11/22	2/27	5/24	8/27	11/27	2/28	5/27	8/29	11/27	2/25	5/28	8/25	11/25	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	1/29
DPA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	_	_	_
PAA	0.004	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	_	_	_
PMA	A 0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		_	_

採水日		Н	.D. N.D. N			H:	27			H	28			H	29			H	30		H31		R1	
抹小口	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	N.D.	N.D.	N.D.	-	N.D.	N.D.	N.D.	N.D.	-	N.D.	N.D.												
PAA	N.D.	N.D.	N.D.	N.D.	-	N.D.	N.D.	N.D.	N.D.	1	N.D.	N.D.												
PMAA	N.D.	N.D.	N.D.	N.D.	-	N.D.	N.D.	N.D.	N.D.	-	N.D.	N.D.												

注)モニタリング井戸所在地の地権者が不在であったことから、平成25年春季~秋季の採水は未身

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+125 -1		H16		H17			Н	118			Н	19			Н	20			H.	21			H:	22			H	23			H	24			H:	25	
採力	5/3	1 10/12	1/27	4/28	7/11	1/26	5/26	8/30	11/22	2/27	5/24	8/27	11/27	2/29	5/27	8/29	11/27	2/25	5/28	8/25	11/25	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DP	A 0.02	4 0.005	N.D.	0.036	0.026	N.D.	0.003	0.001	N.D.	N.D.	0.001	0.001	N.D.	N.D.	N.D.	0.005	N.D.	0.001	N.D.																		
PA	A 0.18	0.155	0.116	0.128	0.159	0.034	0.091	0.074	0.057	0.060	0.071	0.071	0.055	0.047	0.065	0.048	0.034	0.032	0.027	0.032	0.024	0.020	0.021	0.022	0.014	0.012	0.016	0.011	0.013	0.011	0.017	800.0	0.005	0.004	0.004	0.004	0.002
PM	A 0.00	0.005	N.D.	0.004	0.005	0.001	0.003	0.003	0.003	0.003	0.003	0.004	0.003	0.002	0.003	0.002	0.002	0.002	N.D.	0.001	0.001	0.001	0.002	0.001	0.001	N.D.	0.001	0.001	N.D.	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

+₩ -L □		Н	26			H:	27			H	28			Н	29			H	30		H31		R1	
採水日	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	-	N.D.												
PAA	0.003	0.012	800.0	N.D.	N.D.	N.D.	N.D.	0.002	0.003	0.002	-	0.004	0.004	0.011	0.013	0.011	0.008	0.007	0.004	0.004	0.004	0.010	0.010	0.002
PMAA	N.D.	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	-	N.D.	N.D.	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.001	N.D.	N.D.

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	,																																				
410 alv		116		H17			Н	118			Н	19			Н	20			Н	21			H	22			H:	23			H	24			Н	25	
採水	5/31	10/15	1/27	4/28	7/11	1/26	5/26	8/30	11/22	2/27	5/24	8/27	11/27	2/29	5/27	8/29	11/27	2/25	5/28	8/25	11/25	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPA	A N.D.	0.001	N.D.	0.002	0.003	0.002	0.003	0.002	0.001	N.D.	0.001	0.002	N.D.	0.001	0.001	N.D.	N.D.	N.D.	N.D.	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.001	0.001	N.D.								
PAA	0.068	0.068	0.057	0.073	0.052	0.060	0.039	0.029	0.035	0.040	0.040	0.037	0.034	0.035	0.032	0.034	0.021	0.025	0.013	0.019	0.021	0.025	0.025	0.022	0.015	0.030	0.026	0.016	0.020	0.027	0.026	0.018	0.017	0.018	0.016	0.014	0.010
PMA	A 0.005	0.003	N.D.	0.003	0.006	0.002	0.002	0.003	0.002	0.002	0.003	0.003	0.002	0.002	0.003	0.002	0.002	0.002	N.D.	0.001	0.001	0.002	0.003	0.002	0.002	0.001	0.003	0.003	0.002	0.002	0.003	0.004	N.D.	0.001	N.D.	N.D.	N.D.

ちゃっ		H	26			H	27			H	28			H	29			H	30		H31		R1	
採水日	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	-	N.D.	N.D.
PAA	N.D.	0.012	0.014	0.002	N.D.	0.003	0.003	0.003	0.004	0.003	0.001	0.001	0.013	0.024	0.018	0.020	0.018	0.011	0.012	0.018	0.016	-	0.016	0.019
PMAA	N.D.	0.003	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	0.001	N.D.	N.D.	N.D.	0.003	0.003	0.003	0.002	0.003	0.002	0.002	0.003	0.003	-	0.003	0.003

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+177 -1	٠	H16		H1	7			H1	8			Н	19			H:	20			Н	21			H	22			H:	23			H.	24			Н	25	
休小	7				11/1	1 1/2	26 5.	/26	8/30	11/22	2/27	5/28	8/28	11/28	2/29	5/27	8/29	11/28	2/25	5/28	8/25	11/25	3/1	5/27	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPA	4 —	. -	_	. -	N.D.	N.I	D. N	N.D.	0.001	0.001	N.D.	N.D.	0.027	N.D.																								
PAA	_	. -	_		0.062	0.06	9 0.0	023	0.027	0.028	0.033	0.023	0.027	0.026	0.015	0.019	0.025	0.016	0.019	0.010	0.010	0.023	0.012	0.012	0.008	0.015	0.022	0.019	0.021	0.023	0.018	0.013	0.017	0.020	0.017	0.007	0.014	0.013
PMA	۰ –	_	_	. -	N.D	N.E	D. 0.0	002	0.003	0.002	0.003	0.004	0.004	0.003	0.002	0.002	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.002	N.D.	0.002	N.D.

採水日		Н	26			H:	27			Н	28			H:	29			H	30		H31		R1	
抹小口	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28/	8/21	11/25
DPAA	N.D.	0.003	N.D.	N.D.	N.D.	0.001	N.D.																	
PAA	0.013	0.007	0.016	0.008	0.007	0.004	0.010	0.012	0.009	0.005	0.010	0.014	0.014	0.013	0.017	0.018	0.015	0.006	0.016	0.025	0.023	0.010	0.018	0.019
PMAA	0.001	0.001	0.002	N.D.	N.D.	N.D.	0.002	0.001	0.001	N.D.	0.001	0.001	0.002	0.002	0.002	0.002	0.001	N.D.	0.002	0.002	0.002	0.001	0.002	0.001

有機ヒ素化合物分析結果一覧表(単位:mg-As/L、定量下限値:いずれも 0.001mg-As/L)

A事案区域外の北部地域周辺(1)

п	1 4		

+100 mV I	, н	116		H17			Н	18			Н	19			Н	20			H.	21			H:	22			Н	23			Н	24			H	25	
採水日	5/31	10/12	1/27	4/28	7/11	1/26	5/26	8/30	11/22	2/27	5/28	8/27	11/27	2/29	5/27	8/29	11/27	2/25	5/28	8/25	11/25	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPAA	N.D.	0.001	0.002	0.002	0.002	0.001	N.D.	0.001	0.002	0.002	0.002	0.002	0.001	N.D.																							
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	0.002	0.003	0.004	0.004	0.006	0.013	0.016	0.012	0.020	0.025	0.020	0.018	0.023	0.026	0.025	0.027	0.021	0.024	0.039	0.046	0.042	0.058	0.047	0.052	0.061	0.079	0.061	0.060	0.023	0.081	0.084	0.032
PMAA	0.063	0.051	0.016	0.036	0.038	0.044	0.050	0.053	0.045	0.055	0.050	0.049	0.043	0.043	0.033	0.034	0.026	0.031	0.023	0.019	0.015	0.012	0.019	0.028	0.039	0.029	0.032	0.027	0.029	0.031	0.031	0.025	0.025	0.012	0.028	0.033	0.014

採水日		Н	26			H	27			H	28			Н	29			H	30		H31		R1	
抹水口	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.																							
PAA	0.055	0.110	0.092	0.045	0.022	0.018	0.024	0.026	0.029	0.031	0.036	0.028	0.023	0.037	0.049	0.030	0.028	0.022	0.023	0.024	0.021	0.030	0.029	0.023
PMAA	0.021	0.033	0.018	0.011	0.017	0.026	0.019	0.017	0.020	0.021	0.024	0.020	0.024	0.036	0.029	0.019	0.022	0.019	0.019	0.021	0.018	0.030	0.024	0.023

D-13

+107 =14. [,	H16		H17 1/27 4/28 7/11 0.001 N.D. N.D. N.D. N.D. N.D.			Н	18			Н	19			H:	20			Н	21			H	22			Н	23			Н	24			Н	25	
採水日	1	8/18	1/2	7 4/28	7/11	1/26	5/26	8/30	11/22	2/27	5/24	8/27	11/27	2/29	5/27	8/29	11/27	2/25	5/28	8/25	11/25	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPAA	_	N.D.	0.001	N.D.	N.D.	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	0.002	0.006	0.005	0.003	0.002	N.D.																				
PAA	-	N.D.	N.D	. N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.001	N.D.	0.001	0.001	0.001	N.D.	N.D.	N.D.	N.D.								
PMAA	· —	0.067	0.023	0.009	0.005	N.D.	0.002	0.004	0.004	0.004	0.004	0.008	0.006	0.008	0.014	0.029	0.048	0.055	0.056	0.049	0.042	0.027	0.067	0.069	0.027	0.053	0.071	0.064	0.033	0.047	0.073	0.067	0.036	0.032	0.063	0.034	0.005

採水日		Н	26			H	27			Н	28			Н	29			H	30		H31		R1	
抹小口	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.											
PAA	N.D.	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.									
PMAA	0.009	0.060	0.045	0.024	0.019	0.051	0.034	0.012	0.012	0.011	0.002	0.004	N.D.	0.036	0.022	0.002	0.005	0.024	0.019	N.D.	0.006	0.031	0.055	0.003

D-8

+100 =10 TO	Н	116		H17			Н	118			Н	19			Н	20			Н	21			H:	22			H	23			H:	24			H:	25	
採水日		8/18	1/26	4/28	7/11	1/26	5/26	8/30	11/22	2/27	5/24	8/27	11/27	2/29	5/27	8/29	11/27	2/25	5/28	8/25	11/25	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPAA	_	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PAA	_	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PMAA		0.001	N.D.	N.D.	N.D.	N.D.	N.D.	0.001	N.D.	N.D.	0.001	0.001	0.001	0.002	0.002	0.001	N.D.	0.001	0.001	0.001	N.D.	N.D.	N.D.	N.D.	N.D.												

採水日		H	26	
抹小口	2/17	6/12	8/28	12/3
DPAA	N.D.	N.D.	_	_
PAA	N.D.	N.D.	-	-
PMAA	N.D.	N.D.	ı	ı

H-0250

+100 =14 C	Н	16		H17			Н	18			Н	19			H:	20			Н	21			Н	22			Н	23			Н	24			H.	25	
抹水口																																					
DPAA	_	_		-	_	-	_	_	_	_	_	_	_	_	_	-	_	_	-	_	_	_	-	_	_	-	_	_	-	_	_	_	_	_	-	_	_
PAA	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
PMAA	_	ı	-	ı	ı	_	_	_	ı	-	ı	_	_	-	-	-	_	ı	ı	_	ı	_	-	_	-	ı	ı	-	-	_	ı	_	_	_	ı	_	_

採水日		H	26			H:	27			H.	28			H:	29			н	30		H31		R1	
抹水口				12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	_	_		N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PAA	1	1	-	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PMAA	_	_	_	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

注)モニタリング井戸D-8は平成26年夏季に廃止されたことから、平成26年秋季より、H-0250に替えて調査を実施。

有機ヒ素化合物分析結果一覧表(単位:mg-As/L、定量下限値:いずれも0.001mg-As/L)

A事案区域外の北部地域周辺(2)

HC-0020	

ちゃっ	Н	16		H17			Н	18			Н	19			Н	20			Н	21			H:	22			H	23			H	24			H	25	
採水日	4/5	10/12	1/26	4/28	7/11	1/26	5/26	8/30	11/22	2/27	5/24	8/27	11/27	2/29	5/27	8/26	11/27	2/25	5/28	8/25	11/25	3/1	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.														
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.001	N.D.	0.001	N.D.	N.D.	0.002	0.001	0.002	0.001	0.002	0.002	0.001	0.001	0.001														
PMAA	0.026	0.049	0.053	0.049	0.038	0.025	0.020	0.021	0.014	0.014	0.017	0.015	0.015	0.014	0.012	0.01	0.012	0.011	0.009	0.009	0.008	0.008	0.012	0.018	0.016	0.010	0.010	0.015	0.023	0.013	0.025	0.020	0.026	0.026	0.014	0.016	0.008

採水日		H:	26			H:	27			H:	28			H:	29			H	30		H31		R1	
抹小口	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	1	-																					
PAA	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	N.D.	0.001	0.001	N.D.	1	-						
PMAA	0.017	0.027	0.019	0.014	0.022	0.021	0.023	0.023	0.018	0.010	0.007	0.008	0.010	0.020	0.017	0.011	0.014	0.004	0.004	0.005	0.004	0.005	1	-

E-5

+100 mb □	,	H16		H17			Н	18			Н	19			H:	20			Н	21			H:	22			H	23			Н	24			H.	25	
採水は				1/27	7/11	1/26	5/26	8/30	11/22	2/27	5/24	8/27	11/27	2/29	5/27	8/29	11/27	2/25	5/28	8/25	11/25	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPA	—	_	_	N.D.																																	
PAA	_	_	_	N.D.																																	
PMA/	Т	_	_	0.007	0.003	0.004	0.010	0.011	800.0	800.0	0.009	0.014	0.013	0.013	0.020	0.020	0.016	0.015	0.009	0.015	0.014	0.012	0.014	0.021	0.025	0.013	0.010	0.012	0.012	800.0	800.0	800.0	0.008	0.008	0.009	0.009	0.009

採水日		Н	26			H	27			Н	28			H	29			Н	30	
抹小口	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26
DPAA	N.D.	_																		
PAA	N.D.	0.001	N.D.	N.D.	0.001	0.001	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	_
PMAA	0.007	0.012	0.010	0.010	0.008	0.006	0.006	0.002	0.003	0.002	0.001	0.001	0.002	0.007	0.003	0.002	0.001	0.001	0.002	_

G-3

₩.J. □	H:	16		H17			Н	18			Н	19			Н	120			H.	21			H:	22			H	23			Н	24			H	25	
抹小口						1/26	5/26	8/30	11/22	2/27	5/24	8/28	11/27	2/29	5/27	8/29	11/27	2/25	5/28	8/25	11/25	3/1	5/28	8/26	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29
DPAA	_	_			_	0.004	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0.005	0.001	0.002	0.004	0.002	N.D.	0.002	0.001	0.002	N.D.	0.003	0.002	0.002	0.002	N.D.	N.D.	0.006								
PAA	_		_		_	0.024	0.007	0.004	0.004	0.005	0.015	0.019	0.019	0.012	0.022	0.057	0.009	0.003	0.022	0.015	0.007	0.006	0.008	0.002	0.005	0.002	0.021	0.060	0.036	0.002	0.036	0.011	0.059	0.023	0.010	0.005	0.005
PMAA	_				_	N.D.	0.026	0.002	0.005	0.009	0.041	0.062	0.006	0.029	0.011	0.110	0.010	0.002	0.065	0.019	0.006	0.002	0.024	0.009	0.004	0.003	0.016	0.064	0.012	0.003	0.068	0.029	0.025	0.022	0.036	0.024	0.003

+∞ -b □		Н	26			Н	27			Н	28			Н	29			H	30		H31	<u> </u>	R1	
採水日	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	0.002	0.001	0.003	0.002	0.002	0.002	N.D.	0.002	0.002	N.D.	N.D.	N.D.	N.D.	0.002	0.002	0.002	0.002	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PAA	0.003	0.010	0.014	0.034	0.024	0.018	0.038	0.024	0.028	0.002	0.006	0.006	0.001	0.019	0.030	0.049	800.0	0.006	0.007	0.002	0.002	0.003	0.006	0.018
PMAA	0.005	0.021	0.035	0.025	0.035	0.029	0.062	0.009	0.025	N.D.	0.007	0.007	0.005	0.037	0.032	0.075	0.004	0.004	0.003	N.D.	0.003	0.014	0.002	0.003

有機ヒ素化合物分析結果一覧表(単位:mg-As/L、定量下限値:いずれも 0.001mg-As/L)

要調査地域南東側

.135

477 T		H	122			Н	23			Н	24			Н	25			H	26			Н	27			Н	28			H:	29			Н	30		H31		R1	
採水	2/2	6 5/28	8/26	11/26	2/17	5/27	8/30	11/25	2/24	5/28	8/24	11/30	2/28	6/6	9/11	11/29	2/17	6/12	8/27	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPA	A N.D	. N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PA	A N.D	. N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PMA	A 0.00	0.001	N.D.	N.D.	N.D.	0.001	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

要調査地域外縁部周辺(1)

M1

採水日		Н	22			H:	23			H	24	
抹水口	2/27	5/29	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	_
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	_
PMAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	_

М3

120 alv E		H	22			H	23			H	24			H:	25			H	26			H:	27			H	28			H	29			н	30		H31		R1	
抹水口													2/28	6/6	9/13	11/29	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	_	1	_	_	1		_	_	_	1	1		N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PAA	_	1	_	_	1		-	_	_	1	1	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PMAA	_	_	_	_	_	_	_	_	_	_	_	_	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

注)モニタリング井戸M1は平成24年秋季に廃止されたことから、平成25年冬季より、M3に替えて調査を実施。

M10

+100 m/s CI		Н	22			Н	23			H	24			Н	25			Н	26			Н	27			H	28			H:	29			Н	30		H31		R1	
抹水口	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PMAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												

M20

+100 mL I		H	22			Н	23			Н	24			Н	25			H.	26			H:	27			H.	28			H	29			Н	30		H31		R1	
抹水口	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PMAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												

M22

470 alc		Н	22			H:	23			Н	24			Н	25			Н	26			Н	27			Н	28			H	29			Н	30		H31		R1	
採水	2/27	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPA	A N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PA/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PMA	A N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												

有機ヒ素化合物分析結果一覧表(単位:mg-As/L、定量下限値:いずれも 0.001mg-As/L)

要調査地域外縁部周辺(2)

SB225

+107 -1		Н	22			Н	23			Н	24			Н	25			H	26			Н	27			Н	28			H	29			Н	30		H31		R1	
採水	2/24	5/28	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPA	A N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PA/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PMA	A N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												

F2																																								
477 ml c 1	,	Н	22			H:	23			H	24			Н	25			Н	26			Н	127			Н	28			Н	29			H	30		H31		R1	
採水	3/1	5/27	8/25	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/11	11/29	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PMA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												

J18-7	1																																							
+₩ -Ł □	,	H	22			H:	23			Н	24			H:	25			H	26			H:	27			Н	28			H	29			Н	30		H31		R1	
休小口	2/26	5/28	8/26	11/26	2/17	5/27	8/30	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29	2/17	6/12	8/27	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PMAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												

G1																																								
+177 alv		Н	22			Н	123			H2	24			Н	25			Н	26			Н	27			H.	28			H	29			Н	30		H31		R1	
採水	3/1	5/28	8/26	11/26	2/17	5/27	8/29	11/24	2/24	5/28	8/24	11/30	2/28	6/6	9/13	11/29	2/17	6/12	8/28	12/3	2/19	5/27	8/25	11/27	2/23	5/30	8/30	11/30	2/21	5/30	8/29	11/29	2/28	5/31	8/28	11/26	2/26	5/28	8/21	11/25
DPA	A N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
PAA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
PMA	A N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												