FIELD SCREENING
FINAL DATA DELIVERABLE COVER SHEET

Date: Tuesday, March 29, 2005

Sample Authorization Form (SAF) Number: F02-002

SDG Number (assigned by Sample Management): FP0230 D. Ayres 4/11/05

Attachments (check all that apply or N/A):

X	Test Results
N/A	Narrative Summary
N/A	Chain of Custody(s)
X	Logbook Pages
N/A	Anomaly Report

Total number of pages (including cover sheet): 14

Comments:
200-ZP-1 Process Sampling and Analysis– VOA - Air

FEB 2006 RECEIVED

Analyst Signature — Date: 3/29/05

Reviewer's Signature — Date: 4/18/05

Distribution: CPP Sample Management A0-21
Project (Specify)

Requires distribution to listed project personnel by Sample Management (check if applicable)

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EDMC

200-ZP-1 Phase III Pump and Treat System

Process Monitoring Field Screening Results

Advanced Data Copy, SAF F02-001/F02-002

				WATER ANALYSES			AIR ANALYSES		
Sample Location	*HEIS Number*	*Sample/ Analysis Date*	*Sample Time*	*TCM (ug/L)*	*CCl_4 (ug/L)*	*TCE (ug/L)*	*TCM (ppmv)*	*CCl_4 (ppmv)*	*TCE (ppmv)*
Post Chiller Air (Z-A2-01)	B19547	08/20/04	08:24		B&K 1302		<1.0	10	Not Analyzed For
Stack Effluent (Z-A3-01)	B19548	08/20/04	08:22		B&K 1302		<1.0	<1.0	Not Analyzed For
Post Chiller Air (Z-A2-01)	B19549	09/16/04	08:58		B&K 1302		<1.0	9.4	Not Analyzed For
Stack Effluent (Z-A3-01)	B19550	09/16/04	08:55		B&K 1302		<1.0	<1.0	Not Analyzed For
Post Chiller Air (Z-A2-01)	B1BJW3	11/02/04	12:55		B&K 1302		<1.0	9.4	Not Analyzed For
Stack Effluent (Z-A3-01)	B1BJW4	11/02/04	13:00		B&K 1302		<1.0	<1.0	Not Analyzed For
Post Chiller Air (Z-A2-01)	B1C145	12/21/04	10:32		B&K 1302		<1.0	6.6	Not Analyzed For
Stack Effluent (Z-A3-01)	B1C144	12/21/04	10:28		B&K 1302		<1.0	<1.0	Not Analyzed For
Post Chiller Air (Z-A2-01)	B1C381	01/25/05	07:43		B&K 1302		<1.0	8.2	Not Analyzed For
Stack Effluent (Z-A3-01)	B1C382	01/25/05	07:24		B&K 1302		<1.0	<1.0	Not Analyzed For
Post Chiller Air (Z-A2-01)	B1CD19	02/17/05	09:35		B&K 1302		<1.0	7.8	Not Analyzed For
Stack Effluent (Z-A3-01)	B1CD18	02/17/05	09:33		B&K 1302		<1.0	<1.0	Not Analyzed For

TCM = Chloroform, CCl_4 = Carbontetrachloride, TCE = Trichloroethylene

200-ZP-1 Process
200-UP-1 RI

Mathansen / GS / [illegible] 8/23/04

MOBILE LABORATORY DATA/LOG SHEET

Site Names: 200-ZP-1 Phase III (Logbook HNF-N-293 1, SAF F02-001/F02-002); 200-UP-1 Remedial Investigation; C4299 (699-36-70B) (SAF F04-014)

Date: 8/20/04

Sample Number	HEIS Number	Sample Time	Sample Type	Sampler (Initials)	Analysis Time	Analytical Results			Comments
						TCM ug/L	CCl4 ug/L	TCE ug/L	
DI Blank	—	0630	Water	TMJ/DJA	0934	<2.0	<2.0	<2.0	hs012.d
100ug/L Cal. Check	—	0900	Water	TMJ/DJA	0946	106 106%	108 108%	107 107%	hs013.d; Acceptable recoveries.
DI Blank	—	0630	Water	TMJ/DJA	0957	<2.0	<2.0	<2.0	hs014.d
Field Blank	B194T9	0804	Water	TMJ/DJA	1030	<2.0	22	<2.0	hs017.d;
Z-T2-01	B194V0	0806	Water	TMJ/DJA	1041	<2.0	21	<2.0	hs018;
Z-V1-01	B194V1	0810	Water	TMJ/DJA	1053	<2.0	21	<2.0	hs019;
C4299, 270'	B193H8	1005	Water	TMJ/DJA	1104	7.0	<2.0	<2.0	hs020;
Z-V1-02 MS	-	0810	Water	TMJ/DJA	1115	11.8 118%	10.9 109%	12.8 128%	hs021.d; (10 ug/L)
Z-V1-03 MSD	-	0810	Water	TMJ/DJA	1126	146 73%	201 101%	179 90%	hs022.d RPD = 5.14 (200 ug/L)
Z-T1-01	B194V2	0813	Water	TMJ/DJA	1138	16	3680	6.2	hs023d;
Z-W1-01	B19504	0815	Water	TMJ/DJA	1149	13	4026	2.1	hs024d; Manifold Bldg
Z-W2-01	B19505	0817	Water	TMJ/DJA	1201	19	5289	8.9	hs025d; Manifold Bldg
Z-W2-02 Duplicate	B19506	0817	Water	TMJ/DJA	1212	19	5138	8.8	hs026d; Manifold Bldg RPD = 2.90
Z-W3-01	B19507	0836	Water	TMJ/DJA	1223	14	3566	7.8	hs027d; Manifold Bldg
Z-W4-01	B19508	0839	Water	TMJ/DJA	1235	18	3106	6.6	Hs028.d; Manifold Bldg
Z-W5-01	B19509	0845	Water	TMJ/DJA	1246	16	1158	<2.0	Hs029.d; Manifold Bldg
DI Blank	—	0630	Water	TMJ/DJA	1257	<2.0	<2.0	<2.0	hs030d;
3000ug/L Cal. check	—	1245	Water	TMJ/DJA	1309	~~2149~~ 3199 107%	1-23-06 3382 ~~107%~~ 113	3640 121%	hs031d; Acceptable recoveries
DI Blank	—	0630	Water	TMJ/DJA	1320	<2.0	<2.0	<2.0	hs032d;
						ppm	ppm	ppm	
Blank	—	—	Air	TMJ/DJA	0949	<1.0	<1.0	NA	B&K 1302
25.5 ppm Cal. Check	—	—	Air	TMJ/DJA	0951	<1.0	23.6 93%	NA	B&K 1302 Acceptable recovery.
Z-A3-01	B19548	0822	Air	TMJ/DJA	0953	<1.0	<1.0	NA	B&K 1302
Z-A2-01	B19547	0824	Air	TMJ/DJA	0955	<1.0	10	NA	B&K 1302
Blank	—	—	Air	TMJ/DJA	0957	<1.0	<1.0	NA	B&K 1302

For instrument operation information, please refer to logbook HNF-N-292 1, page 52

Mathansen / [illegible] 8/23/04

00000003

[illegible] 8/23/04

Reviewed By: P.M. Gent [illegible] 3/16/05

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200-ZP-1 Process
200-UP-1 RI

Mathansen/GS/Mathansen

MOBILE LABORATORY DATA/LOG SHEET

Site Names: 200-ZP-1 Phase III (Logbook HNF-N-293 1, SAF F02-001/F02-002);
200-UP-1 Remedial Investigation; C4299 (699-36-70B) (SAF F04-014)
200-UP-1 Remedial Investigation; C4298 (699-30-66) (SAF F04-014)

Date: 9/16/04

Sample Number	HEIS Number	Sample Time	Sample Type	Sampler (Initials)	Analysis Time	Analytical Results TCM µg/L	CCl4 µg/L	TCE µg/L	Comments
DI Blank	—	0630	Water	TMJ/DJA	0949	<2.0	<2.0	<2.0	hs014.d
100ug/L Cal. Check	—	0955	Water	TMJ/DJA	1010	92 92%	73 73%	84 84%	hs016.d; Acceptable recoveries.
DI Blank	—	0630	Water	TMJ/DJA	1021	<2.0	<2.0	<2.0	hs017.d
Field Blank	B194V3	0840	Water	TMJ/DJA	1032	<2.0	17	<2.0	hs018.d;
Z-T2-01	B194V4	0842	Water	TMJ/DJA	1043	<2.0	16	<2.0	hs019;
Z-V1-01	B194V5	0844	Water	TMJ/DJA	1054	<2.0	15	<2.0	hs020;
C4298	B193H4. 240ft	1135	Water	TMJ/DJA	1105	<2.0	<2.0	<2.0	hs021; Sampled 9/9/04
C4299	B193J1, 340 ft	0915	Water	TMJ/DJA	1116	3.2	<2.0	<2.0	hs022; Sampled 9/9/04
C4299	B193J2, 375 ft	1120	Water	TMJ/DJA	1126	3.5	7.2	<2.0	hs023; Sampled 9/14/04
Z-T2-02 MS	-	0842	Water	TMJ/DJA	1137	13.0 130%	8.5 85%	12.3 123%	hs024.d;
Z-T2-03 MSD	-	0842	Water	TMJ/DJA	1148	11.6 116%	7.2 72%	11.5 115%	hs025.d RPD = 17%
Z-T1-01	B194V6	0848	Water	TMJ/DJA	1159	18	4507	6.7	hs026d;
Z-W1-01	B19510	0850	Water	TMJ/DJA	1210	16	6205	3.5	hs027d; Manifold Bldg
Z-W2-01	B19511	0846	Water	TMJ/DJA	1221	27	9745[E]	9.8	hs028d; Manifold Bldg
Z-W3-01	B19512	0805	Water	TMJ/DJA	1232	19	5064	8.9	hs029d; Manifold Bldg
Z-W3-02 Duplicate	B19513	0805	Water	TMJ/DJA	1243	20	4956	8.8	hs030d; Manifold Bldg RPD = 2.16%
Z-W4-01	B19514	0807	Water	TMJ/DJA	1253	22	3887	7.3	Hs031.d; Manifold Bldg
Z-W5-01	B19515	0813	Water	TMJ/DJA	1304	20	1231	2.3	Hs032.d; Manifold Bldg
DI Blank	—	0630	Water	TMJ/DJA	1315	<2.0	<2.0	<2.0	hs033d;
3000ng/L Cal. check	—	1250	Water	TMJ/DJA	1326	2694 90%	2134 71%	2376 79%	hs034d; Acceptable recoveries
DI Blank	—	0630	Water	TMJ/DJA	1337	<2.0	<2.0	<2.0	hs035d;
						ppm	ppm	ppm	
Blank	—	—	Air	TMJ/DJA	1321	<1.0	<1.0	NA	B&K 1302
25.5 ppm Cal. Check	—	—	Air	TMJ/DJA	1323	<1.0	23.2 91%	NA	B&K 1302 Acceptable recovery.
Z-A3-01	B19550	0855	Air	TMJ/DJA	1325	<1.0	<1.0	NA	B&K 1302
Z-A2-01	B19549	0858	Air	TMJ/DJA	1327	<1.0	9.4	NA	B&K 1302
Blank	—	—	Air	TMJ/DJA	1329	<1.0	<1.0	NA	B&K 1302

① TMJ 3-15-05

① TMJ 3-15-05

① Values determined to be invalid due to standard degradation. Data for 20-1 was removed from Aris SDT.

For instrument operation information, please refer to logbook HNF-N-292 1, page 56
E - Estimated value. Concentration exceeds calibration range of the GC

Reviewed By [redacted]

Mathansen/JM Mathansen 9/21/04

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200ZP-1 Monthly/Process
216-Z-9 Characterization

DJ Alexander/
GS/D J Alexander

MOBILE LABORATORY DATA/LOG SHEET (Logbook HNF-N-293 1, SAF F02-001/F02-002/F04-007)

Site Name: 200-ZP-1 Phase III / 200-UP-1 RI/FS 3-D Aquifer Characterization **Date: 11/02/04**

DJ Alexander 1-13-05

Sample Number	HEIS Number	Sample Time (PST)	Sample Type	Sampler (Initials)	Analysis Time (PDT)	Analytical Results TCM ug/L	CCl4 ug/L	TCE ug/L	Comments
DI Blank	----	0715	Water	MAB/DJA/ROM	1045	<2.0	<2.0	<2.0	hs012.d
100ug/L Cal. Check	----	0945	Water	MAB/DJA/ROM	1056	86 86%	89 89%	110 110%	hs013.d; Acceptable recoveries.
DI Blank	----	0715	Water	MAB/DJA/ROM	1142	<2.0	<2.0	<2.0	hs016.d
Field Blank	B1BJV3	0805	Water	MAB/DJA/ROM	1153	<2.0	3.9	<2.0	hs017.d
Z-T2-01	B1BJV4	0805	Water	MAB/DJA/ROM	1203	<2.0	3.8	<2.0	hs018.d
Z-V1-01	B1BJV5	0835	Water	MAB/DJA/ROM	1214	<2.0	3.8	<2.0	hs019.d
Z-V1-02 MS	----	0835	Water	MAB/DJA/ROM	1225	10.4 104%	7.37 74%	11.9 119%	hs020.d
Z-V1-03 MSD	----	0835	Water	MAB/DJA/ROM	1236	10.3 103%	7.51 75%	12.0 120%	hs021.d; (RPD= 0.19%)
Z-9, 292 ft	B1LLT2	*	Water	MAB/DJA/ROM	1247	413	2918	11	hs022.d; *sampled 10-19-04 PCE=<2.0
Z-9, 297.5 ft	B1LLT3	**	Water	MAB/DJA/ROM	1258	1039	286	4.4	hs023.d; **sampled 10-25-04 PCE=<2.0
Z-T1-01	B1BJV6	0851	Water	MAB/DJA/ROM	1309	18	2653	7.2	hs024.d
Z-W1-01	B1BJV7	0915	Water	MAB/DJA/ROM	1319	14	3371	3.5	hs025.d
Z-W2-01	B1BJV8	0930	Water	MAB/DJA/ROM	1330	20	4460	11	hs026.d
Z-W3-01	B1BJV9	1055	Water	MAB/DJA/ROM	1341	16	2934	10	hs027.d; Manifold Bldg
Z-W4-01	B1BJW0	1032	Water	MAB/DJA/ROM	1352	19	2067	7.1	hs028.d; Manifold Bldg
Z-W4-02	B1BJW1	1032	Water	MAB/DJA/ROM	1402	18	2213	7.6	hs029.d; (RPD= 0.07%)
Z-W5-01	B1BJW2	1115	Water	MAB/DJA/ROM	1413	16	778	<2.0	hs030.d; Manifold Bldg
DI Blank	----	0715	Water	MAB/DJA/ROM	1424	<2.0	<2.0	<2.0	hs031.d
3000ug/L Cal. check	----	1200	Water	MAB/DJA/ROM	1435	~~3372~~ 3399 113%	~~3399~~ 3329 111%	3853 RJQ 1-23-06 128%	hs032.d; Acceptable recoveries
DI Blank	----	0715	Water	MAB/DJA/ROM	1446	<2.0	<2.0	<2.0	hs033.d
						ppm	ppm	ppm	
Blank	----	----	Air	MAB/DJA/ROM	1330	<1.0	<1.0	NA	B&K 1302
25.5 ppm Cal. Check	----	----	Air	MAB/DJA/ROM	1332	NA	23.2 91%	NA	B&K 1302 Acceptable recovery.
Z-A3-01	B1BJW3	1111	Air	MAB/DJA/ROM	1334	<1.0	<1.0	NA	B&K 1302
Z-A2-01	B1BJW4	1107	Air	MAB/DJA/ROM	1336	<1.0	9.35	NA	B&K 1302
Blank	----	----	Air	MAB/DJA/ROM	1340	<1.0	<1.0	NA	B&K 1302

For instrument operation information, please refer to logbook HNF-N-292 1, page 64.

D.J. ALEXANDER
DJ Alexander
1-13-05

Reviewed
B. JOHANSEN/MJohansen
3/16/05

200-ZP-1 Monthly / Process
VISTA Engr. DNAPL GW Sampling

DJ Alexander / GS / DJ Alexander

MOBILE LABORATORY DATA/LOG SHEET (Logbook HNF-N-293 1, SAF F02-001/F02-002/F04-007)

Site Name: 200-ZP-1 Phase III / 200-UP-1 RI/FS 3-D Aquifer Characterization **Date: 12/21/04**

DJ Alexander 1-17-05

Sample Number	HEIS Number	Sample Time (PST)	Sample Type	Sampler (Initials)	Analysis Time (PDT)	Analytical Results TCM ug/L	CCl4 ug/L	TCE ug/L	Comments
DI Blank	---	0900	Water	DJA	1233	<2.0	<2.0	<2.0	hs012.d
100ug/L Cal. Check	---	0915	Water	DJA	1244	99 99%	97 97%	94 94%	hs013.d; Acceptable recoveries.
DI Blank	---	0900	Water	DJA	1316	<2.0	<2.0	<2.0	hs016.d
Field Blank	B1C146	1010	Water	DJA	1327	<2.0	3.3	<2.0	hs017.d
Z-T2-01	B1C147	1013	Water	DJA	1338	<2.0	2.9	<2.0	hs018.d
Z-V1-01	B1C148	1018	Water	DJA	1349	<2.0	2.9	<2.0	hs019.d
Z-V1-02 MS	-	1018	Water	DJA	1400	13.3 133%	9.65 97%	14.7 147%	hs020.d
Z-V1-03 MSD	-	1018	Water	DJA	1410	12.6 126%	8.52 85%	13.6 136%	hs021.d (RPD= 12.4%)
299-W15-17	B1C092	*1012	Water	DJA	1421	<2.0	2.2	<2.0	hs022.d; *sampled 12-13-04 PCE = 420
299-W15-17	B1C0R6	*1302	Water	DJA	1432	<2.0	2.0	4.8	hs023.d; *sampled 12-13-04
299-W15-17	B1C0R8	*1212	Water	DJA	1443	<2.0	15	4.2	hs024.d; *sampled 12-14-04
299-W15-17	B1C0T0	*1212	Water	DJA	1454	6.0	16	5.3	hs025.d; *sampled 12-14-04
299-W15-17	B1C0T2	*1152	Water	DJA	1505	2.0	15	4.5	hs026.d; *sampled 12-15-04
Z-T1-01	B1C149	1021	Water	DJA	1515	14	2344	6.4	hs027.d;
Z-W1-01	B1C150	1022	Water	DJA	1526	13	3127	3.7	hs028.d;
Z-W3-01	B1C151	1312	Water	DJA	1537	14	2666	8.8	hs029.d; Manifold Bldg.
Z-W4-01	B1C152	1310	Water	DJA	1548	16	1891	6.6	hs030.d; Manifold Bldg.
Z-W5-01	B1C153	1303	Water	DJA	1559	15	679	2.2	hs031.d; Manifold Bldg.
Z-W5-02	B1C154	1303	Water	DJA	1610	15	727	2.3	hs032.d; Manifold Bldg. (RPD=6.83%)
DI Blank	---	0900	Water	DJA	1621	<2.0	<2.0	<2.0	hs033.d;
3000ug/L Cal. check	---	0915	Water	DJA	1631	3258 109%	3494 117%	3719 124%	hs034.d; Acceptable recoveries
DI Blank	---	0900	Water	DJA	1642	<2.0	<2.0	<2.0	hs035.d;
						ppm	ppm	ppm	
Blank	---	---	Air	DJA	1220	<1.0	<1.0	NA	B&K 1302
25.5 ppm Cal. Check	---	---	Air	DJA	1222	NA	22.9 90%	NA	B&K 1302 Acceptable recovery.
Z-A3-01	B1C144	1028	Air	DJA	1224	<1.0	<1.0	NA	B&K 1302
Z-A2-01	B1C145	1032	Air	DJA	1226	<1.0	6.60	NA	B&K 1302
Blank	---	---	Air	DJA	1230	<1.0	<1.0	NA	B&K 1302

Extraction Well No. 2 was not sampled – pump is broken and well is off-line per P. Wilkerson, 12-21-04.
For instrument operation information, please refer to logbook HNF-N-292 1, page 73.

DJ Alexander 1-17-05
D.J. ALEXANDER

By _____ 3/16/05

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200ZP-1 Quarterly/Monthly Process VISTA DNAPL, Z-9 Characterization, (F05-005) GS/DJAlexander and RCRA SX Borehole Characterization (F05-007) DJAlexander/

MOBILE LABORATORY DATALOG SHEET (Logbook HNF-N-293 1, SAF F02-001/F02-002/F04-007)

Site Name: 200-ZP-1 Phase III / 200-UP-1 RI/FS 3-D Aquifer Characterization — Date: 1/25/05

DJalexander 1-26-05

Sample Number	HRIS Number	Sample Time (PST)	Sample Type	Sampler (Initials)	Analysis Time (PDT)	Analytical Results TCM µg/L	CCl4 µg/L	TCE µg/L	Comments
DI Blank	—	0710	Water	DJA/MAB	1038	<2.0	2.1	<2.0	hs012.d
100µg/L Cal. Check	—	0735	Water	DJA/MAB	1048	103 103%	97 97%	94 94%	hs013.d; Acceptable recoveries.
DI Blank	—	0710	Water	DJA/MAB	1121	<2.0	2.2	<2.0	hs016.d
Field Blank	B1C386	0759	Water	DJA/MAB	1132	<2.0	12	<2.0	hs017.d
Z-T2-01	B1C383	0803	Water	DJA/MAB	1143	<2.0	13	<2.0	hs018.d
Z-T2-02 MS	—	0803	Water	DJA/MAB	1153	10.5 105%	8.3 83%	10.7 107%	hs019.d
Z-T2-03 MSD	—	0803	Water	DJA/MAB	1204	10.5 105%	8.0 80%	10.2 102%	hs020.d; (RPD= 3.68%)
Z-V1-01	B1C384	0825	Water	DJA/MAB	1215	<2.0	12	<2.0	hs021.d
Z-T1-01	B1C385	0843	Water	DJA/MAB	1226	16	2458	7.3	hs022.d
Z-W1-01	B1C387	0850	Water	DJA/MAB	1237	15	3543	4.6	hs023.d
Z-W1-02	B1C388	0850	Water	DJA/MAB	1248	14	3201	4.0	hs024.d; (RPD= 10.14%)
Z-W2-01	B1C7Y7	0912	Water	DJA/MAB	1258	21	4471	9.7	hs025.d
Z-W3-01	B1C389	0943	Water	DJA/MAB	1309	16	2577	9.6	hs026.d; Manifold Bldg
Z-W4-01	B1C390	0954	Water	DJA/MAB	1320	18	1869	7.4	hs027.d; Manifold Bldg
Z-W5-01	B1C391	1014	Water	DJA/MAB	1331	18	672	2.5	hs028.d; Manifold Bldg
C4667, 288 ft	B1C351	*1111	Water	DJA/MAB	1342	3.9	90	2.2	hs029.d; *Sampled 1-13-05
C4667, 308 ft	B1C354	*1145	Water	DJA/MAB	1353	<2.0	3.1	<2.0	hs030.d; *Sampled 1-19-05
C4667, 328 ft	B1C357	*1100	Water	DJA/MAB	1404	2.3	5.2	<2.0	hs031.d; *Sampled 1-20-05
C4667, 348 ft	B1C360	*1100	Water	DJA/MAB	1415	<2.0	3.9	<2.0	hs032.d; *Sampled 1-21-05
299-W14-14	B1C4F8	*1120	Water	DJA/MAB	1426	4.8	298	2.2	hs033.d; *Sampled 1-13-05
299-W14-14	B1C4H0	*1255	Water	DJA/MAB	1437	6.1	423	3.4	hs034.d; *Sampled 1-13-05
299-W14-14	B1C4H2	*1423	Water	DJA/MAB	1448	7.4	411	3.5	hs035.d; *Sampled 1-13-05
299-W14-6	B1C4H4	*1040	Water	DJA/MAB	1459	4.6	164	<2.0	hs036.d; *Sampled 1-21-05
299-W14-6	B1C4H6	*1040	Water	DJA/MAB	1510	3.3	99	<2.0	hs037.d; *Sampled 1-21-05
299-W14-12	B1C4H8	*1014	Water	DJA/MAB	1521	<2.0	45	<2.0	hs038.d; *Sampled 1-24-05
299-W14-12	B1C4J0	*1232	Water	DJA/MAB	1532	<2.0	65	<2.0	hs039.d; *Sampled 1-24-05
Z-9, 482 ft	B1CLV1	Unk.	Water	DJA/MAB	1542	36	2.2	<2.0	hs040.d; *Sampled 1-13-05
DI Blank	—	0710	Water	DJA/MAB	1553	<2.0	2.0	<2.0	hs041.d
3000µg/L Cal. check	—	1343	Water	DJA/MAB	1604	3046 102%	2902 97%	3419 114%	hs042.d; Acceptable recoveries.
DI Blank	—	0710	Water	DJA/MAB	1615	<2.0	2.3	<2.0	hs043.d
						ppm	ppm	ppm	
Blank	—	—	Air	DJA/MAB	1326	<1.0	<1.0	NA	B&K 1302
25.5 ppm Cal. Check	—	—	Air	DJA/MAB	1328	NA	22.8 89.4%	NA	B&K 1302 Acceptable recovery.
Z-A3-01	B1C382	0724	Air	DJA/MAB	1330	<1.0	<1.0	NA	B&K 1302
Z-A2-01	B1C381	0743	Air	DJA/MAB	1332	<1.0	8.15	NA	B&K 1302
Blank	—	—	Air	DJA/MAB	1335	<1.0	<1.0	NA	B&K 1302

PLE= 420

DMO 3/23/05

For instrument operation information, please refer to logbook HNF-N-292 1, page 76.

DJalexander 1-26-05

Reviewed By _____ 3/16/05

200-ZP-1 Monthly Process Monitoring
KISTA Engr. DNAPL GW Samples

DJ Alexander/GS/
DJ Alexander

65

MOBILE LABORATORY DATA/LOG SHEET (Logbook HNF-N-293 1, SAF F02-001/F02-002/F04-007)

Site Name: 200-ZP-1 Phase III / 200-UP-1 RI/FS 3-D Aquifer Characterization

Date: 2/17/05

DJ Alexander 2-18-05

Sample Number	HEIS Number	Sample Time (PST)	Sample Type	Sampler (Initials)	Analysis Time (PDT)	Analytical Results			Comments
						TCM µg/L	CCl4 µg/L	TCE µg/L	
DI Blank	---	0742	Water	DJA	1217	<2.0	<2.0	<2.0	hs015.d
100µg/L Cal. Check	---	~~0910~~ 0900	Water	DJA	1228	110 110%	114 114%	109 109%	hs016.d; Acceptable recoveries.
DI Blank	---	0742	Water	DJA	1300	<2.0	<2.0	<2.0	hs019.d
Field Blank	B1CD20	0915	Water	DJA	1311	<2.0	9.8	<2.0	hs020.d
Z-T2-01	B1CD21	0917	Water	DJA	1322	<2.0	6.5	<2.0	hs021.d
Z-V1-01	B1CD22	0920	Water	DJA	1332	<2.0	7.7	<2.0	hs022.d
Z-V1-02 MS	---	0920	Water	DJA	1343	11 110%	11 110%	12 120%	hs023.d
Z-V1-03 MSD	---	0920	Water	DJA	1354	12 120%	11 110%	12 120%	hs024d; (RPD= 0%)
Z-T1-01	B1CD23	0925	Water	DJA	1405	12	2596	5.7	hs025.d
Z-W1-01	B1CD24	0927	Water	DJA	1416	10	3031	2.9	hs026.d
Z-W2-01	B1CD25	0929	Water	DJA	1427	20	4338	7.8	hs027.d
Z-W2-02	B1CD26	0929	Water	DJA	1437	17	4178	7.5	hs028.d; (RPD= 3.76%)
Z-W3-01	B1CD27	1219	Water	DJA	1448	13	2641	7.4	hs029.d; Manifold Bldg
Z-W4-01	B1CD28	1217	Water	DJA	1459	14	1717	5.2	hs030.d; Manifold Bldg
Z-W5-01*	---	---	Water	DJA	---	---	---	---	---
299-W15-2	B1C8H7	1320*	Water	DJA	1510	3.2	65	<2.0	hs032.d; *Sampled 2-10 -05 PCE=420
299-W15-2	B1C8X5	1320*	Water	DJA	1521	9.2	68	<2.0	hs033.d; *Sampled 2-10 -05
299-W4-9	B1C8X8	1100*	Water	DJA	1531	12	133	6.9	hs034.d; *Sampled 2-14 -05
299-W4-9	B1C8Y0	1322*	Water	DJA	1542	11	125	6.4	hs035.d; *Sampled 2-14 -05
DI Blank	---	0742	Water	DJA	1553	<2.0	<2.0	<2.0	hs036.d
3000µg/L Cal. check	---	1520	Water	DJA	1636	2951 98%	2685 90%	3213 109%	hs039.d; Acceptable recoveries
DI Blank	---	0742	Water	DJA	1647	<2.0	<2.0	<2.0	hs040.d
						ppm	ppm	ppm	
Blank	---	---	Air	DJA	1112	<1.0	<1.0	NA	B&K 1302
25.5 ppm Cal. Check	---	---	Air	DJA	1114	NA	23.0 90%	NA	B&K 1302 Acceptable recovery.
Z-A3-01	B1CD18	0933	Air	DJA	1116	<1.0	<1.0	NA	B&K 1302
Z-A2-01	B1CD19	0935	Air	DJA	1118	<1.0	7.78	NA	B&K 1302
Blank	---	---	Air	DJA	1121	<1.0	<1.0	NA	B&K 1302

For instrument operation information, please refer to logbook HNF-N-292 1, page 79.

* Extraction Well No. 5 is off-line – unable to sample.

DJ Alexander 2/18/05

D.J. ALEXANDER

Reviewed By _____ 3/16/05

200-ZP-1 Process
200-UP-1 RI

mathansen/GS/amanarson

200-ZP-1 Daily Activity Log
(Logbook HNF-N-292 1, SAF F02-001/ F02-002)
200-UP-1 Remedial Investigation;
C4299 (699-36-70B) (SAF F04-014)
Date: 8/20/04

amanarson 8/23/04

0630	T. M. Johansen and Deb Alexander arrive on-site at laboratory trailer located at 200-ZP-1 to perform monthly sampling and analysis of the 200-ZP-1 pump and treat. Turned on HP 5890 gas chromatograph S/N 3235A47685 and HP 7694 headspace autosampler S/N 3617I01945. Loaded methods HSECDFID.MTH (HP 5890) and HSECDFID.HSM (HP 7694).
0645	Split flow = 40.6 mL/min. Septum purge = 3.12 mL/min.
0655	Prepared new warm-up standards of 5 and 10 ug/L. Created sample sequence "Z082004.Z"
0710	Prepared calibration standards of 5, 100, 200, 2000, 4000, and 8000 ug/L.
0800	Exited laboratory trailer to collect process water samples.
0817	Started calibration of HP 5890 gas chromatograph.
0850	Returned to laboratory trailer with samples.
0912	Completed calibration of HP 5890 gas chromatograph. Calibration curves are acceptable.
0949	Started analysis of process air samples using the B&K 1302 FTIR S/N 1732828 gas analyzer. For information on this instrument, see logbook HNF-N-294 1.
0957	Completed analysis of process air samples. Analysis results are found on the data sheet in logbook HNF-N-293-1.
0900	Prepared 100 ug/L calibration check standard.
0934	100 ug/L calibration check: DCM = 70 (70%), TCM = 106 (106 %), CCl_4 = 108 (108) TCE = 107 (107 %), PCE = 112 (112%). Acceptable recoveries.
1030	Started analysis of process water samples.
1040	Prepared 200-UP-1 Remedial Investigation sample B193H8 (F04-014) collected from C4299, 270 feet. Transferred 10 mL of sample to clean 20 mL HP vial using a pipette. Sediment had settled to the bottom of the vial, therefore filtration was not necessary. See logbook HNF-N-384 1 for sampling information.
1100	Prepared matrix spike and matrix spike duplicate. Added 2 uL of 50 ug/mL of LCS parent stock to 10 ml of Z-V1-02 for a total of 10 ug/L. Accidently, added 2 uL of 1000 ug/mL of LCS parent stock to 10 ml of Z-V1-03 for a total of 200 ug/L.
1115	Matrix spike recovery for Z-V1-02 = 109 %
1126	Matrix spike duplicate recovery for Z-V1-03 = 201 % Note: Relative Percent Difference = 5.14 %
1246	Completed analysis of process water samples.
1248	Prepared 3000 ug/L calibration check standard.
1309	3000 ug/L calibration check: DCM = 3278 (109%), TCM = 3199 (107%), CCl_4 = 3382 (113%), TCE = 3640 (121%), PCE = 3250 (108%).Acceptable Rec.
1350	Disposed of liquid and solid waste.
1400	Loaded standby method, shut down equipment, left site.

Data recorded in real time using a laptop computer.

mathansen/amanarson 8/23/04

Reviewed
By P.M. GENTO

MAR 16 2005

200-ZP-1 Process
200-UP-1 RI

TMJohansen/GS/DMAlexander

200-ZP-1 Daily Activity Log
(Logbook HNF-N-292 1, SAF F02-001/ F02-002)
200-UP-1 Remedial Investigation;
C4299 (699-36-70B)/C4298 (699-30-66)
(SAF F04-014)
Date: 9/16/04

Tamar Johansen 9/21/04

0630	T. M. Johansen and Deb Alexander arrive on-site at laboratory trailer located at 200-ZP-1 to perform monthly sampling and analysis of the 200-ZP-1 pump and treat. Turned on HP 5890 gas chromatograph S/N 3235A47685 and HP 7694 headspace autosampler S/N 3617I01945. Loaded methods HSECDFID.MTH (HP 5890) and HSECDFID.HSM (HP 7694).
0645	Split flow = 37.9 mL/min. Septum purge = 3.12 mL/min.
0705	Prepared new warm-up standards of 5 and 10 ug/L. Created sample sequence "Z091604.Z"
0710	Prepared calibration standards of 5, 100, 200, 2000, 4000, and 8000 ug/L.
0830	Exited laboratory trailer to collect process water samples.
0809	Started calibration of HP 5890 gas chromatograph.
0900	Returned to laboratory trailer with samples.
0904	Completed calibration of HP 5890 gas chromatograph. Calibration curves are acceptable.
1321	Started analysis of process air samples using the B&K 1302 FTIR S/N 1732828 gas analyzer. For information on this instrument, see logbook HNF-N-294 1.
1331	Completed analysis of process air samples. Analysis results are found on the data sheet in logbook HNF-N-293-1.
0955	Prepared 100 ug/L calibration check standard.
1010	100 ug/L calibration check: DCM = 87 (87%), TCM = 92 (92 %), CCl_4 = 73 (73) TCE = 84 (84%), PCE = 80 (80%). Acceptable recoveries.
1032	Started analysis of process water samples.
1035	Prepared 200-UP-1 Remedial Investigation sample B193H4 (C4298, 240ft), B193J1 (C4299, 340ft) & B193J2 (C4299, 375ft). Transferred 10 mL of sample to clean 20 mL HP vial using a pipette. See logbook HNF-N-384 1 for sampling information.
1110	Prepared matrix spike and matrix spike duplicate. Added 2 uL of 50 ug/mL of LCS parent stock to 10 ml of Z-T2-02, Z-T2-03 for a total of 10 ug/L.
1137	Matrix spike recovery for Z-T2-02 = 85 %
1126	Matrix spike duplicate recovery for Z-T2-03 = 72 % Note: Relative Percent Difference = 17 %
1304	Completed analysis of process water samples.
1248	Prepared 3000 ug/L calibration check standard.
1310	3000 ug/L calibration check: DCM = 2828 (94%), TCM = 2694 (90%), CCl_4 = 2134 (71%), TCE = 2376 (79%), PCE = 2202 (73%).Acceptable Rec.
1400	Disposed of liquid and solid waste.
1420	Loaded standby method, shut down equipment, left site.

Data recorded in real time using a laptop computer.

Reviewed By P.M. GENT

TMJohansen/TMJohansen 9/21/04

MAR 1 0 2005

200-ZP-1 Monthly/Process
216-Z-9 Characterization

DJ Alexander /GS/
DJ Alexander

200-ZP-1 Daily Activity Log
(Logbook HNF-N-292 1, SAF F02-001/ F02-002)
216-Z-9 Trench Characterization
(Logbook HNF-N-296 3, SAF F03-019)
Date: 11/02/04

DJ Alexander
1-13-2005

0700	M.A. Baechler, D.J. Alexander, and R.O. Mahood arrive on-site at laboratory trailer located at 200-ZP-1 to perform monthly sampling and analysis of the 200-ZP-1 pump and treat and analysis of Z-9 well samples. Turned on HP 5890 gas chromatograph S/N 3235A47685 and HP 7694 headspace autosampler S/N 3617I01945. Loaded methods HSECDFID.MTH (HP 5890) and HSECDFID.HSM (HP 7694).
0720	Split flow = 40.0 mL/min. Septum purge = 2.96 mL/min.
0730	Prepared new warm-up standards of 5 and 10 µg/L. Created sample sequence "Z110204.Z"
0735	Prepared calibration standards of 5, 100, 200, 2000, 4000, and 8000 µg/L.
0800	Exited laboratory trailer to collect process water samples from main building.
0828	Started calibration of HP 5890 gas chromatograph.
0923	Completed calibration of HP 5890 gas chromatograph. Calibration curves are acceptable.
0935	Returned to laboratory trailer with first set of samples.
0945	Prepared 100 µg/L calibration check standard. 86 1-23-06
~~0956~~ 1056	100 µg/L calibration check: DCM = 84 (84%), TCM = ~~96~~ (96%), CCl_4 = 89 (89%), TCE = 110 (110%), PCE = 91 (91%). Acceptable recoveries.
1025	Left trailer to collect remaining process water samples at outlying manifold buildings.
1042	Started analysis of process water samples.
1045	Prepared Z-9 samples. Transferred 10 mL of each sample to a clean 20 mL HP vial using a pipette. See logbook HNF-296 3 for data.
1100	Prepared matrix spike and matrix spike duplicate. Added 2 µL of 50 µg/mL of LCS parent stock to 10 ml of B19400MS and MSD for a total of 10 µg/L each sample.
1125	Returned to trailer with remaining samples.
1225	Matrix spike recovery for V1-02MS = 74%.
1236	Matrix spike duplicate recovery for V1-03MSD = 75%. Note: Relative Percent Difference (RPD) = 0.19.
1200	Prepared 3000 µg/L calibration check standard.
1413 ~~1313~~	Completed analysis of process water samples.
1435 1335	3000 µg/L calibration check: DCM = 3373 (112%), TCM = 3399 (113%), CCl_4 = 3329 (111%), TCE = 3853 (128%), PCE = 3373 (112%). Acceptable recoveries.
1450 ~~1350~~	Loaded standby method and shut down equipment.
1455 ~~1415~~	Disposed of liquid and solid waste.
1510 1430	Left site.

Data recorded in real time using a laptop computer.

D.J. ALEXANDER
DJ Alexander
1-13-05

Reviewed
By: M.R. Adams
Mary Adams
JAN 2 4 2006

200-ZP-1 Monthly /Process
VISTA Engr. DNAPL GW Sampling

DJ Alexander /GS/
DJ alexander

200-ZP-1 Daily Activity Log
(Logbook HNF-N-292 1, SAF F02-001/ F02-002)
VISTA Engineering Technologies DNAPL
Groundwater Sampling (SAF F05-005)
Date: 12/21/04

	0845	D.J. Alexander arrives on-site at laboratory trailer located at 200-ZP-1 to perform monthly sampling and analysis of the 200-ZP-1 pump and treat. Turned on HP 5890 gas chromatograph S/N 3235A47685 and HP 7694 headspace autosampler S/N 3617I01945. Loaded methods HSECDFID.MTH (HP 5890) and HSECDFID.HSM (HP 7694).
	0905	Split flow = 40.2 mL/min. Septum purge = 3.03 mL/min.
	0910	Prepared new warm-up standards of 5 and 10 µg/L. Created sample sequence "Z122104.Z"
	0915	Prepared calibration standards of 5, 100, 200, 2000, 4000, and 8000 µg/L.
	0915	Prepared 100 µg/L calibration check standard.
	0915	Prepared 3000 µg/L calibration check standard.
	0922	Started calibration of HP 5890 gas chromatograph.
	1000	Exited laboratory trailer to collect process water samples.
	1030	Returned to laboratory trailer with samples.
	~~1045~~ 1241	100 µg/L calibration check: DCM = 87 (87%), TCM = 92 (92 %), CCl_4 = 73 (73) TCE = 84 (84%), PCE = 80 (80%). Acceptable recoveries.
	1230	Completed analysis of process air samples. Analysis results are found on the data sheet in logbook HNF-N-293-1.
	1240	Prepared matrix spike and matrix spike duplicate. Added 2 uL of 50 µg/mL of LCS parent stock to 10 ml of Z-V1-02, Z-V2-03 for a total of 10 µg/L.
	1255	Left trailer to collect remaining process water samples at outlying manifold buildings.
1400	~~1300~~	Matrix spike recovery for Z-V1-02 = 97 %
	1307	Returned to trailer with remaining samples.
	1315	Prepared 299-W15-17 samples B1C092, B1C0R6, B1C0R8, B1C0T0, and B1C0T2. Transferred 10 mL of each sample to a clean 20 mL HP vial using a pipette. See logbook HNF-N-296 3 for sampling information.
	1338	Started analysis of process water samples.
	1410	Matrix spike duplicate recovery for Z-V1-03 = 85 % Note: Relative Percent Difference = 12.4%
1610	1510	Completed analysis of process water samples.
1631	1531	3000 µg/L calibration check: DCM = 3438 (115%), TCM = 3258 (109%), CCl_4 = 3494 (117%), TCE = 3719 (124%), PCE = 3164 (106%). Acceptable Recoveries.
1655	1545	Disposed of liquid and solid waste.
1710	1600	Loaded standby method, shut down equipment, left site.

Data recorded in real time using a laptop computer.

1-17-2005

D.J. ALEXANDER 1-17-05
DJ Alexander

Reviewed By Drathans
3-16-05

200ZP-1 Quarterly/Monthly Process VISTA-DNAPL, Z-9 Characterization, and RCRA SX Borehole Characterization

DJ Alexander/ GS/DJ Alexander

200-ZP-1 Daily Activity Log
(Logbook HNF-N-292 1, SAF F02-001)
VISTA Engineering Technologies DNAPL Groundwater Sampling
Wells 299-W14-14, 299-W14-6, and 299-W14-12 (Logbook HNF-N-296-3, SAF F05-005)
216-Z-9 Trench Characterization;
C3426/299-W18-16 (Logbook HNF-N-388-1, SAF F03-019)
GW Sampling for RCRA Boreholes in the S-SX, T, and TX-TY WM;
C4667/299-W22-47 (Logbook HNF-N-384-1, SAF F05-007)
Date: 01/25/05

DJ Alexander 1-26-05

0635	D. J. Alexander and M.A. Baechler arrive on-site at laboratory trailer located at 200-ZP-1 to perform quarterly sampling and analysis of the 200-ZP-1 pump and treat. Turned on HP 5890 gas chromatograph S/N 3235A47685 and HP 7694 headspace autosampler S/N 3617101945. Loaded methods HSECDFID.MTH (HP 5890) and HSECDFID.HSM (HP 7694).
0715	Split flow = 39.9 mL/min. Septum purge = 2.87 mL/min.
0720	Prepared new warm-up standards of 5 and 10 µg/L. Created sample sequence "Z012505.Z"
0725	Prepared calibration standards of 5, 100, 200, 2000, 4000, and 8000 µg/L.
0730	Started calibration of HP 5890 gas chromatograph.
0735	Prepared 100 µg/L calibration check standard.
0800	Exited laboratory trailer to collect process water samples.
0916	Completed calibration of HP 5890 gas chromatograph. Calibration curves are acceptable.
~~0948~~ 1016	100 µg/L calibration check: DCM = 85 (85%), TCM = 103 (103 %), CCl_4 = 97 (97%) TCE = 94 (94%), PCE = 91 (91%). Acceptable recoveries.
1015	Prepared matrix spike and matrix spike duplicate. Added 2 µL of 50 µg/mL of LCS parent stock to 10 mL of T2-02 and T2-03 for a total of ~~10~~ µg/L per sample.
1040	Returned to laboratory trailer with samples. 10 mg 3-1-05
1129	Prepared additional field screening samples. Transferred 10 mL of each sample to a clean 20 mL HP vial using a pipette. See logbook HNF-N-388-1 for sampling information on Z-9 sample. Data from well(s) 299-W14-14, 299-W14-6, and 299-W14-12 will be recorded in logbook HNF-N-296-3. Data from well C4667 will be recorded in logbook HNF-N-384-1.
1143	Started analysis of process water samples.
1153	Matrix spike recovery for T2-02 = 83 %.
1204	Matrix spike duplicate recovery for T2-03 = 80%. Note: Relative Percent Difference (RPD) = 3.68%.
1231	Completed analysis of process water samples.
1343	Prepared 3000 µg/L calibration check standard.
~~1504~~ 1604	3000 µg/L calibration check: DCM = 3292 (110%), TCM = 3046 (102%), CCl_4 = 2902 (97%), TCE = 3419 (114%), PCE = 2847 (94%). Acceptable recoveries.
~~1530~~ 1620	Loaded standby method, shut down equipment, and turned down nitrogen gas supply. Turned off outside hydrogen and breathing air gas bottles.
1625 ~~1545~~	Disposed of liquid and solid waste.
1630 ~~1600~~	Left trailer. mg 3-1-05

Data recorded in real time using a laptop computer.

DJ Alexander
D.J. ALEXANDER 1-26-2005

Reviewed
By: M.R. Adams JAN 2 1 2006

00000013

200-ZP-1 Monthly Process Monitoring
VISTA DNAPL GW Samples

DJAlexander/GS/ DJalexander

200-ZP-1 Daily Activity Log
(Logbook HNF-N-292 1, SAF F02-001)
VISTA Engineering Technologies DNAPL
Groundwater Sampling 299-W15-2 and 299-W4-9
(Logbook HNF-N-296-3, SAF F05-005)
Date: 02/17/05

DJalexander 2-18-05

0735	D. J. Alexander arrives on-site at laboratory trailer located at 200-ZP-1 to perform quarterly sampling and analysis of the 200-ZP-1 pump and treat. Turned on HP 5890 gas chromatograph S/N 3235A47685 and HP 7694 headspace autosampler S/N 3617I01945. Loaded methods HSECDFID.MTH (HP 5890) and HSECDFID.HSM (HP 7694).
0745	Prepared new warm-up standards of 5 and 10 µg/L. Created sample sequence "Z021705.Z"
0813	Split flow = 40.1 mL/min. Septum purge = 3.16 mL/min.
0815	Started calibration of HP 5890 gas chromatograph.
0817	Prepared calibration standards of 5, 100, 200, 2000, 4000, and 8000 µg/L.
0900	Prepared 100 µg/L calibration check standard.
0910	Exited laboratory trailer to collect process water samples from main ZP-1 P&T building.
0940	Returned to laboratory trailer with samples from main building.
0950	Prepared matrix spike and matrix spike duplicate. Added 2 µL of 50 µg/mL of LCS parent stock to 10 mL of V1-02 and V1-03 for a total of 10 µg/L per sample.
1010	Completed calibration of HP 5890 gas chromatograph. Calibration curves are acceptable.
1020	Prepared additional field screening samples. Transferred 10 mL of each sample to a clean 20 mL HP vial using a pipette. See logbook HNF-N-296 3 for sampling information on VISTA Engineering DNAPL Groundwater samples.
1128	100 µg/L calibration check: DCM = 117 (117%), TCM = 110 (110 %), CCl_4 = 114 (114%), TCE = 109 (109%), PCE = 112 (112%). Acceptable recoveries.
1204	Exited laboratory trailer to collect process water samples at outlying buildings.
1211	Started analysis of process water samples.
1225	Returned to laboratory trailer with samples from outlying buildings.
1343 ~~1243~~	Matrix spike recovery for V1-02 = 110%.
1354 ~~1254~~	Matrix spike duplicate recovery for V1-03 = 110%. Note: Relative Percent Difference (RPD) = 0%.
1359	Completed analysis of process water samples.
1520	Prepared 3000 µg/L calibration check standard.
~~1536~~ 1636	3000 µg/L calibration check: DCM = 2949 (98%), TCM = 2951 (98%), CCl_4 = 2685 (90%), TCE = 3213 (107%), PCE = 2804 (94%). Acceptable recoveries.
~~1556~~ 1656	Loaded standby method, shut down equipment, and turned down nitrogen gas supply. Turned off outside hydrogen and breathing air gas bottles.
~~1600~~ 1700	Disposed of liquid and solid waste.
~~1610~~ 1710	Left trailer and 200W area.

Data recorded in real time using a laptop computer.

MJ 3/16/05

DJA 2-18-05

DJalexander 2/18/05

D.J. ALEXANDER

Reviewed By _____ /3/16/05