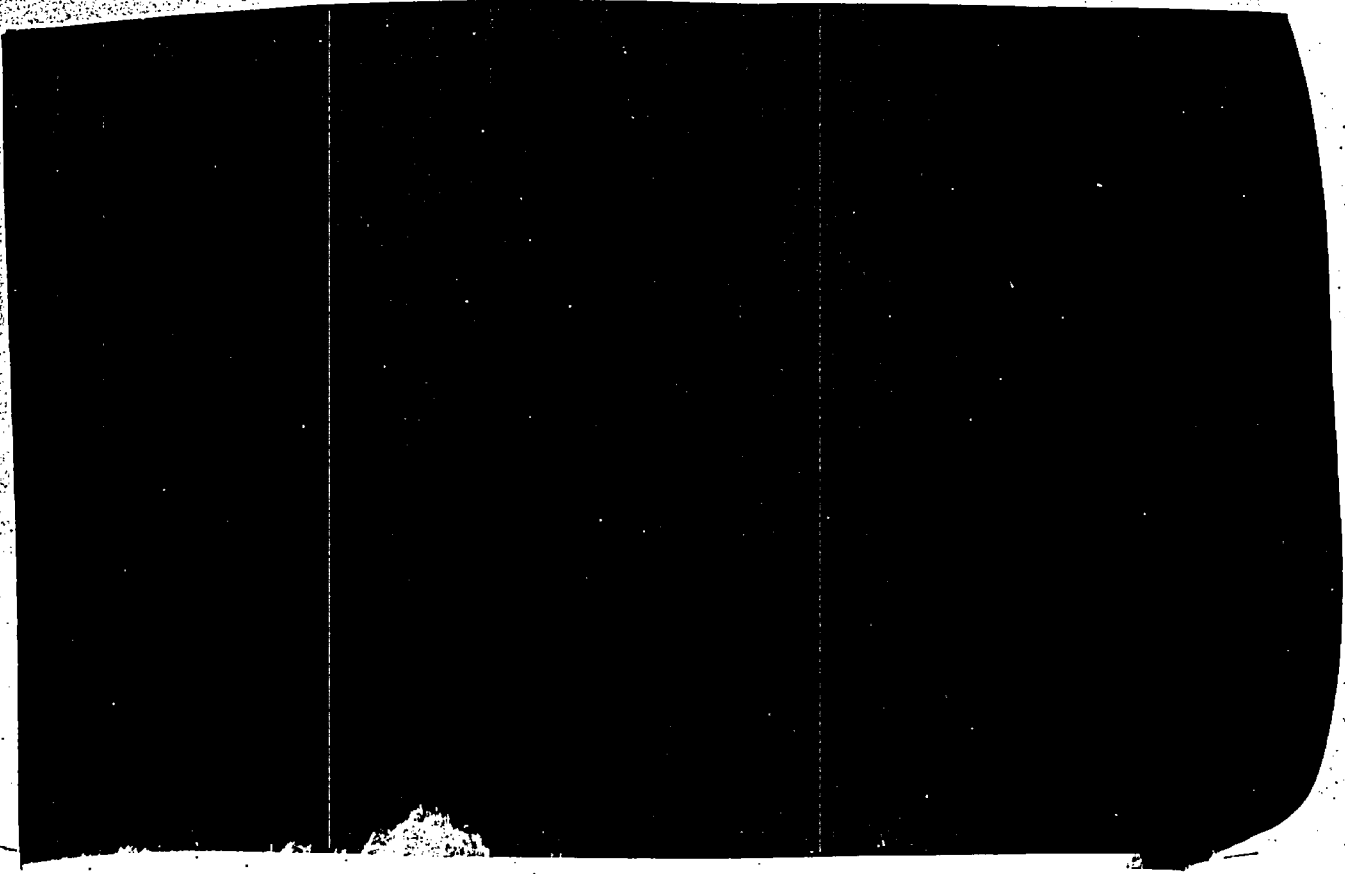


R3

From: Steven Orth  
To: Ronald Nimitz  
Date: Tue, Jan 24, 2006 2:08 PM  
Subject: Proposed RIS re: Monitoring of Spent Fuel Pools and On-site Contamination

Ron,



Ex 5

Steve

>>> John White 01/09/06 4:49 PM >>>  
Region I staff participated in the January 5, 2006, RES/NMSS/NRR Technical Assistance Group (TAG) meeting on Groundwater and Performance Monitoring. During the meeting we were requested to provide a copy of the Draft RIS that was developed by Ron Nimitz relative to Spent fuel pool leakage and structural integrity issues. Accordingly, please review and provide comments to Ron Nimitz.

Information in this record was deleted  
in accordance with the Freedom of Information  
Act, exemptions 5/6  
F.J.A. 2006-115

G-112

From: "Haskell, Larry" <Haskell@iema.state.il.us>  
To: Steven Orth <SKO@nrc.gov>  
Date: Tue, Jan 24, 2006 3:32 PM  
Subject: RE: Braidwood Tritium Sampling

Steven:

Attached you will find a copy of my spreadsheet comparing Exelon's results with IEMA's. Results that are bold indicate results where the uncertainty intervals for Exelon and IEMA results did not overlap. I use it as a tool to quickly locate pairs of samples which might have some discrepancy. In general, our results are in good agreement with theirs. One exception is PW-5, the private well at the [redacted] residence. Our analysis had a positive detection of approximately 450 pCi/L in that sample; theirs came back as a non-detect.

ExL

Last week I had spoken to Jim Gosnell from Exelon about this issue and he agreed that they would resample that location. This afternoon, Exelon contacted me and informed me that their second analysis was also a non-detect. I have not yet received a second sample, but am expecting it later this week.

Larry Haskell  
IEMA - Division of Nuclear Safety

<<Exelon and IEMA Tritium results Smiley Road -- updated jan 23.xls>> -----Original Message-----

From: Steven Orth [mailto:SKO@nrc.gov]  
Sent: Tuesday, January 24, 2006 3:24 PM  
To: haskell@iema.state.il.us  
Cc: r\_allen@iema.state.il.us; John Cassidy; Roland Lickus  
Subject: Re: Braidwood Tritium Sampling

<< File: NRC Spreadsheet (24Jan06 Copy to IL).xls >> Larry,

We have compiled the attached comparisons of NRC results to the licensee's results. We still have a number of results that we have not received from our contract laboratory.

Our initial data review indicates generally very good agreement between the laboratories. As I discussed with Rich Allen yesterday, a few results have a greater difference than I expected, but were still within a reasonable variance. In some cases, we have asked our laboratory to recount the samples.

Since this information is part of an ongoing NRC inspection, we request that you use the attached information for internal use/review only. We plan to issue our results in an upcoming inspection report.

We are also very interested in your results and would appreciate a copy of your spreadsheet.

If you have any questions, please contact me via email or at 630/829-9827 or contact John Cassidy at 630/829-9667.

Steven Orth  
US NRC Region III  
Division of Reactor Safety

>>> "Haskell, Larry" <Haskell@iema.state.il.us> 01/24/06 10:04 AM >>>  
Mr Orth:

My name is Larry Haskell and I am with the Illinois Emergency Management Agency, Division of Nuclear Safety. I am coordinating the State's receipt and analysis of samples from Exelon's special sampling efforts around the Braidwood station. I understand that you have a similar set of data, collected by the NRC. Would you be willing to swap data sets?

Exelon has been providing us with duplicates of all samples they collect and analyze. Currently I have received approximately 200 samples and our lab has provided me with results for half of these samples. All these samples are comprised of between 100 -1000 ml of water which is analyzed by liquid scintillation for tritium. Exelon staff members at Braidwood have provided me with their results from most of the 200 samples. If you would be interested in these results, please let me know. I would be most interested in any results of independent analyses that you have.

Larry Haskell  
Illinois Emergency Management Agency  
Division of Nuclear Safety  
Haskell@iema.state.il.us  
217.786.6760

Braidwood Station Tritium Sample Results								
		Exelon Results			IEMA Results			
Location	Exelon Sample ID	Collection Date	pCi/L	Unc	pCi/L	Unc	MDC	IEMA Date
BL-01	BL-01	11-17-15	70 ±	96	0			
BL-02	BL-02	11-17-15	156 ±	99	0			
BL-03	BL-03	11-18-05	0 ±	94	0			
BL-04	BL-04	11-18-05	40 ±	95	0			
BL-05	BL-05	11-18-05	102 ±	98	0			
BL-06	BL-06	11-18-05	114 ±	112	0			
BL-07	BL-07	11-18-05	39 ±	109	0			
BL-08	BL-08	11-18-05	90 ±	111	0			
BL-09	BL-09	12-23-05	4701 ±	205	0			
	BL-9D	12-23-05	23097 ±	415	0			
BL-10	BL-10	11-17-05	295 ±	118	0			
	BL-10D	12-15-05	8259 ±	267	8280 ±	229	167	12-15-05
BL-11	BL-11	11-17-05	61 ±	96	0			
	BL-11D	12-15-05	213 ±	93	10.7 ±	99.4	167	12-15-05
BL-12	BL-12	11-17-15	126 ±	87	0			
	BL-12D	12-15-05	-31 ±	108	-61 ±	124	212	12-15-05
BL-13	BL-13	11-17-15	76 ±	96	0			
	BL-13D	12-15-05	150 ±	104	102 ±	129	212	12-15-05
BL-14	BL-14	11-17-15	70 ±	96	0			
	BL-14D	12-15-05	187 ±	94	18.3 ±	127	212	12-15-05
BL-15	BL-15	11-17-15	1178 ±	128	0			
	BL-15D	12-16-05	38 ±	106	58.9 ±	128	212	12-16-05
BL-16	BL-16	11-17-15	4058 ±	201	0			
	BL-16D	12-16-05	85 ±	104	26.4 ±	127	212	12-16-05
BL-17	BL-17	12-01-05	25 ±	96	2.49 ±	84.8	142	12-01-05
	BL-17	12-05-05	105 ±	112	0			
	BL-17	12-05-05	183 ±	114	0			
	BL-17D	12-12-05	28 ±	94	32.5 ±	125	212	12-12-05
BL-18	BL-18	12-01-05	108 ±	99	-29.8 ±	83.9	142	12-01-05
BL-19	BL-19	12-01-05	37 ±	97	-97 ±	81.9	142	12-01-05
BL-20	BL-20D	12-23-05	-76 ±	91	0			
C-1	C-1	12-12-05	85 ±	96	69.1 ±	128	212	12-12-05
	C-1D	12-12-05	158 ±	104	30.5 ±	125	212	12-12-05
D-1	D-1	12-06-05	92 ±	111	-4.97 ±	83.3	140	12-06-05

PW-12 (Burns Well)	PW-12	12-07-05	44 ±	109	-75 ±	97.3	167	12-07-05
PW-13 (Zimmer Well)	PW-13	12-07-05	-62 ±	97	34.8 ±	100	167	12-07-05
PW-14 (Agazzi Well)	PW-14	12-14-05	-118 ±	105	-72.2 ±	97.3	167	12-07-05
PW-15 (Fatlan Well)	PW-15	12-14-05	-51 ±	108	-16 ±	98.8	167	12-14-05
RW-1	RW-1	12-01-05	2396 ±	173	2220 ±	187	198	12-01-05
	RW-1	12-01-05	2050 ±	153	0			
	RW-1	12-04-05	7855 ±	254	0			
RW-2	RW-2	12-01-05	33736 ±	499	32900 ±	573	198	12-01-05
	RW-2	12-01-05	30605 ±	475	0			
	RW-2	12-04-05	88778 ±	798	0			
	RW-2@10'	12-13-05	54111 ±	632	52900 ±	1060	343	12-13-05
	RW-2@10.6'	12-06-05	58621 ±	644	0			
	RW-2@20'	12-13-05	171166 ±	1115	164000 ±	3240	601	12-13-05
	RW-2@20.6'	12-06-05	170024 ±	1089	0			
	RW-2@25'	12-13-05	246442 ±	1337	276000 ±	5430	777	12-13-05
	RW-2@25.0'	12-06-05	223888 ±	1299	0			
RW-3	RW-3	12-02-05	197 ±	107	53.5 ±	120	198	12-05-05
RW-4	RW-4	12-02-05	380 ±	113	146 ±	123	198	12-02-05
S-1	S-1	12-05-05	-21 ±	107	121 ±	122	198	12-05-05
	S-1	12-06-05	83 ±	111	0			
S-2	S-2	12-05-05	95 ±	111	133 ±	123	198	12-05-05
	S-2	12-06-05	88 ±	103	0			
	S-2D	12-12-05	225 ±	101	-175 ±	132	230	12-12-05
S-3	S-3	12-05-05	145 ±	113	110 ±	129	211	12-05-05
	S-3	12-06-05	57 ±	102	0			
S-4	S-4	12-05-05	1280 ±	147	1260 ±	160	211	12-05-05
	S-4	12-06-05	1086 ±	133	0			
S-5	S-5	12-05-05	2023 ±	165	2070 ±	179	211	12-05-05
	S-5	12-06-05	1874 ±	152	0			
S-6	S-6	12-05-05	679 ±	130	655 ±	145	211	12-05-05
	S-6	12-06-05	411 ±	113	0			
SW-1	SW-1	11-30-05	2464 ±	163	2270 ±	183	212	11-30-05
SW-2	SW-2	11-30-05	2347 ±	160	2040 ±	178	212	11-30-05
SW-3	SW-3	12-02-05	96 ±	99	0			
SW-4 (Lake)	SW-4 (Lake)	12-02-05	83 ±	98	108 ±	129	211	12-02-05
VB1-1	VB1-1	11-15-05	1194 ±	140	0			
	VB1-1D	12-16-05	49 ±	90	-289 ±	128	230	12-16-05

	D-1D	12-23-05	-147 ±	106	0			
D-2	D-2	12-05-05	125 ±	113	0			
	D-2	12-05-05	59 ±	110	-17.4 ±	82.9	140	12-05-05
	D-2D	12-23-05	-91 ±	108	0			
D-3	D-3	12-02-05	137 ±	100	-2.49 ±	83.4	140	12-02-05
	D-3D	12-23-05	4674 ±	215	0			
D-4	D-4	12-06-05	91 ±	111	0			
D-5	D-5	12-02-05	73 ±	98	-34.8 ±	82.5	140	12-02-05
F-1	F-1	12-12-05	104 ±	97	-4.07 ±	126	212	
	F-1D	12-12-05	139 ±	113	-167 ±	132	230	12-12-05
G-1	G-1	12-06-05	133 ±	112	37.3 ±	84.5	140	12-06-05
G-2	G-2	12-06-05	87 ±	111	-19.9 ±	82.8	140	12-06-05
G-3	G-3	12-06-05	81 ±	111	-32.3 ±	82.5	140	12-06-05
	G-3	12-06-05	126 ±	112	0			
MW-101	MW-101	11-15-05	157 ±	96	0			
MW-102	MW-102				0			
MW-103	MW-103	11-15-05	2497 ±	173	0			
MW-104	MW-104				0			
MW-105	MW-105	11-15-05	729 ±	119	0			
	MW-105D	12-16-05	-69 ±	105	-205 ±	131	230	12-16-05
MW-106	MW-106D	12-16-05	-115 ±	87	-217 ±	131	230	12-16-05
MW-107	MW-107	11-15-05	269 ±	112	0			
MW-108	MW-108	11-15-05	91 ±	90	0			
MW-109	MW-109				0			
MW-110	MW-110	11-15-05	93 ±	90	0			
MW-111	MW-111	11-15-05	224 ±	112	0			
MW-112	MW-112	11-15-05	167 ±	110	0			
MW-113	MW-113	11-15-05	4830 ±	219	0			
	MW-113	12-05-05	4009 ±	207	3640 ±	156	140	12-05-05
	MW-113	12-05-05	3598 ±	188	0			
	MW-113D	12-14-05	4835 ±	211	4230 ±	228	230	12-14-05
P-1	P-1	12-01-05	2484 ±	174	2570 ±	139	140	12-01-05
P-2	P-2	12-02-05	4344 ±	288	2370 ±	179	226	12-02-05
	P-2D	12-12-05	2599 ±	177	2190 ±	189	230	12-12-05
P-3	P-3	12-02-05	3258 ±	258	2160 ±	174	226	12-02-05
P-4	P-4	12-01-05	33041 ±	509	31800 ±	649	288	12-01-05
	P-4	12-01-05	33763 ±	499	0			

	P-4	12-06-05	25311 ±	435	28800 ±	592	274	12-06-05
	P-4D	12-23-05	59592 ±	657	0			
P-5	P-5	12-01-05	6621 ±	248	6400 ±	252	226	12-01-05
	P-5D	12-23-05	2402 ±	161	0			
P-6	P-6	12-01-05	450 ±	123	54.7 ±	118	226	12-01-05
P-7	P-7	12-01-05	1210 ±	133	997 ±	153	198	12-01-05
P-8	P-8	12-01-05	2998 ±	185	2690 ±	199	198	12-01-05
	P-8	12-06-05	2212 ±	160	2600 ±	197	198	12-06-05
P-9	P-9	12-05-05	1346 ±	148	3.73 ±	118	198	12-05-05
	P-9	12-06-05	-90 ±	96	0			
	P-9	12-13-05	111 ±	112	-222 ±	131	230	12-13-05
	P-9	12-13-05	27 ±	104	0			
P-10	P-10	12-05-05	1934 ±	162	1670 ±	163	225	12-05-05
	P-10	12-06-05	1723 ±	149	0			
P-11	P-11	12-05-05	1681 ±	156	1390 ±	156	225	12-05-05
	P-11	12-06-05	1476 ±	143	0			
P-12	P-12	12-05-05	1535 ±	153	1360 ±	155	225	12-05-05
	P-12	12-06-05	1622 ±	154	0			
P-13	P-13D	12-23-05	226468 ±	1270	0			
	P-13D	12-28-05	225231 ±	1268	0			
PS-1	PS-1	12-22-05	-18 ±	95	0			
PS-2	PS-2	12-22-05	-89 ±	93	0			
PW-1 (Well)	PW-1	11-30-05	-26 ±	112	11.1 ±	126	212	11-30-05
PW-2 (Well)	PW-2	11-30-05	48 ±	97	3.04 ±	126	212	11-30-05
PW-3 (Well)	PW-3	11-30-05	25 ±	96	-13.2 ±	125	212	11-30-05
PW-4	PW-4	12-02-05	43 ±	97	0			
PW-5 (Well)	PW-5	12-07-05	9 ±	100	449 ±	139	211	12-07-05
PW-6	PW-6				0			
PW-6P (Pond)	PW-6P	12-08-05	142 ±	114	22.4 ±	126	211	12-08-05
PW-7 (Well)	PW-7	12-07-05	-58 ±	98	-34.8 ±	98.4	167	12-07-05
					xxxx ±			
PW-8 (Well)	PW-8	12-03-05	1151 ±	130	1220 ±	159	211	12-03-05
	PW-8	12-06-05	1524 ±	151	1410 ±	164	211	12-06-05
	PW-8	12-08-05	1367 ±	135	0			
PW- (Well)	PW-9	12-05-05	142 ±	113	31.4 ±	127	211	12-05-05
PW- (Well)	PW-10	12-07-05	72 ±	110	-53.5 ±	97.9	167	12-07-05
PW-1 (Well)	PW-11	12-05-05	99 ±	112	-43.5 ±	124	211	12-05-05

VB1-2	VB1-2	11-17-15	337 ±	97	0			
VB1-3	VB1-3	11-15-05	206 ±	110	0			
VB1-4	VB1-4	11-15-05	384 ±	102	0			
VB1-5	VB1-5	11-15-05	130 ±	92	0			
	VB1-5	11-22-05	57 ±	114	0			
VB1-6	VB1-6	11-22-05	95 ±	115	0			
VB1-7	VB1-7	11-22-05	140 ±	100	0			
VB1-8	VB1-8				0			
VB1-9	VB1-9	11-22-05	107 ±	99	0			
VB2-1	VB2-1	11-15-05	207 ±	98	0			
VB2-2	VB2-2	11-15-05	6193 ±	228	0			
	VB2-2	12-05-05	5832 ±	236	5850 ±	187	142	12-05-05
	VB2-2	12-05-05	5569 ±	222	0			
	VB2-2D	12-23-05	3445 ±	194	0			
VB2-3	VB2-3	11-15-05	3940 ±	195	0			
VB2-4	VB2-4	11-15-05	3664 ±	190	0			
VB2-5	VB2-5	11-15-05	4270 ±	202	0			
	VB2-5D	12-14-05	64 ±	111	-30.5 ±	136	230	12-14-05
VB2-6	VB2-6	11-15-05	2132 ±	157	0			
	VB2-6	12-05-05	2348 ±	171	0			
	VB2-6	12-05-05	1979 ±	162	1780 ±	125	142	12-02-05
	VB2-6D	12-14-05	56 ±	111	110 ±	133	219	12-14-05
VB2-7	VB2-7	12-14-05	-47 ±	108	-165 ±	125	219	12-14-05
	VB2-7D	12-14-05	-52 ±	96	-83.4 ±	128	219	12-14-05
VB2-8	VB2-8	12-14-05	-103 ±	94	-95.6 ±	127	219	12-14-05
VB3-1	VB3-1	11-15-05	5959 ±	225	0			
VB3-2	VB3-2	11-15-05	32830 ±	509	0			
	VB3-2	11-15-05	26686 ±	453	0			
VB3-3	VB3-3	11-16-05	43894 ±	580	0			
VB-3-4	VB3-4	11-16-05	58489 ±	702	37200 ±	430	142	11-30-05
	VB3-4	12-05-05	43708 ±	592	40800 ±	464	147	12-05-05
	VB3-4	12-05-05	40654 ±	545	0			
	VB3-4D	12-14-05	747 ±	132	874 ±	154	219	12-14-05
VB3-5	VB3-5	11-22-05	95 ±	98	0			
VB3-6	VB3-6	11-22-05	53572 ±	637	0			
VB-3-7	VB3-7	12-02-05	169 ±	106	39.8 ±	85.8	142	12-02-05
	VB3-7D	12-14-05	-79 ±	95	-146 ±	126	219	12-14-05



VB3-6	VB3-8	12-02-05	171 ±	106	-52.2 ±	83.2	142	12-02-05
VB3-9	VB3-9D	12-13-05	21715 ±	408	19800 ±	419	222	12-13-05
VB3-10	VB3-10	12-16-05	8473 ±	260	9220 ±	298	219	12-16-05
	VB3-10D	12-16-05	70773 ±	710	80700 ±	1610	439	12-16-05
VB4-1	VB4-1	12-19-05	-119 ±	94	-42.7 ±	129	219	12-19-05
	VB4-1D	12-22-05	-34 ±	95	0			
VB5-1	VB5-1	12-22-05	-66 ±	94	0			
	VB5-1D	12-22-05	0 ±	96	0			
VB6-1	VB6-1	12-20-05	-160 ±	107	0			
	VB6-1D	12-20-05	-151 ±	108	0			
VB7-1	VB7-1	12-20-05	1612 ±	140	0			
	VB7-1	12-22-05	2358 ±	173	0			
	VB7-1D	12-22-05	169 ±	118	0			
VB7-3	VB7-3	12-23-05	-9 ±	111	0			
VB7-4	VB7-4	12-23-05	-65 ±	109	0			
VB8-1	VB8-1	12-20-05	-103 ±	86	0			
	VB8-1D	12-20-05	-87 ±	87	0			
VB9-1	VB9-1	12-22-05	-9 ±	113	0			
	VB9-1D	12-22-05	-60 ±	111	0			
VB10-1	VB10-1	12-22-05	-116 ±	109	0			
	VB10-1D	12-22-05	40 ±	114	0			
VB11-1	VB11-1				0			
	VB11-1D	12-23-05	21 ±	95	0			
Braidwood Cooling @ Lake 2B Bay	Braidwood Cooling Lake 2B Bay	12-14-05	-61 ±	95	-120 ±	126	219	12-14-05
Condensate @ (Unit 1)	Condensate (Unit 1)	12-22-05	45004 ±	573	0			
Condensate @ (Unit 2)	Condensate (Unit 2)	12-22-05	39233 ±	537	0			
Ditch @ Culvert	Ditch @ Culvert	12-22-05	1007 ±	128	0			
Holding Pond @ Fresh Water	Holding Pond Fresh Water	12-14-05	-100 ±	106	-102 ±	127	219	12-14-05
Kankakee River @ Bar Rocks	Kankakee River @ Bar Rocks	12-14-05	-162 ±	92	-181 ±	125	219	12-14-05
Kankakee River Upstream 200'	Kankakee River Upstream 200'	12-14-05	-150 ±	92	-112 ±	127	219	12-14-05
Kankakee River between RSH & CWBD	Kankakee River between RSH & CWBD	12-14-05	-187 ±	91	-197 ±	124	219	12-14-05
North Oil Separator	North Oil Separator	12-13-05	107 ±	112	75.2 ±	132	219	12-13-05
	North Oil Separator	12-13-05	57 ±	105	0			
Potable Water	Potable Water	12-13-05	6024 ±	239	22.3 ±	126	211	12-13-05
	Potable Water	12-13-05	-50 ±	113	0			
	Potable Water	12-13-05	-77 ±	113	0			
	Potable Water	12-13-05	-125 ±	101	0			

