APPENDIX D

TOTAL AND REMOVABLE ALPHA/BETA SURFACE RADIOACTIVITY RESULTS

Well Sites

Survey No.:	WP-01-FS-045
Date:	9/6/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/25/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:					**Project:**
Contaminant/Limits:					
Comments:					

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.09	38.37
MDC:		NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	water offload pad				N/A	N/A	7-9	9	25	375	1144	5	12	58	36
2	containment around tanks				N/A	N/A	8-10	2	-10	462	1790	2	4	51	18
3	containment around tanks				N/A	N/A	10-12	4	0	410	1404	2	4	39	-12
4	pipe containment				N/A	N/A	10-12	4	0	482	1939	1	1	49	13
5	pipe containment/valve area				N/A	N/A	5-7	6	10	382	1196	0	-2	51	18
6	back side of flare trailer				N/A	N/A	5-7	3	-5	335	847	0	-2	43	-2
7	seperator-sand				N/A	N/A	5-7	13	45	334	839	1	1	49	13
8	containment pad behind seperators				N/A	N/A	8-10	6	10	335	847	0	-2	53	23
9	near sand seperators				N/A	N/A	8-10	9	25	309	654	1	1	51	18
10	thrust block in containment				N/A	N/A	3-5	8	20	270	364	0	-2	44	1
11	concrete of well pad				N/A	N/A	5-7	9	25	325	773	0	-2	43	-2
12	containment around waste dumpster				N/A	N/A	10-15	3	-5	558	2503	1	1	38	-14
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-01-FS-081
Date:	8/6/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	0
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:		**Project:**
Contaminant/Limits:		
Comments:		

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	1	240	10	521
	ACF:	NA	NA	NA	1.27	1.27	1	1
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	11.54	267.72	6.57	41.90
	MDC:	NA	NA	NA	37.95	557.72	8.47	203.99

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	guard house floor				N/A	N/A	3-5	1	0	307	498	0	-3	39	-33
2	residual water offload				N/A	N/A	3-5	2	5	374	995	2	3	43	-23
3	residual water offload				N/A	N/A	3-5	6	25	354	847	0	-3	36	-40
4	secondary containment around residual water tanks				N/A	N/A	4-6	0	-5	363	914	0	-3	53	2
5	secondary containment behind 5-7 residual water tanks				N/A	N/A	5-7	3	10	470	1709	0	-3	45	-18
6	frac van floor				N/A	N/A	3-5	1	0	285	334	0	-3	46	-15
7	frac van floor				N/A	N/A	3-5	0	-5	326	639	0	-3	57	12
8	water mixing truck				N/A	N/A	4-6	3	10	245	37	N/A	N/A	N/A	N/A
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															

Survey No.:	WP-01-FS-128
Date:	4/242014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/1/2014
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	9007			227433 /PR295917		227433 /PR295917		143878		PR147628	
Cal. Due Date:				NA	5/21/2014			4/18/2015		4/18/2015		10/24/2014		10/24/2014	
x, y int.:	*Efficiency:*			NA	NA		NA	0.2036		0.343		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		5		615	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	17.99		79.39		4.55		48.53	
MDC:				NA	NA		NA	47.59		165.67		8.29		235.63	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	production pack 2H floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	5	12	63	4
2	production pack 3H floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	1	47	-39
3	dump valve				N/A	N/A	3-5	N/A	N/A	N/A	N/A	2	4	55	-17
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-02-FS-083
Date:	7/24/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	0
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	257	10	521
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	277.04	6.57	41.90
MDC:		NA	NA	NA	14.88	576.36	8.47	203.99

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Mud Engineer's Office				N/A	N/A	3-5	2	10	242	-111	0	-3	37	-38
2	Drilling Consultant's Office				N/A	N/A	3-5	2	10	265	59	0	-3	38	-35
3	DCO Kitchen				N/A	N/A	3-5	0	0	211	-342	0	-3	51	-3
4	Parts Storage Floor				N/A	N/A	3-5	0	0	236	-156	1	0	28	-60
5	Rig Mananger's Office Floor				N/A	N/A	3-5	0	0	255	-15	1	0	36	-40
6	Weight Room Floor				N/A	N/A	3-5	1	5	249	-59	1	0	40	-30
7	Water Storage Area				N/A	N/A	3-5	1	5	229	-208	0	-3	51	-3
8	Generator Room Floor				N/A	N/A	3-5	2	10	221	-267	0	-3	31	-53
9	Water Storage Floor				N/A	N/A	3-5	3	15	232	-186	0	-3	38	-35
10	Living Quarters Floor				N/A	N/A	3-5	0	0	216	-305	1	0	55	7
11	Living Quarters Floor (Directional Drillers)				N/A	N/A	3-5	2	10	236	-156	0	-3	33	-48
12	Trailer/Living Space Mud Logger				N/A	N/A	3-5	0	0	244	-97	1	0	46	-15
13	Safety House Break Area				N/A	N/A	3-5	3	15	242	-111	0	-3	36	-40
14	Parts Storage Floor				N/A	N/A	4-6	2	10	234	-171	0	-3	34	-45
15	Change Room Floor				N/A	N/A	3-5	1	5	230	-201	1	0	46	-15
16	Generator Room Floor				N/A	N/A	3-5	0	0	198	-438	0	-3	37	-38
17	Mud Pump Room				N/A	N/A	3-5	3	15	348	676	0	-3	30	-55
18	Bottom of Mud Room				N/A	N/A	3-5	1	5	287	223	0	-3	34	-45
19	Vacum house				N/A	N/A	3-5	3	15	255	-15	0	-3	43	-23
20	Closed Loop Doghouse				N/A	N/A	3-5	1	5	249	-59	0	-3	47	-13
21	Recirculation Pump Under Centerfuge				N/A	N/A	3-5	1	5	228	-215	1	0	41	-28
22	Containment in Cuttings Area				N/A	N/A	3-5	0	0	247	-74	0	-3	33	-48
23	Hydraulic House/Tool Room				N/A	N/A	3-5	2	10	212	-334	0	-3	32	-50
24	Doghouse on Rig Deck				N/A	N/A	3-5	1	5	198	-438	0	-3	37	-38
25	Rig Floor				N/A	N/A	3-5	2	10	235	-163	2	3	45	-18

Survey No.:	WP-02-FS-083
Date:	7/24/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	0
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	257	10	521
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	277.04	6.57	41.90
MDC:		NA	NA	NA	14.88	576.36	8.47	203.99

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Rig Floor				N/A	N/A	3-5	0	0	306	364	0	-3	28	-60
27	Drill Pipe				N/A	N/A	3-5	3	15	187	-520	0	-3	34	-45
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WP-03-FS-029
Date:	11/8/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/11/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		143878		PR147628	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		10/24/2014		10/24/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		4		528	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.1		257		4.07		45.0	
MDC:				NA	NA		NA	61.0		536		8.29		219	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	tool pushers trailer				N/A	N/A	3-5	2	-10	295	550	1	2	47	-15
2	non potable water				N/A	N/A	3-5	0	-20	293	535	1	2	43	-26
3	waste water				N/A	N/A	3-5	3	-5	307	639	0	-1	55	6
4	living quarters				N/A	N/A	3-5	0	-20	320	735	1	2	54	3
5	living quarters				N/A	N/A	3-5	1	-15	340	884	0	-1	46	-18
6	mud engineers office				N/A	N/A	4-6	4	0	314	691	0	-1	50	-7
7	living quarters				N/A	N/A	3-5	1	-15	310	661	0	-1	60	19
8	company man's trailer				N/A	N/A	3-5	0	-20	315	698	2	4	56	9
9	equipment storage				N/A	N/A	3-5	1	-15	269	357	0	-1	53	1
10	change room				N/A	N/A	3-5	1	-15	273	386	1	2	54	3
11	hopper house bottom of mud pits				N/A	N/A	4-6	2	-10	284	468	0	-1	61	22
12	equipment room				N/A	N/A	3-5	3	-5	297	565	1	2	48	-13
13	dog house				N/A	N/A	5-7	1	-15	288	498	1	2	55	6
14	rig floor				N/A	N/A	3-5	2	-10	305	624	0	-1	41	-31
15	near shaker table				N/A	N/A	3-5	2	-10	283	461	3	7	63	27
16	top of mud pit				N/A	N/A	3-5	5	5	307	639				
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-03-FS-082
Date:	7/26/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	218	9	371
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	255.15	6.23	35.35
MDC:		NA	NA	NA	14.88	532.59	8.47	173.31

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Drill Consultant's Trailer/Office				N/A	N/A	4-6	0	0	260	312	0	-3	33	-10
2	Pump Parts House Floor				N/A	N/A	3-5	1	5	267	364	0	-3	40	7
3	Potable Water House				N/A	N/A	3-5	4	20	241	171	0	-3	43	15
4	Company Man's Office				N/A	N/A	3-5	4	20	253	260	0	-3	38	2
5	Truck Holiding Pipe				N/A	N/A	3-5	1	5	221	22	0	-3	41	10
6	Change House Lower Level				N/A	N/A	3-5	2	10	212	-45	0	-3	38	2
7	Change House Bench				N/A	N/A	3-5	0	0	236	134	0	-3	43	15
8	Rig Dog House Floor				N/A	N/A	3-5	1	5	224	45	0	-3	44	17
9	Walkway connecting Dog House to Rig Floor				N/A	N/A	3-5	1	5	254	267	1	0	40	7
10	Parts House				N/A	N/A	4-6	0	0	259	305	1	0	30	-18
11	Corner of Shaker Table				N/A	N/A	3-5	1	5	235	126	0	-3	44	17
12	Chemical Mixing Hopper				N/A	N/A	3-5	16	79	258	297	0	-3	37	0
13	Mud Pump Base				N/A	N/A	3-5	5	25	205	-97	0	-3	43	15
14	Well Logger Floor				N/A	N/A	3-5	2	10	255	275	0	-3	49	30
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-04-FS-014
Date:	9/4/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/25/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.09	38.37
MDC:		NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	HSE conference room				N/A	N/A	4-6	0	-20	329	802	3	7	59	38
2	HSE office				N/A	N/A	4-6	1	-15	287	490	0	-2	34	-24
3	water offload containment				N/A	N/A	12-15	2	-10	515	2184	0	-2	53	23
4	water offload containment near filters				N/A	N/A	15-17	3	-5	516	2191	1	1	44	1
5	containment for frac tanks				N/A	N/A	10-12	1	-15	520	2221	0	-2	49	13
6	containment for frac tanks				N/A	N/A	6-8	0	-20	456	1746	1	1	42	-4
7	sand offload area				N/A	N/A	6-8	3	-5	331	817	3	7	52	21
8	frac trailer				N/A	N/A	5-7	4	0	270	364	0	-2	44	1
9	frac control				N/A	N/A	4-6	3	-5	275	401	1	1	47	8
10	frac control				N/A	N/A	5-7	1	-15	287	490	0	-2	52	21
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-04-FS-084
Date:	6/17/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/27/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/PR240349	227415/PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1583	0.1162	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	399	2	456
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	314.89	2.94	39.20
MDC:		NA	NA	NA	14.92	650.11	8.47	191.33

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	HSE Office Floor				N/A	N/A	5-7	1	5	347	-352	0	-1	53	18
2	HSE Office Floor				N/A	N/A	5-7	0	0	346	-359	0	-1	56	26
3	Living Quarter's Floor				N/A	N/A	3-5	1	5	417	122	1	2	39	-16
4	Living Quarter's Floor				N/A	N/A	5-7	2	10	331	-461	0	-1	43	-6
5	Rig Office Floor				N/A	N/A	5-7	1	5	363	-244	0	-1	41	-11
6	Office Floor				N/A	N/A	5-7	0	0	351	-325	0	-1	52	16
7	Living Quarter's Floor				N/A	N/A	5-7	1	5	325	-501	0	-1	40	-14
8	Mud Lab Floor				N/A	N/A	5-7	2	10	403	27	0	-1	54	21
9	Connex Floor				N/A	N/A	5-7	1	5	369	-203	0	-1	53	18
10	Connex Floor				N/A	N/A	3-5	3	15	381	-122	1	2	43	-6
11	Connex Floor				N/A	N/A	3-5	3	15	410	75	1	2	57	28
12	Rig Deck				N/A	N/A	3-5	11	55	245	-1044	1	2	36	-24
13	Rig Deck				N/A	N/A	3-5	14	70	247	-1030	1	2	47	3
14	Control Room Floor				N/A	N/A	3-5	0	0	264	-915	1	2	44	-4
15	Control Room Floor				N/A	N/A	3-5	2	10	245	-1044	0	-1	43	-6
16	Well Logger Lab				N/A	N/A	5-7	2	10	399	0	1	2	45	-1
17	Compressor Floor				N/A	N/A	3-5	0	0	276	-833	2	5	35	-26
18	Electrical Control Room				N/A	N/A	5-7	1	5	301	-664	0	-1	45	-1
19	Floor Near Mud Pump				N/A	N/A	3-5	0	0	413	95	0	-1	39	-16
20	Floor Between Mud Pumps				N/A	N/A	3-5	7	35	308	-617	0	-1	49	8
21	Sink on Mud Processing Floor				N/A	N/A	3-5	3	15	262	-928	0	-1	44	-4
22	Solids Control Floor				N/A	N/A	3-5	3	15	278	-820	0	-1	49	8
23															
24															
25															

Survey No.:	WP-04-FS-085
Date:	6/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/22/2013
Survey Type:	0
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	Horizontal Drilling Phase

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/PR240349	227415/PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1583	0.1162	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	378	6	582
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	306.49	5.09	44.28
MDC:		NA	NA	NA	14.92	633.31	8.47	215.18

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	HSE Trailer Floor				N/A	N/A	3-5	0	0	344	-230	1	1	67	22
2	HSE Trailer Floor				N/A	N/A	3-5	1	5	321	-386	0	-2	45	-33
3	Living Area Floor				N/A	N/A	3-5	2	10	342	-244	0	-2	43	-38
4	Living Area Floor				N/A	N/A	3-5	0	0	349	-197	0	-2	45	-33
5	OSR Office Floor				N/A	N/A	3-5	4	20	355	-156	1	1	45	-33
6	Living Area Floor				N/A	N/A	4-6	1	5	323	-373	1	1	53	-13
7	Mud Lab Floor				N/A	N/A	4-6	1	5	375	-20	2	4	53	-13
8	Mud Lab Bench				N/A	N/A	3-5	1	5	318	-407	1	1	51	-18
9	Storage Connex Floor				N/A	N/A	3-5	4	20	339	-264	0	-2	56	-5
10	Storage Connex Floor				N/A	N/A	5-7	3	15	442	434	0	-2	55	-8
11	Living Area Floor				N/A	N/A	4-6	1	5	302	-515	1	1	50	-20
12	Living Area Floor				N/A	N/A	3-5	1	5	237	-955	0	-2	62	9
13	Living Area Floor				N/A	N/A	4-6	1	5	268	-745	0	-2	46	-30
14	Living Area Floor				N/A	N/A	5-7	1	5	420	285	0	-2	53	-13
15	Hose Panel Deck				N/A	N/A	5-7	5	25	447	468	0	-2	40	-45
16	Rig Floor				N/A	N/A	3-5	1	5	277	-684	2	4	47	-28
17	Rig Floor				N/A	N/A	3-5	4	20	250	-867	0	-2	45	-33
18	Control Room Floor				N/A	N/A	3-5	1	5	293	-576	0	-2	44	-35
19	Mud Treatment Tank				N/A	N/A	3-5	6	30	312	-447	1	1	51	-18
20	Compressor Room Floor				N/A	N/A	5-7	3	15	270	-732	0	-2	58	0
21	Work Bench Compressor Room				N/A	N/A	3-5	2	10	330	-325	1	1	33	-63
22	Electrical Room Floor				N/A	N/A	3-5	2	10	318	-407	0	-2	45	-33
23	Compressor Room Floor				N/A	N/A	3-5	4	20	334	-298	0	-2	42	-40
24	Natural Gas Compressor Room				N/A	N/A	5-7	0	0	334	-298	1	1	37	-53
25	Natural Gas Motor Room				N/A	N/A	3-5	6	30	474	651	0	-2	39	-48

Survey No.:	WP-04-FS-085	**Item Surveyed:**	**Project:**
Date:	6/20/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	Horizontal Drilling Phase
Count Rm. Tech.:	A. Gumbert		
Date Counted:	7/22/2013		
Survey Type:	0		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/PR240349	227415/PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1583	0.1162	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	378	6	582
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	306.49	5.09	44.28
MDC:		NA	NA	NA	14.92	633.31	8.47	215.18

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Boiler Room				N/A	N/A	3-5	1	5	256	-827	0	-2	67	22
27	Locker Room				N/A	N/A	6-8	3	15	218	-1084	0	-2	50	-20
28	Mud Load out area				N/A	N/A	3-5	1	5	256	-827	0	-2	55	-8
29	Solids Control				N/A	N/A	3-5	3	15	284	-637	1	1	51	-18
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WP-04-FS-086
Date:	10/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.09	38.37
MDC:		NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	frac tank 1				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	frac tank 2				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	frac tank 3				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	frac tank 4				N/A	N/A	10-12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	frac tank 5				N/A	N/A	8-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	frac tank 6				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	frac tank 7				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	frac tank 8				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	frac tank 9				N/A	N/A	7-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	frac tank 10				N/A	N/A	8-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	frac tank 11				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	frac tank 12				N/A	N/A	4-6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	frac tank 13				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	frac tank 14				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	frac tank 15				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	frac tank 16				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	frac tank 17				N/A	N/A	8-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	frac tank 18				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	frac tank 19				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	frac tank 20				N/A	N/A	8-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21															
22															
23															
24															
25															

Survey No.:	WP-04-FS-087
Date:	2/27/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
	ACF:	NA	NA	NA	1.27	1.27	1	1
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	23.07	256.90	5.09	38.37
	MDC:	NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	production packs				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-05-FS-077
Date:	10/8/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.74	46.48
MDC:		NA	NA	NA	61.02	536.09	8.29	225.98

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	OSR-safety trailer				N/A	N/A	5-7	0	-20	290	513	2	2	53	-9
2	frac van floor				N/A	N/A	3-5	6	10	297	565	1	0	46	-28
3	rack bumper of pump				N/A	N/A	5-7	7	15	315	698	2	2	63	18
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-05-FS-089
Date:	7/8/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/13/2013
Survey Type:	0
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	Horizontal Drilling Phase

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/PR240349	227415/PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1583	0.1162	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	294	11	489
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	270.30	6.89	40.59
MDC:		NA	NA	NA	14.92	560.93	8.47	197.86

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	guard shack floor				N/A	N/A	3-5	0	0	247	-318	2	3	47	-5
2	lab floor				N/A	N/A	3-5	0	0	254	-271	1	0	47	-5
3	lab bench				N/A	N/A	3-5	0	0	260	-230	0	-3	33	-40
4	HSE office				N/A	N/A	4-6	2	0	260	-230	0	-3	45	-10
5	HSE office				N/A	N/A	4-6	0	0	287	-47	2	3	46	-7
6	living area				N/A	N/A	4-6	2	10	300	41	1	0	45	-10
7	living area				N/A	N/A	4-6	2	10	349	373	0	-3	61	30
8	living area				N/A	N/A	3-5	1	5	310	108	1	0	43	-15
9	OSR office				N/A	N/A	3-5	0	0	280	-95	2	3	37	-30
10	OSR office				N/A	N/A	3-5	2	10	270	-163	1	0	49	0
11	connex storage				N/A	N/A	4-6	0	0	327	224	0	-3	49	0
12	connex storage				N/A	N/A	3-5	12	60	294	0	0	-3	62	33
13	lock out tag out control				N/A	N/A	3-5	1	5	251	-291	1	0	44	-12
14	generator deck				N/A	N/A	3-5	33	164	374	542	0	-3	49	0
15	maintenance area				N/A	N/A	4-6	1	5	231	-427	0	-3	48	-2
16	compressed nitrogen storage				N/A	N/A	3-5	30	149	356	420	0	-3	51	5
17	base of mud pump				N/A	N/A	3-5	3	15	204	-610	1	0	46	-7
18	mud pump manifold				N/A	N/A	3-5	28	139	256	-257	1	0	46	-7
19	well logging trailer				N/A	N/A	3-5	1	5	254	-271	1	0	37	-30
20	mud processing				N/A	N/A	4-6	2	10	277	-115	1	0	47	-5
21	mud processing sink				N/A	N/A	3-5	3	15	224	-474	0	-3	61	30
22	shaker table				N/A	N/A	4-6	3	15	219	-508	1	0	45	-10
23	control room				N/A	N/A	3-5	2	10	230	-434	1	0	45	-10
24	control room table				N/A	N/A	3-5	1	5	243	-346	0	-3	46	-7
25	drilling deck				N/A	N/A	4-6	2	10	241	-359	0	-3	46	-7

Survey No.:	WP-05-FS-089	**Item Surveyed:**	**Project:**
Date:	7/8/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	Horizontal Drilling Phase
Count Rm. Tech.:	A. Gumbert		
Date Counted:	8/13/2013		
Survey Type:	0		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/PR240349	227415/PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1583	0.1162	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	294	11	489
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	270.30	6.89	40.59
MDC:		NA	NA	NA	14.92	560.93	8.47	197.86

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	solids control				N/A	N/A	4-6	2	10	254	-271	0	-3	44	-12
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WP-05-FS-090
Date:	2/26/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E094A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.74	46.48
MDC:		NA	NA	NA	61.02	536.09	8.29	225.98

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	5H production pack				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	production tanks				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	production tanks				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	production tanks				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	production tanks				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-06-FS-026
Date:	11/22/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	7	557
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.38	46.19
MDC:		NA	NA	NA	61.02	536.09	8.29	224.63

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	OSR trailer				N/A	N/A	3-5	2	-10	479	1917	1	1	44	-31
2	meeting side of OSR trailer				N/A	N/A	3-5	2	-10	359	1025	2	4	34	-58
3	frac van floor				N/A	N/A	3-5	6	10	308	646	1	1	67	30
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-06-FS-091
Date:	6/28/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/13/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1583	0.1162	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	332	10	521
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	287.24	6.57	41.90
MDC:		NA	NA	NA	14.92	594.80	8.47	203.99

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	equipment storage floor				N/A	N/A	3-5	3	15	251	-549	0	-3	39	-33
2	living quarters				N/A	N/A	3-5	1	5	276	-379	0	-3	22	-75
3	living quarters				N/A	N/A	3-5	1	5	251	-549	0	-3	50	-5
4	non potable water storage				N/A	N/A	3-5	2	10	287	-305	0	-3	37	-38
5	living quarters				N/A	N/A	3-5	2	10	263	-468	0	-3	35	-43
6	living quarters				N/A	N/A	3-5	0	0	29	-2053	0	-3	39	-33
7	HSE floor				N/A	N/A	3-5	1	5	277	-373	1	0	42	-25
8	breakroom floor				N/A	N/A	3-5	0	0	241	-617	0	-3	46	-15
9	OSR office floor				N/A	N/A	3-5	1	5	292	-271	1	0	50	-5
10	storage floor				N/A	N/A	3-5	2	10	289	-291	1	0	51	-3
11	storage floor				N/A	N/A	3-5	1	5	300	-217	1	0	51	-3
12	drillers office floor				N/A	N/A	3-5	1	5	256	-515	1	0	57	12
13	storage area				N/A	N/A	3-5	2	10	299	-224	0	-3	44	-20
14	air package storage				N/A	N/A	3-5	0	0	281	-346	1	0	38	-35
15	drill control floor				N/A	N/A	3-5	2	10	299	-224	0	-3	46	-15
16	electric cable room shelf				N/A	N/A	3-5	0	0	251	-549	0	-3	44	-20
17	mud pump room				N/A	N/A	3-5	0	0	262	-474	1	0	50	-5
18	electric panel room				N/A	N/A	3-5	2	10	249	-562	1	0	45	-18
19	non potable water feed to solids control				N/A	N/A	3-5	4	20	293	-264	0	-3	43	-23
20	base of solids control				N/A	N/A	3-5	2	10	286	-312	0	-3	53	2
21	base of solids control deck				N/A	N/A	3-5	1	5	281	-346	0	-3	46	-15
22	solids control base of shaker table				N/A	N/A	3-5	3	15	241	-617	0	-3	43	-23
23	solids control shaker table opposite side				N/A	N/A	3-5	4	20	275	-386	0	-3	40	-30
24	rolloff track				N/A	N/A	3-5	5	25	260	-488	0	-3	60	20
25	separator water from solids				N/A	N/A	3-5	2	10	256	-515	1	0	52	0

Survey No.:	WP-06-FS-091
Date:	6/28/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/13/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227415/PR240349		227415 /PR240349		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1583		0.1162		0.3540		0.4008	
BKG:	*Bcpm**:*			NA	NA		NA	0		332		10		521	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	0.00		287.24		6.57		41.90	
MDC:				NA	NA		NA	14.92		594.80		8.47		203.99	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	oil tank room				N/A	N/A	3-5	2	10	224	-732	1	0	50	-5
27	operating control room				N/A	N/A	3-5	1	5	262	-474	0	-3	40	-30
28	operating room				N/A	N/A	3-5	0	0	238	-637	0	-3	44	-20
29	guard shack floor				N/A	N/A	3-5	2	10	309	-156	1	0	53	2
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WP-06-FS-092
Date:	7/25/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/12/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	238	10	454
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	266.60	6.57	39.11
MDC:		NA	NA	NA	14.88	555.48	8.47	190.92

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	guard house floor				N/A	N/A	3-5	1	5	241	22	1	0	50	11
2	supply trailer				N/A	N/A	3-5	0	0	233	-37	0	-3	46	1
3	living quarters floor				N/A	N/A	3-5	0	0	272	253	1	0	49	9
4	potable water trailer				N/A	N/A	3-5	2	10	229	-67	0	-3	37	-21
5	HSE office				N/A	N/A	3-5	0	0	236	-15	0	-3	35	-26
6	breakroom in HSE office				N/A	N/A	3-5	0	0	245	52	0	-3	47	4
7	OSR office				N/A	N/A	3-5	0	0	259	156	0	-3	44	-3
8	tool room storage				N/A	N/A	3-5	0	0	257	141	1	0	50	11
9	potable water				N/A	N/A	3-5	0	0	259	156	0	-3	44	-3
10	tool storage				N/A	N/A	3-5	1	5	262	178	1	0	61	39
11	drillers trailer office				N/A	N/A	3-5	0	0	237	-7	0	-3	44	-3
12	storage room floor				N/A	N/A	3-5	2	10	287	364	0	-3	41	-11
13	tool/bit room/electrical				N/A	N/A	3-5	0	0	242	30	1	0	44	-3
14	pump room				N/A	N/A	3-5	3	15	240	15	0	-3	43	-6
15	electrical control				N/A	N/A	3-5	2	10	213	-186	0	-3	47	4
16	diesal generator room compressor room				N/A	N/A	3-5	0	0	218	-149	1	0	42	-8
17	mud pump floor				N/A	N/A	4-6	2	10	232	-45	0	-3	37	-21
18	under mud mixed				N/A	N/A	3-5	2	10	247	67	0	-3	36	-23
19	mud processing deck				N/A	N/A	3-5	3	15	235	-22	0	-3	54	21
20	mud processing rear shaker tables				N/A	N/A	3-5	9	45	233	-37	0	-3	52	16
21	chemical additive room for mud				N/A	N/A	4-6	1	5	250	89	0	-3	46	1
22	mud logger trailser				N/A	N/A	3-5	3	15	309	527	0	-3	34	-28
23	rig doghouse				N/A	N/A	3-5	1	5	255	126	1	0	47	4
24															
25															

Survey No.:	WP-06-FS-093
Date:	12/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	1/15/2014
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	7	548
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.38	45.81
MDC:		NA	NA	NA	61.02	536.09	8.29	222.87

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	meeting room				N/A	N/A	3-5	1	-15	179	-312	2	4	62	19
2	former HSE office				N/A	N/A	3-5	0	-20	181	-297	0	-2	52	-7
3	OSR trailer				N/A	N/A	3-5	3	-5	197	-178	1	1	57	6
4	OSR office				N/A	N/A	3-5	0	-20	152	-513	1	1	62	19
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-07-FS-094
Date:	8/5/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	0
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:	Vertical Drilling Phase														
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	C690J		227389/PR240337		227389/PR240337		185291		PR194723		
Cal. Due Date:				NA	9/21/2013		6/25/2014		6/25/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.1588		0.106		0.3540		0.4008		
BKG:	*Bcpm**:*			NA	NA	NA	0		263		10		521		
ACF:				NA	NA	NA	1.27		1.27		1		1		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	0.00		280.25		6.57		41.90		
MDC:				NA	NA	NA	14.88		582.79		8.47		203.99		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	OSR trailer floor				N/A	N/A	3-5	1	5	225	-282	0	-3	51	-3
2	HSE trailer floor				N/A	N/A	3-5	0	0	243	-149	0	-3	49	-8
3	HSE trailer change area				N/A	N/A	3-5	2	10	237	-193	0	-3	47	-13
4	bathroom trailer floor				N/A	N/A	3-5	0	0	265	15	0	-3	44	-20
5	potable water trailer				N/A	N/A	3-5	1	5	248	-111	0	-3	46	-15
6	maintenance and storage area				N/A	N/A	3-5	2	10	247	-119	2	3	41	-28
7	mud loggers trailer				N/A	N/A	3-5	3	15	245	-134	1	0	49	-8
8	mud loggers lab bench				N/A	N/A	3-5	4	20	261	-15	0	-3	33	-48
9	solids control maintenance area				N/A	N/A	3-5	0	0	282	141	0	-3	55	7
10	solids control room off seperators				N/A	N/A	3-5	3	15	257	-45	0	-3	59	17
11	deck under cernterfuge				N/A	N/A	3-5	1	5	267	30	1	0	48	-10
12	deck in middle of solids control				N/A	N/A	3-5	0	0	396	988	0	-3	69	42
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-07-FS-094
Date:	8/5/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	0
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	Vertical Drilling Phase
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	263	10	521
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	280.25	6.57	41.90
MDC:		NA	NA	NA	14.88	582.79	8.47	203.99

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															

Survey No.:	WP-08-FS-010
Date:	9/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.57	50.97
MDC:		NA	NA	NA	61.02	536.09	8.47	246.54

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	company mans area				N/A	N/A	3-5	0	-20	298	572	0	-3	44	-83
2	company mans office				N/A	N/A	3-5	4	0	318	721	1	0	46	-78
3	office trailer				N/A	N/A	3-5	1	-15	307	639	0	-3	41	-90
4	office trailer				N/A	N/A	4-6	2	-10	306	631	4	8	58	-48
5	restraints trailer				N/A	N/A	4-6	2	-10	296	557	2	3	53	-60
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-08-FS-095
Date:	8/8/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	0
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	Frac Phase

Project:

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	1	240	10	521
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.54	267.72	6.57	41.90
MDC:		NA	NA	NA	37.95	557.72	8.47	203.99

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	base of sand silo				N/A	N/A	3-5	4	15	277	275	0	-3	58	15
2	company man				N/A	N/A	3-5	5	20	217	-171	0	-3	51	-3
3	company man office				N/A	N/A	3-5	6	25	231	-67	0	-3	47	-13
4	frac trailer				N/A	N/A	3-5	4	15	230	-74	0	-3	48	-10
5	chemical mix trailer				N/A	N/A	3-5	8	35	261	156	0	-3	47	-13
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-08-FS-096
Date:	9/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E094A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.57	50.97
MDC:		NA	NA	NA	61.02	536.09	8.47	246.54

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	well heads 1				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	well heads 2				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	well heads 3				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	well heads 4				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	well heads 5				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	production pack 1				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	production pack 2				N/A	N/A	6-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	production pack 3				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	production pack 4				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	production pack 5				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	production tanks 1				N/A	N/A	10-12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	production tanks 2				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	production tanks 3				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	production tanks 4				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-08-FS-096
Date:	9/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E094A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.57	50.97
MDC:		NA	NA	NA	61.02	536.09	8.47	246.54

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															

Survey No.:	WP-09-FS-097
Date:	8/8/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	0
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	Frac Phase

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389/PR240337	227389/PR240337	185291	PR194723
Cal. Due Date:		NA	9/21/2013		6/25/2014	6/25/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	0	251	10	521
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	273.78	6.57	41.90
MDC:		NA	NA	NA	14.88	569.85	8.47	203.99

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	frac van control room				N/A	N/A	3-5	2	10	257	45	0	-3	50	-5
2	frac van lab bench				N/A	N/A	3-5	2	10	225	-193	1	0	54	5
3	chemical additive controls				N/A	N/A	3-5	4	20	243	-59	0	-3	55	7
4	controls base of sand silo				N/A	N/A	3-5	3	15	210	-305	0	-3	42	-25
5	pump truck under mixture effluent pipe				N/A	N/A	3-5	6	30	275	178	0	-3	59	17
6	company man break area				N/A	N/A	3-5	2	10	225	-193	0	-3	28	-60
7	company man office				N/A	N/A	3-5	2	10	248	-22	1	0	4	-120
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-09-FS-098	**Item Surveyed:**	**Project:**
Date:	9/13/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	12/10/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
	ACF:	NA	NA	NA	1.27	1.27	1	1
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	23.07	256.90	6.74	46.48
	MDC:	NA	NA	NA	61.02	536.09	8.29	225.98

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	front of sand seperator				N/A	N/A	5-7	8	20	240	141	0	-3	51	-14
2	company mans trailer				N/A	N/A	5-7	3	-5	215	-45	0	-3	56	-1
3	office meeting area				N/A	N/A	4-6	2	-10	213	-59	2	2	46	-28
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-09-FS-099	**Item Surveyed:**	**Project:**
Date:	12/17/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	12/10/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E0491A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
	ACF:	NA	NA	NA	1.27	1.27	1	1
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	23.07	256.90	6.74	46.48
	MDC:	NA	NA	NA	61.02	536.09	8.29	225.98

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	production pack 1				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	production pack 2				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	production pack 3				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	production pack 4				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	production pack 5				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	production pack 6				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	production tank 1				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	production tank 2				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	production tank 3				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	production tank 4				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	frac tank				N/A	N/A	12-15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-10-FS-003
Date:	8/26/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/25/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:

Contaminant/Limits:

Comments:

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.09	38.37
MDC:		NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	company man trailer				N/A	N/A	5-7	1	-15	298	572	1	1	52	21
2	storage connex				N/A	N/A	5-8	5	5	356	1003	1	1	56	31
3	storage connex				N/A	N/A	5-8	4	0	342	899	0	-2	50	16
4	drill loggers office				N/A	N/A	5-7	1	-15	276	409	1	1	41	-7
5	lab floor				N/A	N/A	5-7	5	5	269	357	1	1	48	11
6	mud engineers floor				N/A	N/A	6-8	2	-10	365	1070	0	-2	44	1
7	haliburton office				N/A	N/A	5-7	2	-10	343	906	1	1	46	6
8	dog house floor				N/A	N/A	5-7	1	-15	261	297	2	4	51	18
9	dog house floor				N/A	N/A	4-6	4	0	250	215	1	1	43	-2
10	drillers dog house				N/A	N/A	4-6	3	-5	211	-74	0	-2	32	-29
11	storage locker room				N/A	N/A	5-7	2	-10	272	379	0	-2	50	16
12	locker side				N/A	N/A	6-8	1	-15	342	899	N/A	N/A	N/A	N/A
13	maintanence side				N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	4	48	11
14	electrical room floor				N/A	N/A	5-7	2	-10	318	721	1	1	48	11
15	mud processing tool room				N/A	N/A	4-6	15	55	311	669	1	1	55	28
16	mud processing mixing room				N/A	N/A	5-7	3	-5	263	312	0	-2	44	1
17	mud processing deck				N/A	N/A	4-6	156	754	244	171	2	4	59	38
18	center of mud processing				N/A	N/A	5-7	34	149	371	1114	0	-2	58	36
19	edge of shaker				N/A	N/A	4-6	3	-5	250	215	0	-2	52	21
20	containment floor				N/A	N/A	8-10	56	258	429	1545	0	-2	35	-22
21	body of excavator				N/A	N/A	5-7	6	10	274	394	0	-2	44	1
22	welding truck				N/A	N/A	6-8	54	248	434	1582	2	4	45	3
23															
24															
25															

Survey No.:	WP-10-FS-004
Date:	8/30/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/25/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.09	38.37
MDC:		NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Company man				N/A	N/A	5-7	1	-15	298	572	3	7	58	36
2	storage conex				N/A	N/A	5-8	5	5	356	1003	2	4	53	23
3	storage conex				N/A	N/A	5-8	4	0	342	899	0	-2	46	6
4	drill loggers office				N/A	N/A	5-7	1	-15	276	409	1	1	49	13
5	lab floor				N/A	N/A	5-7	5	5	269	357	1	1	65	53
6	mud engineers floor				N/A	N/A	6-8	2	-10	365	1070	3	7	34	-24
7	haliburton office				N/A	N/A	5-7	2	-10	343	906	0	-2	46	6
8	dog house floor				N/A	N/A	5-7	1	-15	261	297	1	1	49	13
9	dog house floor				N/A	N/A	4-6	4	0	250	215	1	1	42	-4
10	drillers dog house				N/A	N/A	4-6	3	-5	211	-74	0	-2	46	6
11	storage locker room				N/A	N/A	5-7	2	-10	272	379	0	-2	45	3
12	locker side				N/A	N/A	6-8	1	-15	342	899	0	-2	48	11
13	electrical room floor				N/A	N/A	5-7	2	-10	318	721	1	1	44	1
14	mud processing tool room				N/A	N/A	6-8	15	55	311	669	2	4	40	-9
15	mud processing mixing room				N/A	N/A	5-7	3	-5	263	312	1	1	48	11
16	mud processing deck				N/A	N/A	4-6	15	55	244	171	1	1	43	-2
17	center of mud processing				N/A	N/A	5-7	34	149	371	1114	3	7	48	11
18	edge of shaker				N/A	N/A	4-6	3	-5	350	958	2	4	41	-7
19	containment floor				N/A	N/A	8-10	56	258	429	1545	0	-2	53	23
20	body of excavator				N/A	N/A	5-7	6	10	274	394	1	1	52	21
21	welding truck				N/A	N/A	6-8	54	248	434	1582	0	-2	53	23
22															
23															
24															
25															

Survey No.:	WP-10-FS-009
Date:	11/11/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		143878		PR147628	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		10/24/2014		10/24/2014	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		11		564	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		6.74		46.48	
MDC:				NA	NA		NA	61.02		536.09		8.29		225.98	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	containment inside of brine storage				N/A	N/A	3-5	2	-10	452	1716	2	2	62	15
2	containment inside of fresh water storage				N/A	N/A	3-5	0	-20	476	1894	1	0	48	-22
3	frac van floor				N/A	N/A	3-5	4	0	429	1545	2	2	79	60
4	frac van floor				N/A	N/A	8-10	1	-15	408	1389	3	5	67	28
5	pump house				N/A	N/A	3-5	1	-15	446	1671	1	0	52	-12
6	brine water containment				N/A	N/A	4-6	1	-15	439	1619	4	8	80	63
7	brine water containment				N/A	N/A	3-5	2	-10	436	1597	2	2	63	18
8	containment floor brine water				N/A	N/A	4-6	6	10	435	1590	3	5	62	15
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-10-FS-100
Date:	3/18/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.74	46.48
MDC:		NA	NA	NA	61.02	536.09	8.29	225.98

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	frac tank 1				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	frac tank 2				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	frac tank 3				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	frac tank 4				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	frac tank 5				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	frac tank 6				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-10-FS-101
Date:	4/24/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	E049A			227389 /PR240337		227415 /PR240349		143878		PR147628	
Cal. Due Date:				NA	9/17/2014			4/18/2014		4/18/2014		10/24/2014		10/24/2014	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		11		564	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		6.74		46.48	
MDC:				NA	NA		NA	61.02		536.09		8.29		225.98	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	frac tank 1				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	frac tank 2				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	frac tank 3				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	frac tank 4				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	frac tank 5				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	frac tank 6				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-11-FS-023
Date:	11/14/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/11/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		143878		PR147628	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		10/24/2014		10/24/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		4		528	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		4.07		44.97	
MDC:				NA	NA		NA	61.02		536.09		8.29		218.91	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	dog house floor				N/A	N/A	3-5	3	-5	306	631	0	-1	45	-21
2	rig floor				N/A	N/A	3-5	3	-5	270	364	1	2	40	-34
3	festool house floor				N/A	N/A	3-5	2	-10	377	1159	2	4	45	-21
4	HPU unit				N/A	N/A	3-5	2	-10	406	1374	2	4	58	14
5	mud/pump room				N/A	N/A	3-5	1	-15	315	698	1	2	50	-7
6	water house				N/A	N/A	3-5	2	-10	320	735	0	-1	46	-18
7	hopper house				N/A	N/A	3-5	1	-15	383	1203	0	-1	51	-5
8	mud tank floor				N/A	N/A	3-5	2	-10	346	929	0	-1	63	27
9	floor near shaker tables				N/A	N/A	3-5	2	-10	310	661	2	4	44	-23
10	solids control				N/A	N/A	3-5	2	-10	313	683	2	4	56	9
11	mud loggers				N/A	N/A	3-5	1	-15	411	1411	3	7	60	19
12	living quarters				N/A	N/A	3-5	2	-10	385	1218	1	2	50	-7
13	bit room				N/A	N/A	3-5	0	-20	384	1211	3	7	56	9
14	HSE office				N/A	N/A	3-5	2	-10	356	1003	0	-1	39	-37
15	meeting room				N/A	N/A	3-5	2	-10	358	1018	1	2	81	75
16	tool pusher office				N/A	N/A	3-5	1	-15	356	1003	1	2	41	-31
17	OSR office				N/A	N/A	3-5	1	-15	371	1114	1	2	50	-7
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-11-FS-037
Date:	8/27/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:					**Project:**
Contaminant/Limits:					
Comments:					

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.74	46.48
MDC:		NA	NA	NA	61.02	536.09	8.29	225.98

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	HSE office				N/A	N/A	5-7	1	-15	302	602	3	5	59	7
2	break room floor				N/A	N/A	5-7	2	-10	296	557	2	2	47	-25
3	OSR office				N/A	N/A	5-7	3	-5	253	238	1	0	57	2
4	non potable water				N/A	N/A	4-6	1	-15	306	631	2	2	62	15
5	drillers office				N/A	N/A	3-5	2	-10	295	550	4	8	54	-6
6	storage conex				N/A	N/A	5-7	4	0	264	319	0	-3	85	76
7	storage conex				N/A	N/A	3-5	2	-10	358	1018	0	-3	71	39
8	storage conex				N/A	N/A	4-6	5	5	348	943	0	-3	61	12
9	storage conex				N/A	N/A	5-7	2	-10	306	631	3	5	62	15
10	supply cones				N/A	N/A	5-7	3	-5	298	572	3	5	56	-1
11	living quarters				N/A	N/A	4-6	1	-15	293	535	1	0	55	-4
12	living quarters				N/A	N/A	5-7	2	-10	293	535	3	5	56	-1
13	living quarters				N/A	N/A	4-6	1	-15	242	156	0	-3	53	-9
14	non potable water				N/A	N/A	5-7	2	-10	282	453	3	5	63	18
15	security trailer				N/A	N/A	5-7	5	5	338	869	1	0	41	-41
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-11-FS-102
Date:	1/15/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/11/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	4	528
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	4.07	44.97
MDC:		NA	NA	NA	61.02	536.09	8.29	218.91

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	dog house floor				N/A	N/A	3-5	3	-5	306	631	0	-1	45	-21
2	rig floor				N/A	N/A	3-5	3	-5	270	364	1	2	40	-34
3	festool house floor				N/A	N/A	3-5	2	-10	377	1159	2	4	45	-21
4	HPU unit				N/A	N/A	3-5	2	-10	406	1374	2	4	58	14
5	mud/pump room				N/A	N/A	3-5	1	-15	315	698	1	2	50	-7
6	water house				N/A	N/A	3-5	2	-10	320	735	0	-1	46	-18
7	hopper house				N/A	N/A	3-5	1	-15	383	1203	0	-1	51	-5
8	mud tank floor				N/A	N/A	3-5	2	-10	346	929	0	-1	63	27
9	floor near shaker tables				N/A	N/A	3-5	2	-10	310	661	2	4	44	-23
10	solids control				N/A	N/A	3-5	2	-10	313	683	2	4	56	9
11	mud loggers				N/A	N/A	3-5	1	-15	411	1411	3	7	60	19
12	living quarters				N/A	N/A	3-5	2	-10	385	1218	1	2	50	-7
13	bit room				N/A	N/A	3-5	0	-20	384	1211	3	7	56	9
14	HSE office				N/A	N/A	3-5	2	-10	356	1003	0	-1	39	-37
15	meeting room				N/A	N/A	3-5	2	-10	358	1018	1	2	81	75
16	tool pusher office				N/A	N/A	3-5	1	-15	356	1003	1	2	41	-31
17	OSR office				N/A	N/A	3-5	1	-15	371	1114	1	2	50	-7
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-11-FS-103
Date:	2/18/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	4	528
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	4.07	44.97
MDC:		NA	NA	NA	61.02	536.09	8.29	218.91

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	frac tank 1				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	frac tank 2				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	frac tank 3				N/A	N/A	7-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	frac tank 4				N/A	N/A	7-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	frac tank 5				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	frac tank 6				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	frac tank 7				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	frac tank 8				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	frac tank 9				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	frac tank 10				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-12-FS-017
Date:	9/11/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/25/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3540		0.4008	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		6		437	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		5.09		38.37	
MDC:				NA	NA		NA	61.02		536.09		8.47		187.46	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	HSE trailer floor				N/A	N/A	6-8	1	-15	273	386	0	-2	38	-14
2	tool room floor				N/A	N/A	5-7	1	-15	287	490	1	1	52	21
3	OSR trailer floor				N/A	N/A	5-7	3	-5	277	416	2	4	55	28
4	drillers trailer				N/A	N/A	4-6	0	-20	265	327	0	-2	36	-19
5	living quarters				N/A	N/A	5-7	3	-5	275	401	2	4	46	6
6	lab floor				N/A	N/A	5-7	0	-20	280	438	1	1	52	21
7	lab bench				N/A	N/A	5-7	0	-20	289	505	0	-2	49	13
8	shower-laundry				N/A	N/A	5-7	2	-10	241	149	2	4	50	16
9	mudd loggers				N/A	N/A	5-7	0	-20	269	357	2	4	42	-4
10	solids control				N/A	N/A	5-7	2	-10	259	282	1	1	51	18
11	cuttings process area				N/A	N/A	6-8	1	-15	250	215	2	4	50	16
12	under centerfuge				N/A	N/A	4-6	3	-5	284	468	1	1	46	6
13	drill tubes				N/A	N/A	4-6	5	5	295	550	1	1	58	36
14	change room				N/A	N/A	5-7	1	-15	278	423	1	1	69	63
15	generator room				N/A	N/A	8-10	5	5	217	-30	2	4	48	11
16	generator room				N/A	N/A	8-10	4	0	234	97	1	1	48	11
17	electrical room				N/A	N/A	5-7	0	-20	256	260	2	4	50	16
18	shop				N/A	N/A	5-7	1	-15	242	156	1	1	44	1
19	mud processing				N/A	N/A	5-7	3	-5	237	119	1	1	41	-7
20	floor near shaker table				N/A	N/A	6-8	6	10	340	884	1	1	53	23
21	dog house				N/A	N/A	6-8	4	0	221	0	0	-2	32	-29
22	dog house				N/A	N/A	6-8	2	-10	245	178	2	4	46	6
23	rig floor				N/A	N/A	5-7	1	-15	217	-30	0	-2	49	13
24															
25															

Survey No.:	WP-12-FS-017
Date:	9/11/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/25/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.09	38.37
MDC:		NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															

Survey No.:	WP-12-FS-018
Date:	10/31/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		143878		PR147628	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		10/24/2014		10/24/2014	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		11		564	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		6.74		46.48	
MDC:				NA	NA		NA	61.02		536.09		8.29		225.98	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	frac control floor				N/A	N/A	4-6	2	-10	349	951	2	2	53	-9
2	frac control floor				N/A	N/A	4-6	0	-20	348	943	1	0	54	-6
3	safety trailer				N/A	N/A	3-5	2	-10	334	839	1	0	57	2
4	OSR floor				N/A	N/A	3-5	5	5	343	906	1	0	46	-28
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-12-FS-019
Date:	9/5/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/25/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	437
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	5.09	38.37
MDC:		NA	NA	NA	61.02	536.09	8.47	187.46

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	HSE office				N/A	N/A	3-5	2	-10	243	163	0	-2	48	11
2	storage trailer				N/A	N/A	4-6	4	0	287	490	0	-2	48	11
3	OSR trailer				N/A	N/A	3-5	0	-20	231	74	3	7	43	-2
4	rig managers office				N/A	N/A	4-6	1	-15	248	201	0	-2	51	18
5	living quarters				N/A	N/A	3-6	0	-20	260	290	1	1	45	3
6	lab floor				N/A	N/A	4-6	2	-10	256	260	0	-2	48	11
7	mud loggers				N/A	N/A	5-7	2	-10	321	743	2	4	45	3
8	locker room				N/A	N/A	4-6	2	-10	374	1137	1	1	38	-14
9	generator floor				N/A	N/A	3-5	3	-5	356	1003	2	4	43	-2
10	maintanence tool room work bench				N/A	N/A	3-5	2	-10	197	-178	1	1	40	-9
11	parts room				N/A	N/A	3-5	3	-5	291	520	1	1	45	3
12	mud processing				N/A	N/A	3-5	1	-15	231	74	0	-2	53	23
13	mud processing				N/A	N/A	3-5	2	-10	342	899	3	7	44	1
14	pump house under mud processing				N/A	N/A	5-7	0	-20	430	1553	0	-2	44	1
15	deck below centerfuge				N/A	N/A	5-7	6	10	245	178	1	1	44	1
16	storage connex				N/A	N/A	3-5	2	-10	279	431	0	-2	45	3
17	rig dog house				N/A	N/A	3-5	0	-20	232	82	1	1	42	-4
18	rig dog house				N/A	N/A	3-5	0	-20	205	-119	2	4	61	43
19	back of rig floor				N/A	N/A	3-5	0	-20	222	7	0	-2	64	51
20															
21															
22															
23															
24															
25															

Survey No.:	WP-12-FS-105
Date:	12/18/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.74	46.48
MDC:		NA	NA	NA	61.02	536.09	8.29	225.98

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	gas buster 1				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	gas buster 2				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	gas buster 3				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	frac tank 1				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	frac tank 2				N/A	N/A	8-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	frac tank 3				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	frac tank 4				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	frac tank 5				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	frac tank 6				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	frac tank 7				N/A	N/A	4-6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	frac tank 8				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	frac tank 9				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	frac tank 10				N/A	N/A	8-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	frac tank 11				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	frac tank 12				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	frac tank 13				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	frac tank 14				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	frac tank 15				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19	frac tank 16				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	frac tank 17				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
21	frac tank 18				N/A	N/A	5-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
22	frac tank 19				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
23	frac tank 20				N/A	N/A	6-8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
24															
25															

Survey No.:	WP-12-FS-106
Date:	2/27/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	E049A			227389 /PR240337		227415 /PR240349		143878		PR147628	
Cal. Due Date:				NA	9/17/2014			4/18/2014		4/18/2014		10/24/2014		10/24/2014	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		11		564	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		6.74		46.48	
MDC:				NA	NA		NA	61.02		536.09		8.29		225.98	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	production pack 1				N/A	N/A	4-6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	production pack 2				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	production pack 3				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-13-FS-041
Date:	10/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3540	0.4008
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	6.57	50.97
MDC:		NA	NA	NA	61.02	536.09	8.47	246.54

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	safety house floor				N/A	N/A	10-12	0	-20	346	929	1	0	68	-23
2	mud logger lab				N/A	N/A	6-8	0	-20	379	1174	0	-3	73	-10
3	driller office				N/A	N/A	5-7	0	-20	382	1196	0	-3	72	-13
4	mud logger trailer				N/A	N/A	10-12	3	-5	360	1033	0	-3	70	-18
5	tool pusher shed/office				N/A	N/A	8-10	0	-20	368	1092	0	-3	81	10
6	storage trailer				N/A	N/A	5-7	2	-10	377	1159	0	-3	86	22
7	company man				N/A	N/A	10-12	3	-5	361	1040	0	-3	64	-33
8	bithouse				N/A	N/A	5-7	4	0	370	1107	0	-3	78	2
9	tool shed				N/A	N/A	10-12	3	-5	413	1426	1	0	69	-20
10	dog house				N/A	N/A	5-7	3	-5	271	371	0	-3	86	22
11	parts house				N/A	N/A	5-7	1	-15	389	1248	0	-3	74	-8
12	change room				N/A	N/A	3-5	1	-15	299	579	0	-3	66	-28
13	generator room				N/A	N/A	6-8	2	-10	381	1189	0	-3	82	12
14	shaker table 1				N/A	N/A	8-10	2	-10	283	461	1	0	67	-25
15	shaker table 2				N/A	N/A	6-8	3	-5	328	795	0	-3	71	-15
16	top of mud house				N/A	N/A	3-5	3	-5	410	1404	0	-3	86	22
17	mud house floor				N/A	N/A	4-6	3	-5	361	1040	1	0	78	2
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-13-FS-042
Date:	10/21/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3540		0.4008	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		10		771	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		6.57		50.97	
MDC:				NA	NA		NA	61.02		536.09		8.47		246.54	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	mud engineers office				N/A	N/A	10-12	2	-10	407	1382	0	-3	67	-25
2	mud logger lab				N/A	N/A	5-7	3	-5	311	669	0	-3	62	-38
3	safety house floor				N/A	N/A	5-7	2	-10	314	691	0	-3	58	-48
4	directional drillier office				N/A	N/A	10-12	1	-15	350	958	0	-3	61	-40
5	tool pusher shed/office				N/A	N/A	5-7	1	-15	355	995	0	-3	69	-20
6	storage trailer				N/A	N/A	5-7	0	-20	335	847	0	-3	55	-55
7	tool trailer				N/A	N/A	5-7	0	-20	327	787	0	-3	57	-50
8	company man				N/A	N/A	5-7	1	-15	326	780	0	-3	72	-13
9	bit room				N/A	N/A	6-8	4	0	348	943	0	-3	59	-45
10	tool shed				N/A	N/A	8-10	1	-15	375	1144	0	-3	59	-45
11	dog house				N/A	N/A	5-7	3	-5	269	357	0	-3	57	-50
12	parts house				N/A	N/A	5-7	2	-10	355	995	1	0	73	-10
13	change room				N/A	N/A	5-7	0	-20	310	661	0	-3	75	-5
14	generator roomsteps				N/A	N/A	5-7	4	0	343	906	0	-3	68	-23
15	shaker table				N/A	N/A	5-7	1	-15	258	275	1	0	73	-10
16	grate next to shaker				N/A	N/A	4-6	3	-5	278	423	0	-3	74	-8
17	top of mud house				N/A	N/A	5-7	5	5	336	854	0	-3	58	-48
18	mud house floor				N/A	N/A	3-5	3	-5	318	721	0	-3	56	-53
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-14-FS-035
Date:	2/7/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/15/2014
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	570
	ACF:	NA	NA	NA	1.27	1.27	1	1
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	23.07	256.90	4.98	46.72
	MDC:	NA	NA	NA	61.02	536.09	8.29	227.14

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	OSR office				N/A	N/A	5-7	1	-15	157	-475	0	-2	50	-19
2	dog house				N/A	N/A	3-5	2	-10	127	-698	1	1	60	8
3	rig floor				N/A	N/A	3-5	5	5	212	-67	1	1	66	24
4	intermediate deck				N/A	N/A	3-5	1	-15	318	721	1	1	58	3
5	shaker table				N/A	N/A	3-5	3	-5	212	-67	1	1	54	-8
6	mud sink				N/A	N/A	3-5	5	5	197	-178	1	1	42	-40
7	hopper under mud deck				N/A	N/A	3-5	2	-10	146	-557	0	-2	58	3
8	pump room				N/A	N/A	3-5	6	10	272	379	1	1	58	3
9	change area				N/A	N/A	3-5	1	-15	206	-111	2	4	62	13
10	tool room				N/A	N/A	3-5	3	-5	309	654	1	1	57	0
11	directional drillers				N/A	N/A	3-5	1	-15	145	-565	0	-2	65	21
12	drill super office				N/A	N/A	3-5	1	-15	171	-371	1	1	62	13
13	solids control trailer				N/A	N/A	3-5	0	-20	220	-7	1	1	59	5
14	directional drillers				N/A	N/A	3-5	0	-20	143	-579	0	-2	53	-11
15	mud engineer house				N/A	N/A	5-7	2	-10	199	-163	1	1	64	19
16	mud engineer quarters				N/A	N/A	3-5	1	-15	188	-245	1	1	59	5
17	safety house				N/A	N/A	3-5	0	-20	135	-639	5	12	54	-8
18	storage 1				N/A	N/A	3-5	1	-15	176	-334	2	4	51	-16
19	storage 2				N/A	N/A	4-6	2	-10	196	-186	5	12	64	19
20	storage 3				N/A	N/A	3-5	1	-15	185	-267	1	1	63	16
21															
22															
23															
24															
25															

Survey No.:	WP-14-FS-036
Date:	1/31/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/15/2014
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		143878		PR147628	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		10/24/2014		10/24/2014	
x, y int.:	*Efficiency:*			NA	NA		NA	0.1588		0.106		0.3619		0.3759	
BKG:	*Bcpm**:*			NA	NA		NA	4		221		6		570	
ACF:				NA	NA		NA	1.27		1.27		1		1	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	23.07		256.90		4.98		46.72	
MDC:				NA	NA		NA	61.02		536.09		8.29		227.14	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	dog house floor				N/A	N/A	5-7	0	-20	171	-371	3	7	50	-19
2	rig floor				N/A	N/A	3-5	1	-15	151	-520	1	1	62	13
3	deck below rig floor				N/A	N/A	3-5	6	10	286	483	0	-2	47	-27
4	shaker table				N/A	N/A	4-6	3	-5	183	-282	2	4	46	-29
5	mud deck prep sink				N/A	N/A	3-5	3	-5	160	-453	3	7	61	11
6	hopper house load table				N/A	N/A	5-7	4	0	155	-490	2	4	49	-21
7	gas storage room next to generator combo house				N/A	N/A	8-10	5	5	183	-282	1	1	58	3
8	change room				N/A	N/A	3-5	2	-10	210	-82	3	7	61	11
9	pump house two				N/A	N/A	3-5	2	-10	249	208	0	-2	57	0
10	pump house one				N/A	N/A	3-5	3	-5	279	431	2	4	57	0
11	generator rooms				N/A	N/A	4-6	3	-5	238	126	1	1	42	-40
12	boiler room				N/A	N/A	3-5	0	-20	173	-357	1	1	52	-13
13	AC house				N/A	N/A	3-5	1	-15	152	-513	2	4	61	11
14	directional trailer				N/A	N/A	3-5	0	-20	151	-520	3	7	52	-13
15	drill house floor				N/A	N/A	4-6	2	-10	155	-490	0	-2	57	0
16	OSR trailer				N/A	N/A	3-5	1	-15	147	-550	1	1	57	0
17	solids control living				N/A	N/A	3-5	2	-10	152	-513	1	1	68	29
18	directional driller quarters				N/A	N/A	3-5	3	-5	149	-535	1	1	72	40
19	mud house floor				N/A	N/A	3-5	0	-20	144	-572	1	1	49	-21
20	safety trailer				N/A	N/A	3-5	1	-15	155	-490	2	4	66	24
21	storage floor 1				N/A	N/A	3-5	5	5	169	-386	2	4	46	-29
22	storage floor 2				N/A	N/A	3-5	4	0	184	-275	2	4	43	-37
23	storage floor 3				N/A	N/A	3-5	1	-15	174	-349	6	15	46	-29
24															
25															

Survey No.:	WP-14-FS-107
Date:	4/23/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/1/2014
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	9007		227433 /PR295917	227433 /PR295917	143878	PR147628
Cal. Due Date:		NA	5/21/2014		4/18/2015	4/18/2015	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.2036	0.343	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	6	152	6	570
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	22.04	65.84	4.98	46.72
MDC:		NA	NA	NA	55.68	138.57	8.29	227.14

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	company man trailer				N/A	N/A	3-5	0	-23	160	18	1	1	54	-8
2	guard shack floor				N/A	N/A	3-5	0	-23	165	30	1	1	63	16
3	frack van				N/A	N/A	3-5	0	-23	152	0	2	4	66	24
4	frack van				N/A	N/A	3-5	3	-12	145	-16	0	-2	45	-32
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WP-15-FS-028
Date:	2/6/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/15/2014
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.3619	0.3759
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	570
ACF:		NA	NA	NA	1.27	1.27	1	1
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.07	256.90	4.98	46.72
MDC:		NA	NA	NA	61.02	536.09	8.29	227.14

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	company man trailer				N/A	N/A	3-5	1	-15	182	-290	0	-2	61	11
2	non potable water trailer				N/A	N/A	3-5	2	-10	175	-342	0	-2	66	24
3	tool pusher's trailer				N/A	N/A	3-5	1	-15	168	-394	0	-2	56	-3
4	tool trailer				N/A	N/A	3-5	2	-10	205	-119	1	1	50	-19
5	dog house				N/A	N/A	3-5	1	-15	151	-520	1	1	67	27
6	rig floor				N/A	N/A	4-6	0	-20	177	-327	0	-2	58	3
7	shack/mud				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	1	59	5
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Wastewater Treatment Plants

Survey No.:	WT-01-FS-021
Date:	11/21/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.74	46.5
MDC:		NA	NA	NA	61.0	536	18.3	77

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	floor near maintanence entrance				N/A	N/A	8-10	25	104	551	2451	1	0	58	4
2	maintanence floor				N/A	N/A	5-7	27	114	427	1530	2	2	41	-41
3	maintanence bench				N/A	N/A	3-5	23	94	346	929	1	0	53	-9
4	floor outside office				N/A	N/A	10-12	45	203	603	2838	1	0	52	-12
5	floor under press next to sludge box				N/A	N/A	95-100	36	159	2485	16818	1	0	50	-17
6	floor under sludge thickener				N/A	N/A	40-445	48	218	1652	10630	1	0	51	-14
7	floor next to lime slurry				N/A	N/A	10-12	22	89	891	4977	2	2	48	-22
8	floor near filter pump				N/A	N/A	10-12	21	84	1171	7057	1	0	42	-38
9	under sludge decant tank				N/A	N/A	20-25	64	298	2956	20316	0	-3	42	-38
10	floor near secondary lumella				N/A	N/A	45-50	315	1542	7000	50357	1	0	63	18
11	floor near primary lumella				N/A	N/A	25-30	39	174	1591	10177	0	-3	54	-6
12	floor near neutralization tank				N/A	N/A	20-35	60	278	1175	7087	0	-3	52	-12
13	under barium reaction tank				N/A	N/A	25-30	48	218	1263	7740	3	5	46	-28
14	next to neutralization				N/A	N/A	90-100	61	283	2943	20220	3	5	44	-33
15	back corner behind primary lumella				N/A	N/A	10-15	29	124	604	2845	0	-3	52	-12
16	second story storage				N/A	N/A	10-15	88	417	953	5438	3	5	45	-30
17	second story storage				N/A	N/A	4-6	21	84	572	2607	7	16	45	-30
18	office floor				N/A	N/A	8-10	3	-5	379	1174	0	-3	44	-33
19	water checkin area				N/A	N/A	10-12	5	5	584	2696	2	2	46	-28
20	lab floor				N/A	N/A	15-20	10	30	767	4056	0	-3	42	-38
21	lab bench				N/A	N/A	10-15	8	20	621	2971	0	-3	46	-28
22	top of press				N/A	N/A	40-50	8	20	1325	8201	3	5	42	-38
23															
24															
25															

Survey No.:	WT-01-FS-108
Date:	4/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* µRem/hr	*Gamma*	*Corr µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	259	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	272	4.16	75.0
MDC:		NA	NA	NA	14.6	567	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Concrete Floor				N/A	N/A	15-20	22	107	771	3726	0	-1	56	44
2	Concrete Floor				N/A	N/A	10-20	29	141	655	2882	0	-1	41	-26
3	Concrete Floor				N/A	N/A	40-50	23	112	1733	10727	3	7	41	-26
4	Concrete Floor				N/A	N/A	30-40	39	190	1411	8383	0	-1	51	21
5	Concrete Floor				N/A	N/A	15-20	60	292	1129	6331	1	2	42	-22
6	Concrete Floor				N/A	N/A	4-6	60	292	468	1521	0	-1	40	-31
7	Wood Floor				N/A	N/A	3-5	32	156	296	269	1	2	51	21
8	Wood Floor				N/A	N/A	4-6	47	228	317	422	2	5	58	54
9	Vinyl Floor				N/A	N/A	4-6	8	39	229	-218	0	-1	34	-59
10	Floor under of B tank				N/A	N/A	15-20	45	219	635	2736	0	-1	68	101
11	Office Floor				N/A	N/A	7-10	35	170	383	902	1	2	47	2
12	Lab Counter				N/A	N/A	10-15	2	10	359	728	0	-1	49	11
13	Bathroom Floor				N/A	N/A	8-12	5	24	494	1710	1	2	35	-55
14	Under Polymer Treatment Tank				N/A	N/A	20-30	98	476	1130	6339	0	-1	43	-17
15	Base of Neutralizer Tank				N/A	N/A	160-180	15	73	4747	32660	0	-1	51	21
16	Under Primary Clarifier				N/A	N/A	10-15	41	199	968	5160	0	-1	48	7
17	Floor Near Tank				N/A	N/A	10-15	83	403	2409	15646	6	16	50	16
18	Concrete Floor				N/A	N/A	15-20	29	141	793	3886	1	2	41	-26
19	Concrete Floor				N/A	N/A	15-20	35	170	2081	13259	0	-1	60	63
20	Concrete Floor				N/A	N/A	8-10	9	44	682	3078	0	-1	50	16
21	Wood Floor				N/A	N/A	10-12	83	403	856	4345	6	16	66	92
22	Wood Floor				N/A	N/A	5-7	32	156	313	393	4	10	56	44
23	Gas Heater				N/A	N/A	10-12	2	10	349	655	2	5	42	-22
24	Top of Neutralization Tank				N/A	N/A	15-20	14	68	851	4308	2	5	59	59
25	Top of Filter Press				N/A	N/A	30-40	12	58	400	1026	2	5	56	44

Survey No.:	WT-01-FS-108
Date:	4/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**
Contaminant/Limits:														
Comments:														
Parameters			***Dose Rate*** µRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***			
						Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:			NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:			NA	C690J		164675 / PR176413		164675 / PR176413		185291		PR194723	
Cal. Due Date:			NA	9/21/2013		4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*		NA	NA	NA	0.162		0.108		0.354		0.212	
BKG:	*Bcpm**:*		NA	NA	NA	0		259		4		466	
ACF:			NA	NA	NA	1.27		1.27		1.00		1.00	
tB:			NA	NA	NA	1		1		10		10	
tS:			NA	NA	NA	1		1		1		1	
Lc:			NA	NA	NA	0.0		272		4.16		75.0	
MDC:			NA	NA	NA	14.6		567		14.6		125	

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Filter Press Floor				N/A	N/A	20-30	71	345	1003	5414	6	16	45	-8
27	Tank Valve				N/A	N/A	25-30	N/A	N/A	N/A	N/A	0	-1	49	11
28	Tank Valve				N/A	N/A	70-80	N/A	N/A	N/A	N/A	4	10	43	-17
29	Tank Valve				N/A	N/A	90-100	N/A	N/A	N/A	N/A	1	2	53	30
30	Tank Valve				N/A	N/A	25-30	N/A	N/A	N/A	N/A	5	13	38	-41
31	Tank Base Concrete				N/A	N/A	35-40	86	418	481	1616	0	-1	47	2
32	Tank Valve				N/A	N/A	15-17	N/A	N/A	N/A	N/A	2	5	60	63
33	Tank Valve				N/A	N/A	100-110	N/A	N/A	N/A	N/A	3	7	46	-3
34	Tank Valve				N/A	N/A	25-30	29	141	2889	19139	1	2	46	-3
35	Tank Valve				N/A	N/A	15-17	N/A	N/A	N/A	N/A	7	19	47	2
36	Tank Side				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	41	-26
37	Oil Tank				N/A	N/A	50-60	12	58	384	910	0	-1	46	-3
38	Oil Tank				N/A	N/A	25-30	5	24	382	895	0	-1	56	44
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-01-FS-109	**Item Surveyed:**	**Project:**
Date:	6/7/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	7/30/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	309	6	395
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	277	5.09	36.5
MDC:		NA	NA	NA	14.9	575	16.0	62

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Floor of Sludge Bay				N/A	N/A	6-8	90	448	1251	6383	6	15	46	16
2	Under Filter Press				N/A	N/A	6-8	54	269	733	2873	1	1	37	-6
3	Floor near Slurry Tank				N/A	N/A	6-8	15	75	756	3029	0	-2	44	11
4	Floor Under Sludge Decant Tank				N/A	N/A	15-17	27	134	2217	12929	1	1	40	1
5	Floor in Open Area				N/A	N/A	15-20	57	284	1430	7596	4	10	45	14
6	Open Space in Front of Tanks				N/A	N/A	5-7	30	149	583	1857	1	1	34	-14
7	Floor Between Sludge Roll-off and Thickener Tank				N/A	N/A	20-30	45	224	2055	11831	7	18	48	21
8	Floor Between Sludge Roll-Off and Maintenance Area				N/A	N/A	10-15	29	144	707	2697	0	-2	39	-1
9	Floor Outside Maintenance Area				N/A	N/A	3-5	29	144	499	1287	1	1	45	14
10	Maintenance Work Bench				N/A	N/A	3-5	10	50	335	176	0	-2	51	29
11	Wood Floor Maintenance Area				N/A	N/A	4-6	30	149	410	684	1	1	30	-24
12	Office Floor				N/A	N/A	6-8	4	20	314	34	1	1	34	-14
13	Truck Receiving Office				N/A	N/A	6-8	4	20	500	1294	0	-2	38	-4
14	Lab Floor				N/A	N/A	5-7	3	15	496	1267	2	4	31	-21
15	Lab Bench				N/A	N/A	8-10	7	35	449	949	1	1	29	-26
16	Floor Between Barium Reaction Tank and Office				N/A	N/A	10-15	9	45	772	3137	3	7	51	29
17	Floor Between Neutralization Tank and Lab				N/A	N/A	35-40	25	124	1374	7217	0	-2	27	-31
18	Floor Under Lamella 1				N/A	N/A	12-15	25	124	564	1728	1	1	30	-24
19	Behind Lamella 2				N/A	N/A	15-20	48	239	1236	6282	3	7	49	24
20	Behind Effluent Tank				N/A	N/A	10-12	23	114	2250	13153	4	10	48	21
21	Between Filter and Slurry Tank				N/A	N/A	10-15	17	85	937	4255	0	-2	29	-26
22	Top of Filter Press				N/A	N/A	30-40	18	90	1095	5326	0	-2	40	1
23	Storage Area above Truck Receiving				N/A	N/A	10-12	69	343	714	2744	3	7	25	-36
24	Storage above Office				N/A	N/A	8-10	67	333	616	2080	4	10	43	9
25	Storage above Office				N/A	N/A	6-8	30	149	448	942	3	7	37	-6

Survey No.:	WT-02-FS-012
Date:	11/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	7	557
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	5.38	46.2
MDC:		NA	NA	NA	61.0	536	16.3	76

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lobby floor				N/A	N/A	3-5	6	10	588	2726	1	1	62	17
2	lab bench				N/A	N/A	3-5	27	114	340	884	1	1	54	-5
3	floor outside restroom				N/A	N/A	3-5	6	10	435	1590	0	-2	56	1
4	floor stain near tank				N/A	N/A	3-5	1	-15	371	1114	3	6	60	11
5	floor near other side of flash mixing tank				N/A	N/A	3-5	6	10	405	1367	2	4	67	30
6	floor under lime storage				N/A	N/A	3-5	2	-10	380	1181	1	1	47	-23
7	floor near back door				N/A	N/A	3-5	6	10	398	1315	4	9	61	14
8	chemical storage are floor				N/A	N/A	3-5	6	10	433	1575	0	-2	52	-10
9	work bench				N/A	N/A	3-5	1	-15	359	1025	1	1	61	14
10	office floor				N/A	N/A	3-5	1	-15	315	698	0	-2	65	25
11	office floor				N/A	N/A	3-5	7	15	376	1151	1	1	55	-2
12	second floor				N/A	N/A	3-5	2	-10	3	-1619	2	4	64	22
13	second floor				N/A	N/A	3-5	3	-5	338	869	2	4	61	14
14	storage room floor				N/A	N/A	3-5	7	15	418	1463	1	1	42	-36
15	floor near filter press				N/A	N/A	10-12	47	213	707	3610	3	6	63	19
16	floor between filter press				N/A	N/A	12-15	71	332	1327	8216	1	1	70	38
17	maintanence garage floor				N/A	N/A	3-5	10	30	364	1062	2	4	56	1
18	maintanence bench				N/A	N/A	3-5	9	25	312	676	0	-2	54	-5
19	office floor				N/A	N/A	3-5	2	-10	338	869	0	-2	46	-26
20	office load pad				N/A	N/A	3-5	15	55	500	2073	0	-2	44	-31
21															
22															
23															
24															
25															

Survey No.:	WT-02-FS-066	**Item Surveyed:**	**Project:**
Date:	4/17/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	4/20/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* µRem/hr	*Gamma*	*Corr µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	182	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	228	4.16	75.0
MDC:		NA	NA	NA	14.6	479	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	concrete				N/A	N/A	4-6	13	63	406	1630	1	2	55	40
2	concrete				N/A	N/A	4-6	5	24	297	837	0	-1	60	63
3	concrete				N/A	N/A	10-20	33	160	679	3617	2	5	55	40
4	concrete				N/A	N/A	3-4	19	92	452	1965	0	-1	51	21
5	concrete				N/A	N/A	15-20	9	44	546	2649	1	2	57	49
6	concrete				N/A	N/A	4-6	15	73	228	335	1	2	58	54
7	tile floor				N/A	N/A	7-8	15	73	288	771	1	2	48	7
8	tile floor				N/A	N/A	3-6	4	19	376	1412	0	-1	51	21
9	lab bench				N/A	N/A	3-5	50	243	257	546	0	-1	51	21
10	wood step				N/A	N/A	3-5	5	24	215	240	0	-1	46	-3
11	floor				N/A	N/A	3-5	0	0	275	677	0	-1	58	54
12	floor				N/A	N/A	3-5	1	5	238	408	3	7	43	-17
13	floor				N/A	N/A	3-5	0	0	256	539	0	-1	64	82
14	floor				N/A	N/A	3-5	2	10	263	589	1	2	59	59
15	floor				N/A	N/A	3-5	3	15	279	706	1	2	45	-8
16	floor				N/A	N/A	3-5	1	5	232	364	2	5	43	-17
17	floor				N/A	N/A	3-5	3	15	277	691	0	-1	60	63
18	office floor				N/A	N/A	3-5	1	5	186	29	3	7	52	25
19	floor				N/A	N/A	3-5	2	10	242	437	0	-1	45	-8
20	office floor				N/A	N/A	3-5	2	10	223	298	2	5	36	-50
21	office floor				N/A	N/A	3-5	3	15	212	218	0	-1	53	30
22	floor near tank				N/A	N/A	3-5	3	15	212	218	1	2	50	16
23	floor near tank				N/A	N/A	3-5	2	10	247	473	0	-1	51	21
24	center of floor				N/A	N/A	3-5	1	5	248	480	1	2	49	11
25	floor near outer wall				N/A	N/A	3-5	4	19	258	553	1	2	42	-22

Survey No.:	WT-02-FS-066
Date:	4/17/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:					**Project:**
Contaminant/Limits:					
Comments:					

Parameters		***Dose Rate*** µRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	182	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	228	4.16	75.0
MDC:		NA	NA	NA	14.6	479	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	floor near drain				N/A	N/A	3-5	1	5	251	502	0	-1	55	40
27	compressor room				N/A	N/A	3-5	6	29	285	750	1	2	34	-59
28	filter storage room				N/A	N/A	3-5	3	15	278	699	1	2	39	-36
29	roof				N/A	N/A	3-5	24	117	279	706	0	-1	41	-26
30	floor of sludge				N/A	N/A	100-120	57	277	1317	8260	5	13	59	59
31	floor of sludge				N/A	N/A	15-20	68	331	1034	6200	3	7	38	-41
32	office floor				N/A	N/A	3-5	0	0	192	73	0	-1	51	21
33	maintenance area				N/A	N/A	3-5	9	44	294	815	1	2	49	11
34	work bench				N/A	N/A	3-5	4	19	169	-95	1	2	44	-12
35	concrete under filter press				N/A	N/A	10-15	61	296	1102	6695	6	16	50	16
36	cab of loader				N/A	N/A	4-6	31	151	198	116	1	2	44	-12
37	filter floor				N/A	N/A	10-12	83	403	608	3100	1	2	48	7
38	filter floor				N/A	N/A	7-10	82	399	643	3355	3	7	61	68
39	filter floor				N/A	N/A	15-20	49	238	943	5538	4	10	53	30
40	press				N/A	N/A	12-15	54	262	669	3544	5	13	55	40
41	filter floor				N/A	N/A	20-25	48	233	887	5130	4	10	56	44
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-02-FS-067
Date:	6/6/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	305	6	395
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	275	5.09	36.5
MDC:		NA	NA	NA	38.1	571	16.0	61.6

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	concrete floor				N/A	N/A	4-6	4	15	422	793	1	1	32	-19
2	floor near steps				N/A	N/A	4-6	9	40	377	488	0	-2	26	-34
3	floor near tank				N/A	N/A	4-6	2	5	417	759	2	4	33	-16
4	near mix tank				N/A	N/A	3-6	2	5	332	183	0	-2	42	6
5	floor near compressor				N/A	N/A	3-5	1	0	384	535	0	-2	38	-4
6	floor near reuse water tank				N/A	N/A	3-5	4	15	384	535	0	-2	35	-11
7	floor near back door				N/A	N/A	3-5	6	25	364	400	1	1	34	-14
8	work bench				N/A	N/A	3-5	0	-5	328	156	0	-2	29	-26
9	floor				N/A	N/A	3-5	4	15	357	352	1	1	28	-29
10	office floor				N/A	N/A	3-5	1	0	313	54	2	4	47	19
11	landing between first and second door				N/A	N/A	3-5	6	25	350	305	1	1	31	-21
12	floor near lime slurry				N/A	N/A	3-5	2	5	396	617	1	1	40	1
13	floor near lime slurry				N/A	N/A	3-5	2	5	376	481	0	-2	39	-1
14	compressor room floor				N/A	N/A	3-5	2	5	399	637	0	-2	45	14
15	storage area				N/A	N/A	4-6	9	40	378	495	1	1	39	-1
16	floor				N/A	N/A	5-7	6	25	353	325	1	1	35	-11
17	shase				N/A	N/A	3-5	1	0	353	325	0	-2	32	-19
18	landing between second and third door				N/A	N/A	3-5	1	0	388	562	1	1	30	-24
19	lab bench				N/A	N/A	5-7	17	80	358	359	1	1	29	-26
20	office floor				N/A	N/A	5-7	5	20	519	1450	1	1	50	26
21	filter press floor				N/A	N/A	8-10	52	254	470	1118	2	4	53	34
22	filter press floor near pump				N/A	N/A	15-20	68	333	958	4425	4	10	42	6
23	top of filter press				N/A	N/A	15-18	22	104	801	3361	11	29	53	34
24	floor near filter press				N/A	N/A	15-20	58	284	929	4228	6	15	48	21
25	maintenance floor				N/A	N/A	3-5	10	45	425	813	0	-2	33	-16

Survey No.:	WT-02-FS-067
Date:	6/6/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	305	6	395
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	275	5.09	36.5
MDC:		NA	NA	NA	38.1	571	16.0	61.6

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	maintenance floor				N/A	N/A	3-5	10	45	390	576	0	-2	34	-14
27	office floor				N/A	N/A	3-5	1	0	314	61	0	-2	31	-21
28	sludge stall floor				N/A	N/A	30-60	96	473	1639	9040	8	21	38	-4
29	loader floor				N/A	N/A	3-5	25	119	347	285	1	1	29	-26
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-03-FS-040
Date:	11/21/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:		**Project:**
Contaminant/Limits:		
Comments:		

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	1	349	7	478
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.5	323	5.38	42.8
MDC:		NA	NA	NA	37.9	668	16.3	71

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	influent water building				N/A	N/A	5-7	1	0	469	891	1	1	32	-42
2	influent water building under pump				N/A	N/A	40-50	34	164	914	4197	1	1	53	14
3	water offload pad				N/A	N/A	8-10	71	347	1198	6307	1	1	60	32
4	water receiving office floor				N/A	N/A	3-5	0	-5	365	119	3	6	48	1
5	office floor in doorway				N/A	N/A	3-5	6	25	304	-334	1	1	59	30
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-03-FS-110
Date:	6/7/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	C690J		227415 /PR240349		227415 /PR240349		185291		PR194723		
Cal. Due Date:				NA	9/21/2013		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.158		0.116		0.354		0.401		
BKG:	*Bcpm**:*			NA	NA	NA	0		310		6		395		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	0.0		278		5.09		36.5		
MDC:				NA	NA	NA	14.9		575		16.0		62		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Offload Pad				N/A	N/A	4-5	55	274	559	1687	1	1	38	-4
2	Offload Pad				N/A	N/A	5-7	98	487	1361	7122	3	7	44	11
3	Offload Pad				N/A	N/A	3-5	11	55	409	671	0	-2	32	-19
4	Porch of Offload Office				N/A	N/A	3-5	3	15	391	549	0	-2	44	11
5	Break Area Floor				N/A	N/A	3-5	2	10	279	-210	0	-2	33	-16
6	Utility Room Floor				N/A	N/A	3-5	1	5	306	-27	3	7	41	4
7	Second Offload Pad				N/A	N/A	5-7	86	428	633	2189	0	-2	37	-6
8	Second Offload Pad				N/A	N/A	4-6	98	487	821	3463	1	1	32	-19
9	Sludge Bin Floor				N/A	N/A	8-10	19	95	530	1491	4	10	44	11
10	Sludge Bin Floor				N/A	N/A	5-7	18	90	557	1674	0	-2	42	6
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-03-FS-111
Date:	4/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* µRem/hr	*Gamma*	*Corr µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	198	3	430
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	238	3.60	72.0
MDC:		NA	NA	NA	37.2	498	13.8	121

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Offload Pad				N/A	N/A	5-7	4	15	257	429	0	-1	39	-19
2	Offload Pad				N/A	N/A	5-7	664	3223	4348	30201	5	13	46	14
3	Offload Pad				N/A	N/A	3-5	24	112	313	837	0	-1	39	-19
4	Offload Pad				N/A	N/A	3-5	8	34	256	422	0	-1	39	-19
5	Sludge Bay				N/A	N/A	3-5	22	102	562	2649	0	-1	48	24
6	Sludge Bay				N/A	N/A	7-10	19	87	330	961	1	2	42	-5
7	Cab of Excavator				N/A	N/A	5-7	1	0	157	-298	2	5	45	9
8	Water Offload Drain				N/A	N/A	35-40	N/A	N/A	N/A	N/A	1	2	53	47
9	Skid Loader Seat				N/A	N/A	3-5	4	15	153	-327	0	-1	44	5
10	Sludge Bay				N/A	N/A	3-5	109	525	541	2496	0	-1	47	19
11	Sludge Bay				N/A	N/A	3-5	71	340	477	2030	0	-1	53	47
12	Water Receiving				N/A	N/A	3-5	3	10	173	-182	0	-1	60	80
13	Water Receiving Utility Room				N/A	N/A	3-5	5	19	196	-15	0	-1	45	9
14	Water Receiving Bathroom				N/A	N/A	3-5	1	0	207	65	1	2	47	19
15	Oil Tank				N/A	N/A	15-20	N/A	N/A	N/A	N/A	1	2	52	42
16	Oil Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	2	49	28
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-04-FS-025
Date:	10/7/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.74	46.5
MDC:		NA	NA	NA	61.0	536	18.3	77

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	entrance floor				N/A	N/A	4-6	1	-15	355	995	2	2	50	-17
2	plant entreance				N/A	N/A	8-10	5	5	449	1694	1	0	56	-1
3	lab floor				N/A	N/A	6-8	4	0	445	1664	2	2	51	-14
4	lab bench				N/A	N/A	5-7	7	15	341	891	1	0	48	-22
5	floor outside of restroom				N/A	N/A	12-15	8	20	478	1909	2	2	64	20
6	floor near neutralization				N/A	N/A	30-35	5	5	827	4502	1	0	66	26
7	floor behind neutralization				N/A	N/A	50-55	5	5	1231	7503	5	11	57	2
8	floor under				N/A	N/A	35-40	28	119	1373	8557	0	-3	59	7
9	floor at base of steps				N/A	N/A	15-20	21	84	793	4249				
10	floor between clarifiers				N/A	N/A	10-12	38	169	672	3350	0	-3	53	-9
11	floor between 2 sludge containers				N/A	N/A	10-12	108	516	946	5386	1	0	53	-9
12	floor between sludge containers and storage area				N/A	N/A	15-20	48	218	793	4249	4	8	39	-46
13	between sludge container and heater				N/A	N/A	10-12	118	565	1033	6032	0	-3	50	-17
14	maintanence shelf				N/A	N/A	10-15	19	74	466	1820	1	0	50	-17
15	bomb doors of filter press				N/A	N/A	8-10	20	79	473	1872	3	5	67	28
16	tarp under second press				N/A	N/A	10-112	11	35	542	2384	3	5	60	10
17	upstairs office-break area				N/A	N/A	5-7	20	79	739	3848	1	0	55	-4
18	under recirulation				N/A	N/A	15-20	54	248	66	-1151	3	5	48	-22
19	maintanence garege floor				N/A	N/A	5-7	9	25	453	1723	0	-3	60	10
20	water offload floor				N/A	N/A	4-6	13	45	387	1233	1	0	67	28
21															
22															
23															
24															
25															

Survey No.:	WT-04-FS-112
Date:	4/22/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/4/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* µRem/hr	*Gamma*	*Corr µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	286	5	454
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	286	4.65	74.0
MDC:		NA	NA	NA	37.2	594	15.4	124

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Floor Outside Maintenance				N/A	N/A	7-10	69	331	644	2605	1	1	30	-73
2	Floor Near Sludge Roll-Off				N/A	N/A	10-15	37	175	614	2387	0	-1	52	31
3	Floor Between Roll-Off and Sludge Tank				N/A	N/A	10-15	54	258	762	3464	0	-1	53	36
4	Floor Under Filter Press				N/A	N/A	10-12	47	224	768	3508	0	-1	48	12
5	Floor Near Monitoring Tank				N/A	N/A	30-40	112	540	904	4497	1	1	34	-54
6	Floor Near Filter				N/A	N/A	8-12	24	112	552	1936	0	-1	43	-11
7	Floor				N/A	N/A	10-12	97	467	902	4483	3	7	49	17
8	Floor				N/A	N/A	8-10	69	331	941	4767	1	1	43	-11
9	Floor				N/A	N/A	20-30	12	53	731	3238	0	-1	54	41
10	Exposure on Tank				N/A	N/A	40-50	32	151	1528	9038	1	1	39	-30
11	Exposure on Tank				N/A	N/A	400-450	16	73	2137	13470	0	-1	46	3
12	Floor Near Man Door				N/A	N/A	60-70	20	92	1619	9701	0	-1	51	26
13	Floor				N/A	N/A	100-110	8	34	2293	14605	1	1	47	8
14	Floor Under Polymer Injection				N/A	N/A	75-85	66	316	1347	7721	0	-1	35	-49
15	Floor near Polymer Tank				N/A	N/A	15-20	29	136	809	3806	0	-1	32	-63
16	Lab Floor				N/A	N/A	10-12	16	73	550	1921	0	-1	46	3
17	Lab Bench				N/A	N/A	5-7	12	53	344	422	1	1	51	26
18	Bathroom Floor				N/A	N/A	8-10	9	39	320	247	3	7	55	45
19	Lunchroom Floor				N/A	N/A	18-20	2	5	444	1150	0	-1	37	-40
20	Storage Floor				N/A	N/A	5-7	46	219	455	1230	3	7	54	41
21	Hand Rail				N/A	N/A	5-7	23	107	566	2038	1	1	48	12
22	Top of Clarifier				N/A	N/A	10-15	8	34	463	1288	1	1	48	12
23	Filter Press				N/A	N/A	8-10	8	34	295	65	0	-1	48	12
24	Press Bomb Door				N/A	N/A	6-10	42	199	423	997	14	38	51	26
25	Filter Press				N/A	N/A	10-12	14	63	541	1856	2	4	55	45

Survey No.:	WT-04-FS-112
Date:	4/22/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/4/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** µRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	C690J		164675 / PR176413		164675 / PR176413		185291		PR194723		
Cal. Due Date:				NA	9/21/2013		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.162		0.108		0.354		0.212		
BKG:	*Bcpm**:*			NA	NA	NA	1		286		5		454		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	11.3		286		4.65		74.0		
MDC:				NA	NA	NA	37.2		594		15.4		124		
No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Office Floor				N/A	N/A	5-7	4	15	374	640	1	1	49	17
27	Reception Floor				N/A	N/A	4-6	2	5	277	-65	0	-1	39	-30
28	Maintenance Floor				N/A	N/A	3-5	11	49	344	422	0	-1	53	36
29	Concrete				N/A	N/A	3-5	4	15	284	-15	0	-1	38	-35
30	Concrete Between Tanks				N/A	N/A	10-12	58	277	545	1885	N/A	N/A	N/A	N/A
31	Tank				N/A	N/A	7-10	N/A	N/A	N/A	N/A	0	-1	37	-40
32	Oil Tank				N/A	N/A	15-20	N/A	N/A	N/A	N/A	0	-1	52	31
33	Oil Tank				N/A	N/A	10-15	N/A	N/A	N/A	N/A	2	4	56	50
34	Residual Tank				N/A	N/A	15-20	N/A	N/A	N/A	N/A	1	1	43	-11
35	Concrete				N/A	N/A	15-20	N/A	N/A	N/A	N/A	0	-1	41	-21
36	Dump Station				N/A	N/A	3-5	27	126	410	902	0	-1	49	17
37	Dump Station				N/A	N/A	3-5	4	15	344	422	1	1	52	31
38	Floor of Pump House				N/A	N/A	3-5	14	63	261	-182	1	1	38	-35
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-04-FS-113
Date:	7/22/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	3-5	0	261	10	521
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	279	6.57	41.9
MDC:		NA	NA	NA	14.9	581	18.2	70

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Reception Floor				N/A	N/A	3-5	0	0	256	-37	1	0	40	-30
2	Lunch Room Floor				N/A	N/A	4-6	7	35	469	1545	0	-3	46	-15
3	Lab Bench				N/A	N/A	5-7	5	25	328	498	0	-3	60	20
4	Lab Floor				N/A	N/A	6-8	8	40	550	2147	1	0	50	-5
5	Floor near Neutralization				N/A	N/A	50-60	8	40	1669	10459	3	6	54	5
6	Floor near Back of Neutralization				N/A	N/A	50-60	12	60	1938	12457	2	3	43	-23
7	Floor near Pump				N/A	N/A	35-40	44	218	2178	14240	0	-3	30	-55
8	Floor Near Tank				N/A	N/A	20-30	19	94	1219	7116	1	0	42	-25
9	Floor Near Decant				N/A	N/A	8-10	44	218	678	3098	0	-3	35	-43
10	Floor Under Press near Roll-Off				N/A	N/A	7-10	41	203	764	3736	0	-3	45	-18
11	Floor Under Lumella				N/A	N/A	10-12	30	149	858	4435	1	0	53	2
12	Floor Under Lumella				N/A	N/A	8-10	11	55	643	2838	1	0	35	-43
13	Floor Near Second Roll-Off				N/A	N/A	5-7	9	45	654	2919	0	-3	46	-15
14	Floor Near Front of Roll-Off				N/A	N/A	5-7	322	1597	1269	7488	2	3	53	2
15	Floor Near Outside Wall				N/A	N/A	8-10	51	253	516	1894	2	3	56	10
16	Maintenance Storage				N/A	N/A	5-7	11	55	356	706	0	-3	53	2
17	Behind Monitoring Tank				N/A	N/A	15-17	20	99	840	4301	2	3	57	12
18	Filter Press 2				N/A	N/A	4-6	7	35	319	431	1	0	46	-15
19	Filter Press 1				N/A	N/A	4-6	6	30	342	602	2	3	54	5
20	Second Floor Outside Breakroom				N/A	N/A	10-12	16	79	570	2295	1	0	39	-33
21	Second Floor Breakroom				N/A	N/A	10-12	5	25	500	1775	2	3	54	5
22	Maintenance Floor				N/A	N/A	10-12	18	89	396	1003	0	-3	45	-18
23	Maintenance Work Bench				N/A	N/A	10-12	12	60	290	215	1	0	34	-45
24	Water Offload Pad				N/A	N/A	3-5	12	60	375	847	3	6	50	-5
25	Truck Receiving				N/A	N/A	3-5	7	35	301	297	0	-3	54	5

Survey No.:	WT-05-FS-044
Date:	10/7/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	330	10	771
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	314	6.57	51.0
MDC:		NA	NA	NA	14.88	650.14	18.22	83.08

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	reception area floor				N/A	N/A	5-7	9	45	353	171	2	3	44	-83
2	conference room floor				N/A	N/A	4-6	1	5	357	201	1	0	47	-75
3	hallway floor outside restrooms				N/A	N/A	4-6	2	10	332	15	1	0	53	-60
4	floor behind driver checkin				N/A	N/A	10-12	6	30	568	1768	2	3	43	-85
5	floor near influent to plant				N/A	N/A	15-20	18	89	784	3372	1	0	52	-63
6	office floor				N/A	N/A	8-10	9	45	533	1508	0	-3	60	-43
7	lab floor				N/A	N/A	10-12	7	35	483	1137	0	-3	51	-65
8	main floor				N/A	N/A	12-15	7	35	542	1575	1	0	55	-55
9	near floculent tank between clarifiers				N/A	N/A	10-12	19	94	578	1842	1	0	59	-45
10	hallway between clarifier and maintanence				N/A	N/A	5-7	15	74	553	1657	0	-3	45	-80
11	maintanence room floor				N/A	N/A	6-8	5	25	514	1367	1	0	56	-53
12	shower room entrance				N/A	N/A	8-10	1	5	426	713	1	0	58	-48
13	storage area				N/A	N/A	4-6	6	30	402	535	0	-3	47	-75
14	storage area				N/A	N/A	6-8	17	84	503	1285	2	3	40	-93
15	floor between rolloffs and clarifiers				N/A	N/A	5-7	22	109	478	1099	2	3	58	-48
16	top of filter press				N/A	N/A	6-8	4	20	264	-490	0	-3	51	-65
17	2nd floor office-break area				N/A	N/A	5-7	2	10	377	349	0	-3	59	-45
18	floor between rolloffs				N/A	N/A	10-12	19	94	689	2667	1	0	74	-8
19	rail infront of can under long press				N/A	N/A	8-10	8	40	372	312	5	11	46	-78
20	marcellus off load pad				N/A	N/A	4-6	15	74	440	817	2	3	69	-20
21	secondary containment marcellus side				N/A	N/A	5-7	20	99	597	1983	4	8	54	-58
22	secondary containment marcellus side				N/A	N/A	8-10	24	119	482	1129	1	0	37	-100
23	conventional offload				N/A	N/A	5-7	26	129	505	1300	1	0	43	-85
24	conventional secondary containment				N/A	N/A	5-7	12	60	505	1300	1	0	43	-85
25	conventional secondary containment				N/A	N/A	10-12	36	179	545	1597	1	0	50	-68

Survey No.:	WT-05-FS-114
Date:	4/25/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	3-5		0	210	2	360
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	245	2.94	65.9
MDC:		NA	NA	NA	14.6	513	12.8	112

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Containment Floor				N/A	N/A	3-5	31	151	426	1572	0	-1	46	47
2	Containment Floor				N/A	N/A	3-5	4	19	331	881	0	-1	40	19
3	Containment Floor				N/A	N/A	3-5	18	87	392	1324	1	2	36	0
4	Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	2	25	-52
5	Tank				N/A	N/A	4-6	N/A	N/A	N/A	N/A	1	2	29	-33
6	Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	45	42
7	Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	26	-47
8	Containment Floor				N/A	N/A	3-5	6	29	254	320	0	-1	34	-9
9	Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	33	-14
10	Containment Floor				N/A	N/A	3-5	3	15	331	881	0	-1	33	-14
11	Tank				N/A	N/A	5-7	N/A	N/A	N/A	N/A	2	5	33	-14
12	Tank				N/A	N/A	4-6	N/A	N/A	N/A	N/A	1	2	39	14
13	Truck Offload Pad				N/A	N/A	4-6	8	39	382	1252	1	2	45	42
14	Outside Roll-Up Door				N/A	N/A	3-5	5	24	226	116	0	-1	40	19
15	Middle Sludge Bay				N/A	N/A	4-6	5	24	359	1084	0	-1	39	14
16	Floor				N/A	N/A	6-8	28	136	584	2722	0	-1	27	-42
17	Filter Bank				N/A	N/A	10-12	20	97	363	1113	0	-1	38	9
18	Floor Under Sludge Tank				N/A	N/A	5-7	14	68	439	1666	1	2	37	5
19	Sludge Tank				N/A	N/A	5-7	N/A	N/A	N/A	N/A	1	2	37	5
20	Sludge Tank				N/A	N/A	40-50	N/A	N/A	N/A	N/A	1	2	32	-19
21	Floor Near Sludge Tank				N/A	N/A	10-12	16	78	591	2773	0	-1	38	9
22	Office Floor				N/A	N/A	10-12	10	49	451	1754	0	-1	38	9
23	Lab Floor				N/A	N/A	6-8	9	44	374	1193	3	8	27	-42
24	Lab Bench				N/A	N/A	3-5	2	10	210	0	0	-1	35	-5
25	Floor Under Clarifier				N/A	N/A	6-8	12	58	368	1150	0	-1	36	0

Survey No.:	WT-05-FS-114
Date:	4/25/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	3-5		0	210	2	360
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	245	2.94	65.9
MDC:		NA	NA	NA	14.6	513	12.8	112

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Maintenance Floor				N/A	N/A	5-7	12	58	430	1601	0	-1	33	-14
27	Bathroom Floor				N/A	N/A	4-6	7	34	329	866	0	-1	36	0
28	Changing Area				N/A	N/A	6-8	9	44	340	946	0	-1	38	9
29	Chem Storage				N/A	N/A	5-7	0	0	333	895	0	-1	28	-38
30	Oil Storage				N/A	N/A	3-5	7	34	385	1274	0	-1	32	-19
31	Floor Near Influent Pump				N/A	N/A	5-7	6	29	362	1106	0	-1	38	9
32	Under Primary Clarifier				N/A	N/A	6-8	4	19	345	982	2	5	32	-19
33	Floor Near Influent Pump				N/A	N/A	10-12	6	29	517	2234	0	-1	29	-33
34	Tank				N/A	N/A	15-20	N/A	N/A	N/A	N/A	0	-1	3	-156
35	Floor				N/A	N/A	10-12	7	34	557	2525	0	-1	28	-38
36	Top of Containment				N/A	N/A	6-8	18	87	626	3027	2	5	42	28
37	Bottom of Containment				N/A	N/A	6-8	37	180	631	3064	5	14	48	57
38	Tank				N/A	N/A	5-7	N/A	N/A	N/A	N/A	0	-1	35	-5
39	Bottom of Containment				N/A	N/A	4-6	29	141	491	2045	2	5	30	-28
40	Waste Oil Tank				N/A	N/A	20-25	N/A	N/A	N/A	N/A	2	5	23	-61
41	Waste Oil Tank				N/A	N/A	15-20	N/A	N/A	N/A	N/A	0	-1	37	5
42	Truck Offload Pad				N/A	N/A	4-6	4	19	416	1499	0	-1	33	-14
43	Lobby				N/A	N/A	3-5	8	39	244	247	1	2	26	-47
44	Break Room Floor				N/A	N/A	3-5	1	5	234	175	0	-1	39	14
45	Hallway Outside Bathroom				N/A	N/A	5-7	3	15	238	204	0	-1	31	-24
46															
47															
48															
49															
50															

Survey No.:	WT-05-FS-115	**Item Surveyed:**	**Project:**
Date:	8/1/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	8/12/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	291	10	454
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.5	295	6.57	39.1
MDC:		NA	NA	NA	37.9	612	18.2	65

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Offload Pad				N/A	N/A	3-5	50	243	417	936	0	-3	57	29
2	Offload Pad				N/A	N/A	3-5	41	198	445	1144	1	0	47	4
3	Walkway Next to Offload				N/A	N/A	3-5	44	213	485	1441	0	-3	46	1
4	Containment Floor				N/A	N/A	3-5	32	154	470	1330	0	-3	46	1
5	Containment Between Tanks				N/A	N/A	4-6	40	193	506	1597	0	-3	49	9
6	Containment Floor				N/A	N/A	4-6	45	218	497	1530	1	0	38	-18
7	Under Lumella				N/A	N/A	8-10	3	10	458	1241	0	-3	55	24
8	Next to Mixing Tank				N/A	N/A	6-8	12	55	711	3120	1	0	45	-1
9	Next to Lumella				N/A	N/A	10-15	9	40	1285	7384	0	-3	46	1
10	Near Entrance to Office				N/A	N/A	10-15	5	20	519	1694	0	-3	43	-6
11	Control Room Office				N/A	N/A	5-7	8	35	446	1151	0	-3	41	-11
12	Lab Floor				N/A	N/A	4-6	4	15	418	943	1	0	45	-1
13	Lab Bench				N/A	N/A	4-6	1	0	338	349	0	-3	42	-8
14	Changing Room				N/A	N/A	5-7	2	5	365	550	0	-3	52	16
15	Tool Room Floor				N/A	N/A	5-7	4	15	477	1382	1	0	47	4
16	Floor				N/A	N/A	4-6	2	5	393	758	0	-3	45	-1
17	Maintenance Floor				N/A	N/A	5-7	4	15	396	780	0	-3	50	11
18	Marcellus Offload				N/A	N/A	4-6	16	74	355	475	1	0	40	-13
19	Floor Near Filters				N/A	N/A	4-6	3	10	399	802	1	0	48	6
20	Floor Between Roll-Offs				N/A	N/A	5-7	7	30	378	646	0	-3	36	-23
21	Confernece Room				N/A	N/A	3-5	2	5	281	-74	2	3	48	6
22	Reception Area				N/A	N/A	5-7	3	10	318	201	0	-3	54	21
23	Copier Area				N/A	N/A	3-5	2	5	286	-37	1	0	43	-6
24															
25															

Survey No.:	WT-05-FS-115	**Item Surveyed:**	**Project:**
Date:	8/1/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	8/12/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	291	10	454
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.5	295	6.57	39.1
MDC:		NA	NA	NA	37.9	612	18.2	65

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															

Survey No.:	WT-06-FS-039
Date:	10/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.57	51.0
MDC:		NA	NA	NA	61.0	536	18.2	83

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	main entrance floor				N/A	N/A	6-8	15	55	523	2243	0	-3	75	-5
2	under centerfuge				N/A	N/A	8-10	18	69	553	2466	2	3	73	-10
3	behind sludge rolloff				N/A	N/A	6-8	21	84	711	3640	6	14	59	-45
4	behind recycle tank				N/A	N/A	6-8	5	5	605	2852	0	-3	64	-33
5	behind effluent tank				N/A	N/A	10-15	15	55	620	2964	0	-3	68	-23
6	below influent sample				N/A	N/A	10-12	14	50	6914	49718	3	6	78	2
7	floor near residual tank				N/A	N/A	12-15	8	20	632	3053	1	0	62	-38
8	containment floor behind				N/A	N/A	15--20	15	55	619	2956	2	3	74	-8
9	lab floor				N/A	N/A	8-10	6	10	483	1946	0	-3	61	-40
10	floor infront of residual tanks				N/A	N/A	10-12	10	30	531	2303	0	-3	63	-35
11	floor next to residual tanks				N/A	N/A	15-17	9	25	540	2370	0	-3	80	7
12	floor next to residual tanks				N/A	N/A	17-20	14	50	548	2429	0	-3	66	-28
13	between A series & C series inside containment				N/A	N/A	10-12	10	30	726	3751	3	6	79	5
14	QA of 13				N/A	N/A	15-17	N/A	N/A	N/A	N/A	1	0	62	-38
15	floor near A-B				N/A	N/A	10-15	8	20	592	2756	1	0	68	-23
16	between B & D series				N/A	N/A	15-17	7	15	592	2756	3	6	79	5
17	floor near tank 257				N/A	N/A	5-7	29	124	608	2875	6	14	78	2
18	floor near tank D13/351				N/A	N/A	10-12	32	139	552	2459	2	3	65	-30
19	floor near tank D5/283				N/A	N/A	10-12	18	69	555	2481	5	11	60	-43
20	restroom hallway				N/A	N/A	10-12	21	84	577	2644	1	0	64	-33
21	near tank 346 Y6				N/A	N/A	10-12	5	5	565	2555	0	-3	68	-23
22	floor near tank 329 Y8				N/A	N/A	10-12	6	10	584	2696	1	0	72	-13
23	floor near 715 331				N/A	N/A	10-12	8	20	601	2823	0	-3	63	-35
24	floor near 22 233				N/A	N/A	10-12	7	15	520	2221	0	-3	73	-10
25															

Survey No.:	WT-06-FS-116	**Item Surveyed:**	**Project:**
Date:	5/1/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	5/5/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 / PR 240349	227415 / PR 240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	267	5	454
	ACF:	NA	NA	NA	1.27	1.27	1.00	1.00
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	11.6	258	4.65	74.0
	MDC:	NA	NA	NA	38.1	536	15.4	124

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Floor				N/A	N/A	5-7	20	95	522	1728	0	-1	40	-25
2	Floor Near Filter				N/A	N/A	4-6	23	109	538	1836	1	1	50	22
3	Floor Near Centerfuge				N/A	N/A	6-8	26	124	562	1999	3	7	38	-35
4	Lab Bench				N/A	N/A	10-12	12	55	485	1477	2	4	44	-7
5	Lab Floor				N/A	N/A	5-7	9	40	476	1416	1	1	45	-2
6	Floor				N/A	N/A	12-15	14	65	695	2900	1	1	42	-16
7	Under Influent Water Tank				N/A	N/A	15-17	12	55	737	3185	3	7	46	3
8	Under pH+ Tank				N/A	N/A	50-60	35	169	1412	7759	2	4	54	41
9	Next to pH+ Tank				N/A	N/A	20-25	17	80	625	2426	0	-1	51	26
10	Bomb door of Filter Press				N/A	N/A	7-10	10	45	618	2378	0	-1	59	64
11	Bottom of Centerfuge				N/A	N/A	7-10	8	35	337	474	4	10	46	3
12	Work Bench near Clarifier				N/A	N/A	5-7	13	60	425	1071	0	-1	35	-49
13	Clarifier 5200				N/A	N/A	7-10	12	55	771	3415	5	13	57	55
14	Clarifier 5100				N/A	N/A	7-10	6	25	569	2046	0	-1	46	3
15	Under Sludge Tank				N/A	N/A	12-15	17	80	689	2860	1	1	51	26
16	Under Sludge Tank				N/A	N/A	8-10	19	90	684	2826	1	1	46	3
17	Containment Under Bag Filter				N/A	N/A	5-7	19	90	510	1647	2	4	49	17
18	Influent Sample Area				N/A	N/A	5-8	0	-5	629	2453	1	1	42	-16
19	Containment Floor				N/A	N/A	8-10	14	65	657	2643	0	-1	40	-25
20	X1 Tank				N/A	N/A	100-110	N/A	N/A	N/A	N/A	0	-1	57	55
21	Floor in Access Way				N/A	N/A	7-10	10	45	535	1816	0	-1	42	-16
22	Floor in Containment				N/A	N/A	10-12	22	104	735	3171	1	1	55	45
23	Floor in Containment				N/A	N/A	10-12	30	144	1144	5943	0	-1	47	8
24	Floor in Access Way				N/A	N/A	7-10	17	80	542	1863	1	1	42	-16
25	Floor in Containment				N/A	N/A	7-10	12	55	933	4513	2	4	47	8

Survey No.:	WT-06-FS-116	**Item Surveyed:**	**Project:**
Date:	5/1/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	5/5/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 / PR 240349	227415 / PR 240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	267	5	454
	ACF:	NA	NA	NA	1.27	1.27	1.00	1.00
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	11.6	258	4.65	74.0
	MDC:	NA	NA	NA	38.1	536	15.4	124

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Floor in Containment				N/A	N/A	15-20	23	109	713	3022	2	4	46	3
27	Floor in Containment				N/A	N/A	15-20	11	50	645	2561	3	7	38	-35
28	Floor in Access Way				N/A	N/A	10-15	37	179	550	1918	1	1	50	22
29	Floor in Containment				N/A	N/A	10-15	19	90	647	2575	0	-1	43	-11
30	Floor Next to 24				N/A	N/A	10-15	8	35	537	1830	1	1	47	8
31	Floor in Access Way				N/A	N/A	10-15	4	15	569	2046				
32	Floor in Containment				N/A	N/A	10-15	9	40	595	2223	1	1	42	-16
33	Floor in Containment				N/A	N/A	10-15	4	15	556	1958	0	-1	49	17
34	Floor in Containment				N/A	N/A	10-15	4	15	1332	7217	1	1	49	17
35	North Hallway Floor				N/A	N/A	5-7	15	70	536	1823	0	-1	49	17
36	Floor in Access Way				N/A	N/A	10-15	55	269	590	2189	2	4	38	-35
37	Floor in Access Way				N/A	N/A	10-15	14	65	538	1836	1	1	53	36
38	Floor in Containment				N/A	N/A	45-50	27	129	869	4079	7	18	38	-35
39	Floor in Containment				N/A	N/A	10-12	36	174	691	2873	3	7	42	-16
40	Floor in Containment				N/A	N/A	10-12	19	90	582	2135	5	13	53	36
41	Floor in Containment				N/A	N/A	10-12	20	95	695	2900	1	1	41	-21
42	Floor in Access Way				N/A	N/A	7-10	6	25	444	1199	1	1	34	-54
43	Floor in Access Way				N/A	N/A	5-7	7	30	457	1287	0	-1	45	-2
44	Floor Between Rooms				N/A	N/A	5-7	3	10	476	1416	1	1	43	-11
45	Curb Near Offloading Pad				N/A	N/A	3-5	30	144	483	1464	1	1	50	22
46	Offloading Bay				N/A	N/A	3-5	134	662	538	1836	0	-1	49	17
47	Offloading Bay				N/A	N/A	3-5	140	691	670	2731	0	-1	39	-30
48															
49															
50															

Survey No.:	WT-06-FS-117	**Item Surveyed:**	**Project:**
Date:	7/16/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	8/13/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	230	11	489
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	262	6.89	40.6
MDC:		NA	NA	NA	14.9	546	18.7	68

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Walkway Between Tanks				N/A	N/A	3-5	17	84	465	1746	0	-3	51	5
2	Floor Near Mud Tank				N/A	N/A	6-8	5	25	534	2258	3	5	53	10
3	Floor Under Sand Filters				N/A	N/A	6-8	7	35	463	1731	0	-3	47	-5
4	Floor Near Transfer 1				N/A	N/A	20-30	17	84	1402	8706	2	3	44	-12
5	Floor Near Final pH				N/A	N/A	7-10	15	74	557	2429	0	-3	47	-5
6	Floor Near pH 1				N/A	N/A	7-10	50	248	756	3907	5	11	56	18
7	Floor Near pH 2				N/A	N/A	10-12	19	94	1110	6537	2	3	51	5
8	Floor Near pH 3				N/A	N/A	6-8	26	129	813	4331	8	19	59	25
9	Floor Near Transfer Area				N/A	N/A	5-7	12	60	605	2786	1	0	50	3
10	Floor inside Containment				N/A	N/A	6-8	4	20	504	2035	0	-3	42	-17
11	Walkway Between Processing and Storage				N/A	N/A	10-12	12	60	568	2511	2	3	48	-2
12	Office/Lab Floor				N/A	N/A	6-8	5	25	393	1211	0	-3	45	-10
13	Lab Bench				N/A	N/A	5-7	1	5	417	1389	0	-3	43	-15
14	Walkway				N/A	N/A	6-8	7	35	434	1515	0	-3	54	13
15	Walkway Under Centerfuge				N/A	N/A	10-12	27	134	481	1865	4	8	42	-17
16	Filter Press Bomb Door				N/A	N/A	5-7	36	179	706	3536	10	25	64	38
17	Floor Inside				N/A	N/A	5-7	16	79	460	1709	1	0	35	-35
18	Floor Inside Treatment Room				N/A	N/A	4-6	27	134	518	2139	0	-3	34	-37
19	Floor Inside Treatment Containment				N/A	N/A	4-6	12	60	535	2266	1	0	46	-7
20	Inside Containment				N/A	N/A	5-7	16	79	637	3023	4	8	50	3
21	Walkway				N/A	N/A	5-7	10	50	468	1768	0	-3	47	-5
22	Walkway				N/A	N/A	5-7	12	60	482	1872	2	3	42	-17
23	Walkway				N/A	N/A	5-7	6	30	410	1337	0	-3	40	-22
24	Floor At End of Tank Row				N/A	N/A	5-7	13	64	461	1716	0	-3	42	-17
25	Floor Near Roll-Up Door				N/A	N/A	5-7	9	45	506	2050	0	-3	41	-20

Survey No.:	WT-06-FS-117
Date:	7/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/13/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.159		0.106		0.354		0.401	
BKG:	*Bcpm**:*			NA	NA		NA	0		230		11		489	
ACF:				NA	NA		NA	1.27		1.27		1.00		1.00	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	0.0		262		6.89		40.6	
MDC:				NA	NA		NA	14.9		546		18.7		68	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Walkway Near Tanks				N/A	N/A	5-7	6	30	434	1515	0	-3	47	-5
27	Corner of Warehouse				N/A	N/A	3-5	18	89	458	1694	0	-3	55	15
28	Hallway Next to Restroom				N/A	N/A	5-7	21	104	489	1924	2	3	54	13
29	Hallway Next to D Tanks				N/A	N/A	5-7	28	139	484	1887	3	5	44	-12
30	Hallway Next to D Tanks				N/A	N/A	5-7	24	119	480	1857	0	-3	37	-30
31	Containment Between B and D Tanks				N/A	N/A	5-7	28	139	504	2035	2	3	49	0
32	Containment Between B and D Tanks				N/A	N/A	3-5	29	144	503	2028	3	5	41	-20
33	Walkway Behind B row				N/A	N/A	3-5	7	35	394	1218	2	3	53	10
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-07-FS-022
Date:	11/20/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.74	46.5
MDC:		NA	NA	NA	61.0	536	18.3	77

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	water transfer station				N/A	N/A	2-3	9	25	378	1166	1	0	37	-52
2	floor near pump				N/A	N/A	20-30	190	922	1116	6648	2	2	42	-38
3	floor behind rolloff				N/A	N/A	3-5	6	10	437	1605	0	-3	42	-38
4	floor on backside of rolloff				N/A	N/A	3-5	27	114	685	3447	0	-3	48	-22
5	floor under filter press trailer				N/A	N/A	3-5	14	50	544	2399	0	-3	39	-46
6	under filter press				N/A	N/A	3-5	7	15	341	891	3	5	53	-9
7	between door and clarifier				N/A	N/A	3-5	4	0	420	1478	0	-3	51	-14
8	between clarifier and wall				N/A	N/A	3-5	3	-5	637	3090	0	-3	47	-25
9	under tank near floor trough				N/A	N/A	3-5	89	421	761	4011	4	8	51	-14
10	floor near filter press				N/A	N/A	3-5	6	10	422	1493	1	0	50	-17
11	floor between rooms				N/A	N/A	3-5	10	30	485	1961	1	0	46	-28
12	floor under brine tank				N/A	N/A	3-5	17	64	551	2451	2	2	63	18
13	lab floor				N/A	N/A	3-5	10	30	503	2095	1	0	47	-25
14	lab floor				N/A	N/A	3-5	1	-15	486	1969	2	2	48	-22
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-07-FS-071	**Item Surveyed:**	**Project:**
Date:	4/17/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	4/20/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* µRem/hr	*Gamma*	*Corr µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	198	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	238	4.16	75.0
MDC:		NA	NA	NA	37.2	498	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	offload				N/A	N/A	3-5	32	151	224	189	0	-1	37	-45
2	offload				N/A	N/A	3-5	3	10	214	116	1	2	50	16
3	HVAC unit				N/A	N/A	3-5	21	97	227	211	0	-1	44	-12
4	containment wall				N/A	N/A	5-7	14	63	275	560	0	-1	44	-12
5	containment floor				N/A	N/A	4-5	9	39	323	910	0	-1	50	16
6	tank 4				N/A	N/A	8-12	8	34	409	1536	0	-1	35	-55
7	tank 3				N/A	N/A	8-10	6	24	292	684	1	2	39	-36
8	tank 2				N/A	N/A	10-12	6	24	329	953	1	2	46	-3
9	tank 1				N/A	N/A	10-12	17	78	400	1470	0	-1	33	-64
10	floor of containment				N/A	N/A	5-7	7	29	305	779	1	2	43	-17
11	wall second containment				N/A	N/A	3-5	6	24	204	44	1	2	47	2
12	floor of containment				N/A	N/A	3-5	11	49	328	946	0	-1	48	7
13	tank 1				N/A	N/A	3-5	5	19	220	160	3	7	42	-22
14	tank 2				N/A	N/A	3-5	9	39	242	320	3	7	37	-45
15	tank 3				N/A	N/A	4-6	12	53	242	320	0	-1	51	21
16	tank 4				N/A	N/A	4-6	51	243	296	713	3	7	40	-31
17	tank 5				N/A	N/A	4-6	19	87	241	313	1	2	36	-50
18	tank 6				N/A	N/A	5-7	3	10	186	-87	0	-1	34	-59
19	tank 7				N/A	N/A	6-9	12	53	197	-7	4	10	40	-31
20	tank 8				N/A	N/A	3-5	11	49	187	-80	1	2	35	-55
21	floor under pump				N/A	N/A	20-30	73	350	459	1899	0	-1	45	-8
22	floor under pump				N/A	N/A	3-5	120	578	694	3610	2	5	33	-64
23	floor				N/A	N/A	4-6	8	34	287	648	0	-1	53	30
24	floor				N/A	N/A	3-5	16	73	363	1201	0	-1	40	-31
25	floor				N/A	N/A	4-6	7	29	340	1033	1	2	51	21

Survey No.:	WT-07-FS-071
Date:	4/17/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** µRem/hr	***Gamma***		***Corr µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			164675 / PR176413		164675 / PR176413		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.162		0.108		0.354		0.212	
BKG:	*Bcpm**:*			NA	NA		NA	1		198		4		466	
ACF:				NA	NA		NA	1.27		1.27		1.00		1.00	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	11.3		238		4.16		75.0	
MDC:				NA	NA		NA	37.2		498		14.6		125	
No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	floor				N/A	N/A	5-7	9	39	292	684	0	-1	39	-36
27	tank				N/A	N/A	4-6	7	29	215	124	1	2	36	-50
28	floor under clarifier				N/A	N/A	3-5	42	199	339	1026	3	7	44	-12
29	side of clarifier				N/A	N/A	20-25	4	15	299	735	0	-1	48	7
30	floor				N/A	N/A	7-10	207	1001	800	4381	0	-1	45	-8
31	floor				N/A	N/A	5-7	89	428	635	3180	0	-1	46	-3
32	floor				N/A	N/A	5-7	65	311	489	2118	1	2	42	-22
33	floor				N/A	N/A	3-5	89	428	931	5334	0	-1	46	-3
34	on tank				N/A	N/A	15-17	1	0	396	1441	2	5	40	-31
35	lab floor				N/A	N/A	3-5	4	15	338	1019	0	-1	57	49
36	lab floor				N/A	N/A	3-5	1	0	367	1230	N/A	N/A	N/A	N/A
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-07-FS-072
Date:	6/6/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/22/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	299	6	582
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.5	299	5.09	44.3
MDC:		NA	NA	NA	37.9	620	16.0	73.2

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lab bench				N/A	N/A	5-7	1	0	314	111	1	1	50	-20
2	lab floor				N/A	N/A	5-7	1	0	468	1255	1	1	63	12
3	floor near clarifier				N/A	N/A	5-7	7	30	424	929	0	-2	41	-43
4	floor near second clarifier				N/A	N/A	3-5	32	154	446	1092	0	-2	53	-13
5	floor under front of filter press				N/A	N/A	3-5	9	40	409	817	2	4	51	-18
6	floor near pumps				N/A	N/A	5-7	281	1388	1061	5660	0	-2	51	-18
7	floor near trough				N/A	N/A	5-7	143	704	1190	6619	2	4	39	-48
8	floor behind rolloff				N/A	N/A	3-5	21	99	468	1255	0	-2	44	-35
9	floor between clarifier and sludge				N/A	N/A	3-5	4	15	409	817	0	-2	38	-50
10	filter press trailer floor				N/A	N/A	3-5	1	0	289	-74	1	1	39	-48
11	floor near clarifier				N/A	N/A	5-7	42	203	485	1382	0	-2	46	-30
12	under sludge holding tank				N/A	N/A	5-7	10	45	469	1263	0	-2	52	-15
13	walkway between sludge tank & press				N/A	N/A	4-6	10	45	427	951	0	-2	50	-20
14	offload pad-no directs because of rain				N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	-2	53	-13
15	offload pad-no directs because of rain				N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	1	57	-3
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-08-FS-015
Date:	10/14/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.57	51.0
MDC:		NA	NA	NA	61.0	536	18.2	83

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	main lobby				N/A	N/A	5-7	1	-15	325	773	0	-3	67	-25
2	office end of hall				N/A	N/A	5-7	3	-5	339	877	0	-3	68	-23
3	floor of loading dock				N/A	N/A	3-5	17	64	416	1449	0	-3	71	-15
4	fcontrol room floor				N/A	N/A	3-5	8	20	298	572	0	-3	65	-30
5	next to right side distillation				N/A	N/A	10-12	6	10	453	1723	3	6	84	17
6	behind distillation unit				N/A	N/A	5-7	7	15	362	1047	0	-3	69	-20
7	hehind left side of distillation unit				N/A	N/A	5-7	7	15	449	1694	0	-3	52	-63
8	on left side of distillation unit				N/A	N/A	5-7	7	15	385	1218	3	6	67	-25
9	infront of N tank containment				N/A	N/A	7-10	7	15	516	2191	0	-3	67	-25
10	corner of N containment				N/A	N/A		6	10	436	1597	0	-3	68	-23
11	floor of CB tank containment				N/A	N/A		8	20	642	3127	1	0	81	10
12	office floor inbound trucks				N/A	N/A		6	10	419	1471	2	3	66	-28
13	infront of sludge container				N/A	N/A		6	10	488	1983	0	-3	68	-23
14	near pH 1A tank				N/A	N/A		32	139	653	3209	2	3	59	-45
15	near pH 3A tank				N/A	N/A		46	208	597	2793	4	8	74	-8
16	near S2A tank				N/A	N/A		29	124	578	2652	0	-3	70	-18
17	valve near bottom of sludge tank				N/A	N/A		9	25	543	2392	5	11	68	-23
18	next to rolloff				N/A	N/A		17	64	570	2592	2	3	68	-23
19	lab floor				N/A	N/A		14	50	485	1961	0	-3	80	7
20	near pH2B tank				N/A	N/A		9	25	397	1307	0	-3	70	-18
21	near FTB tank				N/A	N/A		8	20	472	1865	1	0	67	-25
22	floor between tank B4 & B9				N/A	N/A		7	15	573	2615	0	-3	74	-8
23	containment floor A side near A2				N/A	N/A		5	5	544	2399	0	-3	83	15
24	truck offload pad				N/A	N/A		19	74	661	3268	0	-3	93	40
25	truck pickup pad				N/A	N/A		3	-5	392	1270	0	-3	70	-18

Survey No.:	WT-08-FS-062
Date:	5/2/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/4/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 / PR 240349	227415 / PR 240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	302	5	454
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	274	4.65	74.0
MDC:		NA	NA	NA	38.1	568	15.4	124

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Lobby Floor				N/A	N/A	3-5	1	0	309	47	0	-1	42	-16
2	Floor Near Blower Motor				N/A	N/A	4-6	9	40	438	922	0	-1	61	74
3	Floor Behind Blower Motor				N/A	N/A	3-5	5	20	374	488	2	4	52	31
4	Floor Between Blowers				N/A	N/A	3-5	3	10	368	447	0	-1	45	-2
5	Floor Near Preheat 2				N/A	N/A	5-7	1	0	428	854	0	-1	36	-44
6	Floor Between Preheat and Evaporator 2				N/A	N/A	3-5	3	10	396	637	3	7	42	-16
7	Control Room 2				N/A	N/A	3-5	5	20	310	54	0	-1	39	-30
8	Floor near Roll-up				N/A	N/A	3-5	10	45	379	522	2	4	46	3
9	Floor Under Pipes from DRI				N/A	N/A	3-5	11	50	356	366	0	-1	54	41
10	Floor Outside Control Room				N/A	N/A	3-5	9	40	359	386	1	1	50	22
11	Control Room 1				N/A	N/A	3-5	4	15	328	176	0	-1	41	-21
12	Aisle Floor				N/A	N/A	3-5	5	20	358	379	0	-1	48	12
13	Containment Floor				N/A	N/A	5-7	9	40	548	1667	3	7	47	8
14	Containment Floor				N/A	N/A	5-7	12	55	462	1084	2	4	49	17
15	Outside Office				N/A	N/A	3-5	4	15	401	671	0	-1	43	-11
16	Floor Near Sludge Tank				N/A	N/A	10-15	10	45	806	3415	1	1	48	12
17	Under Filter Press				N/A	N/A	3-5	14	65	488	1260	0	-1	44	-7
18	Floor Outside Mens's Room				N/A	N/A	5-7	17	80	480	1206	2	4	41	-21
19	Under pH 1 A Side				N/A	N/A	25-30	24	114	565	1782	0	-1	49	17
20	Under pH 2 A Side				N/A	N/A	30-35	16	75	712	2778	0	-1	44	-7
21	Under pH 2 A Side				N/A	N/A	30-35	20	95	755	3070	0	-1	37	-40
22	Floor Near Tank				N/A	N/A	10-15	2	5	734	2927	0	-1	46	3
23	Floor Under Tank				N/A	N/A	5-10	25	119	875	3883	0	-1	52	31
24	Floor Near Sludge Recirculator				N/A	N/A	7-10	20	95	456	1044	1	1	46	3
25	Floor Near Chem Storage				N/A	N/A	5-7	16	75	360	393	2	4	54	41

Survey No.:	WT-08-FS-062
Date:	5/2/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/4/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 / PR 240349	227415 / PR 240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	302	5	454
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	274	4.65	74.0
MDC:		NA	NA	NA	38.1	568	15.4	124

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Containment Floor				N/A	N/A	8-10	14	65	765	3137	0	-1	41	-21
27	Containment Floor				N/A	N/A	5-7	10	45	420	800	1	1	50	22
28	Bomb Door of Filter Press				N/A	N/A	5-7	24	114	716	2805	1	1	54	41
29	Second Floor Chem station				N/A	N/A	10-12	24	114	561	1755	0	-1	54	41
30	B Side Sludge Bay				N/A	N/A	3-5	17	80	480	1206	2	4	49	17
31	Sludge Tank				N/A	N/A	5-7	11	50	468	1125	1	1	43	-11
32	Centerfuge Side				N/A	N/A	3-5	3	10	267	-237	2	4	40	-25
33	Under Tank S3B				N/A	N/A	3-5	12	55	550	1681	3	7	40	-25
34	Under Tank S2B				N/A	N/A	7-10	22	104	605	2053	1	1	47	8
35	Under Tank S1B				N/A	N/A	7-10	40	194	650	2358	0	-1	49	17
36	Lab Floor				N/A	N/A	3-5	10	45	447	983	1	1	40	-25
37	pH 1B				N/A	N/A	5-7	22	104	603	2040	1	1	54	41
38	pH 2B				N/A	N/A	5-7	1	0	498	1328	1	1	43	-11
39	pH 3B				N/A	N/A	5-7	23	109	681	2568	1	1	68	107
40	Equalization Tank				N/A	N/A	5-7	12	55	539	1606	1	1	55	45
41	Floor near Roll-up				N/A	N/A	5-7	8	35	481	1213	0	-1	39	-30
42	Floor Between Tanks				N/A	N/A	10-12	6	25	669	2487	0	-1	50	22
43	Truck Loading Area				N/A	N/A	3-5	4	15	367	440	0	-1	53	36
44	Truck Loading Area				N/A	N/A	3-5	2	5	358	379	0	-1	36	-44
45	Truck Offloading Area				N/A	N/A	3-5	9	40	439	928	2	4	51	26
46	Truck Offloading Area				N/A	N/A	3-5	16	75	581	1891	0	-1	54	41
47															
48															
49															
50															

Survey No.:	WT-08-FS-063
Date:	7/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	261	10	521
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	279	6.57	41.9
MDC:		NA	NA	NA	14.9	581	18.2	70

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lobby floor				N/A	N/A	3-5	0	0	285	178	1	0	40	-30
2	hallway floor outside office				N/A	N/A	3-5	2	10	311	371	0	-3	46	-15
3	floor near rollup				N/A	N/A	3-5	19	94	384	914	0	-3	60	20
4	floor near furnace				N/A	N/A	3-5	10	50	350	661	1	0	50	-5
5	floor of distilation office				N/A	N/A	3-5	2	10	268	52	3	6	54	5
6	floor under pipe connection				N/A	N/A	3-5	9	45	429	1248	2	3	43	-23
7	floor behind motor 1				N/A	N/A	3-4	3	15	315	401	0	-3	30	-55
8	floor behind motor 2				N/A	N/A	3-4	2	10	304	319	1	0	42	-25
9	floor between evaporator & pretreat tanks				N/A	N/A	4-6	14	69	389	951	0	-3	35	-43
10	floor near calcium storage				N/A	N/A	5-7	12	60	373	832	0	-3	45	-18
11	containment of CB tanks				N/A	N/A	5-7	2	10	391	966	1	0	53	2
12	doorway between distilation & treatment facility				N/A	N/A	4-6	4	20	384	914	1	0	35	-43
13	lab bench				N/A	N/A	3-5	2	10	274	97	0	-3	46	-15
14	lab floor				N/A	N/A	4-6	9	45	376	854	2	3	53	2
15	floor by truck checkin				N/A	N/A	3-5	4	20	413	1129	2	3	56	10
16	sample storage shelf				N/A	N/A	5-7	1	5	348	646	0	-3	53	2
17	floor entering containment				N/A	N/A	4-6	19	94	382	899	2	3	57	12
18	containment floor				N/A	N/A	5-7	13	64	595	2481	1	0	46	-15
19	floor near pH adjustment pump				N/A	N/A	4-6	16	79	450	1404	2	3	54	5
20	floor near lumela pit				N/A	N/A	6-8	8	40	608	2578	1	0	39	-33
21	floor near sludge recirculation				N/A	N/A	5-7	7	35	493	1723	2	3	54	5
22	floor near mud tank				N/A	N/A	4-5	14	69	460	1478	0	-3	45	-18
23	floor between 53B & 52B				N/A	N/A	4-6	8	40	473	1575	1	0	34	-45
24	lab floor				N/A	N/A	3-5	5	25	343	609	3	6	50	-5
25	floor between pH 1B & pH 2B				N/A	N/A	3-5	11	55	325	475	0	-3	54	5

Survey No.:	WT-08-FS-063
Date:	7/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:		**Project:**
Contaminant/Limits:		
Comments:		

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	261	10	521
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	279	6.57	41.9
MDC:		NA	NA	NA	14.9	581	18.2	70

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	floor below FTB				N/A	N/A	3-5	15	74	433	1278	2	3	46	-15
27	floor around centerfuge				N/A	N/A	3-5	11	55	333	535	1	0	37	-38
28	containment floor				N/A	N/A	3-5	11	55	426	1226	1	0	38	-35
29	containment floor				N/A	N/A	10-12	4	20	575	2332	0	-3	45	-18
30	floor near influent water tanks				N/A	N/A	3-5	15	74	449	1397	0	-3	36	-40
31	floor near offload pad drain				N/A	N/A	3-5	9	45	599	2511	0	-3	34	-45
32	effluent truck pad				N/A	N/A	3-5	3	15	306	334	0	-3	45	-18
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-09-FS-013
Date:	10/8/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:				**Project:**
Contaminant/Limits:				
Comments:				

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.57	51.0
MDC:		NA	NA	NA	61.0	536	18.2	83

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	offload bay				N/A	N/A	3-5	2	-10	441	1634	0	-3	47	-75
2	floor near generator				N/A	N/A	5-7	8	20	391	1263	4	8	47	-75
3	floor inside containment				N/A	N/A	5-7	26	109	402	1345	1	0	57	-50
4	floor near pump				N/A	N/A	5-8	11	35	450	1701	2	3	61	-40
5	floor outside restroom				N/A	N/A	10-12	1	-15	546	2414	1	0	48	-73
6	lab floor				N/A	N/A	4-6	3	-5	319	728	0	-3	38	-98
7	lab bench				N/A	N/A	10-15	2	-10	418	1463	2	3	46	-78
8	office floor				N/A	N/A	8-10	5	5	364	1062	3	6	52	-63
9	edge of sludge bay				N/A	N/A	10-12	5	5	460	1775	3	6	46	-78
10	floor near press				N/A	N/A	5-7	3	-5	360	1033	3	6	55	-55
11	floor near air compressors				N/A	N/A	6-8	4	0	348	943	1	0	44	-83
12	center of loading dock				N/A	N/A	10-12	0	-20	380	1181	1	0	50	-68
13	floor near tank				N/A	N/A	25-30	7	15	708	3618	1	0	52	-63
14	floor near flock				N/A	N/A	10-12	5	5	545	2407	N/A	N/A	N/A	N/A
15	floor near loading dock				N/A	N/A	10-12	6	10	399	1322	1	0	42	-88
16	floor near mixing tank				N/A	N/A	12-15	21	84	423	1501	3	6	49	-70
17	floor near neutralization tank				N/A	N/A	20-25	12	40	676	3380	2	3	43	-85
18	floor near effluent tank				N/A	N/A	45-50	56	258	1825	11915	2	3	57	-50
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-09-FS-060
Date:	4/23/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/28/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	205	0	508
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	242	0.00	78.3
MDC:		NA	NA	NA	37.2	507	8.5	130

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Offload Floor				N/A	N/A	3-5	2	5	316	808	1	3	61	48
2	Offload Floor				N/A	N/A	4-6	5	19	307	742	0	0	45	-27
3	Containment Floor				N/A	N/A	10-12	16	73	434	1666	0	0	49	-8
4	Containment Floor				N/A	N/A	10-15	25	117	539	2431	1	3	45	-27
5	Containment Floor				N/A	N/A	4-6	21	97	354	1084	1	3	58	34
6	Control Room Floor				N/A	N/A	4-6	11	49	253	349	0	0	52	6
7	Control Room Floor				N/A	N/A	4-6	12	53	254	357	1	3	35	-75
8	Control Room Floor				N/A	N/A	3-5	2	5	344	1012	0	0	64	62
9	Bathroom Floor				N/A	N/A	3-5	1	0	238	240	0	0	63	58
10	Lab Floor				N/A	N/A	3-5	2	5	278	531	0	0	47	-18
11	Lab Bench				N/A	N/A	5-7	0	-5	242	269	0	0	47	-18
12	Office Floor				N/A	N/A	5-7	3	10	244	284	0	0	51	1
13	Floor Near Sludge Bay				N/A	N/A	5-7	0	-5	403	1441	4	11	46	-23
14	Loading Dock				N/A	N/A	5-7	1	0	263	422	1	3	49	-8
15	Second Floor				N/A	N/A	3-5	2	5	259	393	2	6	54	15
16	Second Floor Near HVAC				N/A	N/A	3-5	1	0	229	175	0	0	61	48
17	Second Floor Near Air Compressor				N/A	N/A	3-5	2	5	165	-291	1	3	47	-18
18	Filter Press				N/A	N/A	3-5	1	0	144	-444	0	0	39	-56
19	Pump				N/A	N/A	20-30	8	34	511	2227	0	0	41	-46
20	Bottom of Clarifier				N/A	N/A	250-300	11	49	1183	7117	2	6	44	-32
21	Floor				N/A	N/A	7-10	0	-5	407	1470	0	0	50	-4
22	Floor				N/A	N/A	7-10	0	-5	278	531	0	0	79	133
23	Floor				N/A	N/A	25-30	14	63	908	5116	0	0	67	76
24	Floor Under Tank				N/A	N/A	20-25	4	15	474	1958	4	11	50	-4
25	Floor Under Tank				N/A	N/A	20-25	10	44	431	1645	1	3	43	-37

Survey No.:	WT-09-FS-060
Date:	4/23/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/28/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			164675 / PR176413		164675 / PR176413		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.162		0.108		0.354		0.212	
BKG:	*Bcpm**:*			NA	NA		NA	1		205		0		508	
ACF:				NA	NA		NA	1.27		1.27		1.00		1.00	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	11.3		242		0.00		78.3	
MDC:				NA	NA		NA	37.2		507		8.5		130	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Pad for Tank Control				N/A	N/A	5-7	13	58	332	924	0	0	45	-27
27	Tank				N/A	N/A	10-12	N/A	N/A	N/A	N/A	11	31	69	86
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-09-FS-061
Date:	7/23/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/1/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:			**Project:**
Contaminant/Limits:			
Comments:			

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	6	252	9	371
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	28.3	274	6.23	35.4
MDC:		NA	NA	NA	71.4	571	17.7	60

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	truck offload pad				N/A	N/A	3-5	7	5	419	1241	1	0	42	12
2	electrical service room				N/A	N/A	3-5	8	10	347	706	2	3	35	-5
3	near oil tank inside secondary containment				N/A	N/A	3-5	9	15	379	943	2	3	39	5
4	floor near rectangular				N/A	N/A	5-7	7	5	440	1397	2	3	44	17
5	loading dock floor				N/A	N/A	7-10	3	-15	377	929	2	3	27	-25
6	bottom of steps near press				N/A	N/A	10-12	3	-15	628	2793	1	0	32	-13
7	office floor				N/A	N/A	4-6	5	-5	340	654	0	-3	53	40
8	lab floor				N/A	N/A	3-5	3	-15	302	371	0	-3	36	-3
9	lab bench				N/A	N/A	5-7	2	-20	332	594	0	-3	35	-5
10	entrance to restroom				N/A	N/A	10-12	1	-25	461	1553	0	-3	28	-23
11	electical room				N/A	N/A	5-7	6	0	388	1010	1	0	42	12
12	production floor near tank				N/A	N/A	10-15	13	35	604	2615	3	6	48	27
13	floor near flock tanks				N/A	N/A	5-7	6	0	491	1775	0	-3	36	-3
14	floor near mixing tank				N/A	N/A	5-7	3	-15	381	958	0	-3	34	-8
15	floor lower side of loading dock				N/A	N/A	5-7	2	-20	422	1263	0	-3	40	7
16	floor near lumella				N/A	N/A	20-30	5	-5	1146	6641	0	-3	47	25
17	floor behind tank				N/A	N/A	20-25	6	0	850	4442	2	3	40	7
18	floor behind tank				N/A	N/A	10-12	13	35	608	2644	3	6	46	22
19	floor near press				N/A	N/A	5-7	3	-15	389	1018	1	0	37	0
20	compressor area				N/A	N/A	3-5	1	-25	321	513	1	0	34	-8
21															
22															
23															
24															
25															

Survey No.:	WT-10-FS-002
Date:	12/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	1/15/2014
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E094A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.165	0.235	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	7	548
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	22.2	116	5.38	45.8
MDC:		NA	NA	NA	58.7	242	16.3	75.9

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lobby floor				N/A	N/A	3-5	0	-19	203	-60	1	1	75	54
2	office floor				N/A	N/A	3-5	0	-19	225	13	2	4	52	-7
3	lab floor				N/A	N/A	4-6	1	-14	201	-67	1	1	63	22
4	lab bench				N/A	N/A	5-6	1	-14	219	-7	4	9	57	6
5	floor next to tank				N/A	N/A	10-12	39	167	1037	2733	0	-2	68	35
6	floor near second tank				N/A	N/A	10-12	34	143	654	1450	1	1	52	-7
7	floor near middle tank				N/A	N/A	10-12	15	52	525	1018	1	1	50	-13
8	floor near effluent discharge				N/A	N/A	3-5	51	224	409	630	0	-2	49	-15
9	floor at head of tank row				N/A	N/A	3-5	26	105	320	332	0	-2	60	14
10	in tank row				N/A	N/A	3-5	2	-10	315	315	1	1	54	-2
11	in tank row				N/A	N/A	10-12	9	24	343	409	2	4	65	27
12	maintenance bench				N/A	N/A	3-5	0	-19	154	-224	5	12	60	14
13	floor near tank #1				N/A	N/A	5-7	8	19	291	234	3	6	49	-15
14	floor between treated water tanks				N/A	N/A	3-5	9	24	268	157	1	1	61	16
15	floor between treaded water tanks				N/A	N/A	5-7	1	-14	271	167	0	-2	54	-2
16	floor near offload				N/A	N/A	3-5	5	5	267	154	0	-2	50	-13
17	water offload				N/A	N/A	5-7	1	-14	261	134	1	1	51	-10
18	water offload				N/A	N/A	6-8	4	0	266	151	3	6	56	3
19	near residual tanks				N/A	N/A	4-6	2	-10	265	147	2	4	46	-23
20	near primary treatment				N/A	N/A	3-5	4	0	261	134	0	-2	55	1
21	opposite side of prmary treatment				N/A	N/A	5-7	4	0	271	167	2	4	66	30
22	lunch room				N/A	N/A	5-7	1	-14	222	3	1	1	52	-7
23															
24															
25															

Survey No.:	WT-10-FS-046
Date:	4/19/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	C690J		164675 / PR176413		164675 / PR176413		185291		PR194723		
Cal. Due Date:				NA	9/21/2013		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.162		0.108		0.354		0.212		
BKG:	*Bcpm**:*			NA	NA	3-5	1		267		3		430		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	11.3		277		3.60		72.0		
MDC:				NA	NA	NA	37.2		575		13.8		121		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Dump Floor				N/A	N/A	3-6	3	10	147	-873	0	-1	40	-14
2	Dump Floor				N/A	N/A	3-6	4	15	290	167	0	-1	39	-19
3	Floor Under Tank				N/A	N/A	3-6	1	0	225	-306	0	-1	33	-47
4	Floor Under Tank				N/A	N/A	3-6	2	5	244	-167	0	-1	36	-33
5	Outside of Filter				N/A	N/A	3-5	1	0	240	-196	0	-1	49	28
6	Edge of Filter				N/A	N/A	3-5	1	0	155	-815	0	-1	37	-28
7	Floor				N/A	N/A	3-5	2	5	158	-793	0	-1	44	5
8	Floor Near Water Tank				N/A	N/A	3-5	0	-5	227	-291	0	-1	47	19
9	Floor Near Water Tank				N/A	N/A	3-5	2	5	263	-29	0	-1	48	24
10	Infront of Water Tank'				N/A	N/A	3-5	12	53	409	1033	0	-1	46	14
11	Floor Near Water Tank				N/A	N/A	8-10	11	49	334	488	0	-1	45	9
12	Floor Near Water Tank				N/A	N/A	5-7	35	165	367	728	0	-1	38	-24
13	On Tank				N/A	N/A	5-7	6	24	210	-415	0	-1	41	-9
14	Floor Near Water Tank				N/A	N/A	5-7	19	87	371	757	0	-1	50	33
15	Floor Near Water Tank				N/A	N/A	8-10	9	39	451	1339	3	8	42	-5
16	Floor Near Water Tank				N/A	N/A	20-30	13	58	472	1492	1	2	35	-38
17	Floor Near Water Tank				N/A	N/A	10-20	99	476	1060	5771	0	-1	56	61
18	Floor Near Water Tank				N/A	N/A	3-6	17	78	449	1324	0	-1	55	57
19	Floor Near Water Tank				N/A	N/A	7-9	6	24	359	670	2	5	51	38
20	Floor Near Water Tank				N/A	N/A	7-10	3	10	360	677	2	5	49	28
21	Floor Near Water Tank				N/A	N/A	7-10	6	24	332	473	2	5	50	33
22	Floor Near Water Tank				N/A	N/A	3-5	3	10	261	-44	1	2	52	42
23	Floor Near Water Tank				N/A	N/A	3-5	2	5	282	109	0	-1	42	-5
24	Floor Near Water Tank				N/A	N/A	3-5	5	19	251	-116	0	-1	45	9
25	Floor Near Water Tank				N/A	N/A	3-5	4	15	274	51	1	2	45	9

Survey No.:	WT-10-FS-046
Date:	4/19/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	C690J		164675 / PR176413		164675 / PR176413		185291		PR194723		
Cal. Due Date:				NA	9/21/2013		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.162		0.108		0.354		0.212		
BKG:	*Bcpm**:*			NA	NA	3-5	1		267		3		430		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	11.3		277		3.60		72.0		
MDC:				NA	NA	NA	37.2		575		13.8		121		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Floor Near Water Tank				N/A	N/A	3-5	7	29	259	-58	0	-1	56	61
27	Floor Near Water Tank				N/A	N/A	3-5	5	19	252	-109	0	-1	43	0
28	Floor Near Water Tank				N/A	N/A	5-7	3	10	251	-116	2	5	52	42
29	Floor Near Water Tank				N/A	N/A	3-5	2	5	330	458	0	-1	37	-28
30	Floor Near Entranc to Office				N/A	N/A	3-5	3	10	287	146	1	2	42	-5
31	Lab Floor				N/A	N/A	5-7	2	5	219	-349	0	-1	54	52
32	Lab Floor				N/A	N/A	3-5	0	-5	198	-502	0	-1	42	-5
33	Lobby Floor				N/A	N/A	5-7	1	0	195	-524	2	5	51	38
34	Lobby Floor				N/A	N/A	3-5	0	-5	214	-386	0	-1	43	0
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-10-FS-047
Date:	7/18/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/12/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1588	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	273	10	454
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	286	6.57	39.1
MDC:		NA	NA	NA	14.9	593	18.2	65

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lobby floor				N/A	N/A	3-5	2	10	270	-22	1	0	49	9
2	office floor				N/A	N/A	3-5	2	10	276	22	0	-3	43	-6
3	lab floor				N/A	N/A	3-5	0	0	297	178	0	-3	50	11
4	lab bench				N/A	N/A	3-5	0	0	251	-163	0	-3	42	-8
5	breakroom floor				N/A	N/A	3-5	1	5	260	-97	0	-3	47	4
6	floor next to effluent tanks				N/A	N/A	6-8	6	30	510	1761	0	-3	51	14
7	floor under mixing tanks				N/A	N/A	4-6	6	30	255	-134	0	-3	40	-13
8	floor near effluent mix				N/A	N/A	3-5	35	174	369	713	0	-3	60	36
9	floor near influent tanks				N/A	N/A	3-5	5	25	428	1151	1	0	41	-11
10	floor near influent tanks				N/A	N/A	3-5	4	20	326	394	0	-3	41	-11
11	aisleway behind tanks				N/A	N/A	3-5	3	15	363	669	1	0	45	-1
12	maintanence and storage bench				N/A	N/A	3-5	3	15	31	-1798	N/A	N/A	N/A	N/A
13	storage area floor				N/A	N/A	3-5	3	15	326	394	0	-3	41	-11
14	aisleway floor				N/A	N/A	4-6	5	25	329	416	0	-3	51	14
15	between treated water tanks				N/A	N/A	4-6	2	10	353	594	1	0	41	-11
16	between treated water tanks				N/A	N/A	3-5	15	74	355	609	0	-3	33	-31
17	truck offload bay				N/A	N/A	3-5	1	5	338	483	1	0	52	16
18	floor near chemical storage				N/A	N/A	3-5	0	0	313	297	0	-3	44	-3
19	table near influent water screen				N/A	N/A	3-5	0	0	212	-453	0	-3	43	-6
20	filter press 2				N/A	N/A	3-5	0	0	206	-498	0	-3	50	11
21	floor behind waste oil tanks				N/A	N/A	3-5	2	10	306	245	0	-3	52	16
22															
23															
24															
25															

Survey No.:	WT-11-FS-005
Date:	10/9/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	7	557
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	5.38	46.2
MDC:		NA	NA	NA	61.0	536	16.3	76

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	under filter press conveyer				N/A	N/A	4-6	27	114	505	2110	0	-2	56	1
2	garage bay floor				N/A	N/A	3-5	19	74	314	691	0	-2	50	-15
3	work area in garage				N/A	N/A	4-6	18	69	427	1530	0	-2	64	22
4	storage room				N/A	N/A	4-6	12	40	457	1753	1	1	43	-34
5	coat storage area				N/A	N/A	4-6	10	30	337	862	0	-2	67	30
6	kitchen break area				N/A	N/A	4-6	7	15	341	891	1	1	69	35
7	reception area				N/A	N/A	3-5	8	20	350	958	0	-2	52	-10
8	conference room				N/A	N/A	3-5	7	15	342	899	0	-2	46	-26
9	hallway outside of lab				N/A	N/A	5-7	6	10	349	951	1	1	60	11
10	office floor				N/A	N/A	5-7	9	25	338	869	0	-2	59	9
11	lab floor				N/A	N/A	3-5	6	10	304	617	2	4	58	6
12	lab floor				N/A	N/A	4-6	12	40	347	936	1	1	52	-10
13	offload pad				N/A	N/A	6-8	16	60	480	1924	3	6	64	22
14	containment floor				N/A	N/A	12-15	6	10	676	3380	0	-2	66	27
15	containment floor				N/A	N/A	10-12	22	89	466	1820	2	4	65	25
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-12-FS-024
Date:	12/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	1/15/2014
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		184932/PR194992	184932/PR194992	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/30/2014	4/18/2014	10/24/2014	10/24/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.165	0.235	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	148	7	548
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	22.2	95	5.38	45.8
MDC:		NA	NA	NA	58.7	200	16.3	75.9

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Lobby Floor				N/A	N/A	5-7	4	0	294	489	3	6	54	-2
2	Lab Floor				N/A	N/A	5-7	1	-14	283	452	0	-2	66	30
3	Lab Bench				N/A	N/A	5-7	1	-14	253	352	0	-2	54	-2
4	Locker Room Floor				N/A	N/A	8-10	0	-19	316	563	2	4	61	16
5	Pump Room				N/A	N/A	5-7	5	5	224	255	0	-2	54	-2
6	Floor near drain between pumps				N/A	N/A	3-5	1	-14	199	171	1	1	68	35
7	Filter press room near door				N/A	N/A	5-7	9	24	302	516	1	1	63	22
8	filter press room near floor drains				N/A	N/A	5-7	2	-10	268	402	0	-2	68	35
9	filter press room				N/A	N/A	8-10	3	-5	285	459	0	-2	65	27
10	next to press				N/A	N/A	5-7	11	33	311	546	2	4	52	-7
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-12-FS-074
Date:	4/19/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR94723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	307	3	430
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	297	3.60	72.0
MDC:		NA	NA	NA	14.6	615	13.8	121

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Lobby Floor				N/A	N/A	3-5	4	19	278	-211	0	-1	46	14
2	Lobby Floor				N/A	N/A	3-5	4	19	265	-306	0	-1	39	-19
3	Lab Floor				N/A	N/A	3-5	1	5	306	-7	0	-1	39	-19
4	Underground Chase				N/A	N/A	3-5	6	29	268	-284	0	-1	44	5
5	Underground Chase Near Pump				N/A	N/A	3-5	4	19	228	-575	0	-1	56	61
6	Underground Chase				N/A	N/A	3-5	4	19	371	466	2	5	47	19
7	Underground Chase Near Pump				N/A	N/A	3-5	9	44	315	58	0	-1	35	-38
8	Underground Chase Near Pump				N/A	N/A	3-5	3	15	305	-15	1	2	45	9
9	Underground Chase Near Pump				N/A	N/A	3-5	4	19	210	-706	0	-1	40	-14
10	Underground Chase				N/A	N/A	3-5	4	19	343	262	0	-1	45	9
11	Underground Chase				N/A	N/A	3-5	6	29	279	-204	0	-1	43	0
12	Digester Building				N/A	N/A	3-5	1	5	279	-204	2	5	42	-5
13	Digester Building				N/A	N/A	3-5	5	24	202	-764	0	-1	41	-9
14	Sludge Press Room				N/A	N/A	5-7	2	10	226	-589	1	2	52	42
15	Sludge Press Room				N/A	N/A	3-5	3	15	270	-269	2	5	57	66
16	Sludge Press Room				N/A	N/A	3-5	4	19	313	44	0	-1	41	-9
17	Near Sludge Press				N/A	N/A	3-5	2	10	235	-524	0	-1	47	19
18	Sludge Barn				N/A	N/A	3-5	3	15	246	-444	0	-1	43	0
19	Sludge Barn				N/A	N/A	3-5	8	39	261	-335	0	-1	40	-14
20															
21															
22															
23															
24															
25															

Survey No.:	WT-12-FS-075
Date:	7/18/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0.00	222	10	521
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	257	6.57	41.9
MDC:		NA	NA	NA	14.9	537	18.2	69.6

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lobby floor				N/A	N/A	4-6	0	0	353	973	1	0	45	-18
2	lab floor				N/A	N/A	3-5	1	5	331	810	0	-3	48	-10
3	lab bench				N/A	N/A	3-5	4	20	315	691	0	-3	47	-13
4	breakroom floor				N/A	N/A	4-6	1	5	368	1085	0	-3	46	-15
5	dressing room floor				N/A	N/A	4-6	2	10	328	787	0	-3	56	10
6	compresser room floor				N/A	N/A	3-5	1	5	309	646	0	-3	50	-5
7	compresser room floor near drain				N/A	N/A	3-5	2	10	283	453	0	-3	46	-15
8	filter press room floor				N/A	N/A	3-5	6	30	360	1025	0	-3	38	-35
9	floor near press				N/A	N/A	3-5	5	25	353	973	1	0	56	10
10	filter press room floor				N/A	N/A	3-5	3	15	336	847	0	-3	38	-35
11	room under centerfuge press				N/A	N/A	3-5	7	35	332	817	0	-3	42	-25
12	room under filter press				N/A	N/A	4-6	11	55	355	988	0	-3	46	-15
13	compressor room floor				N/A	N/A	3-5	1	5	328	787	0	-3	45	-18
14	chase floor				N/A	N/A	3-5	2	10	304	609	0	-3	46	-15
15	chase floor				N/A	N/A	3-5	6	30	430	1545	0	-3	48	-10
16	chase floor				N/A	N/A	3-5	1	5	371	1107	0	-3	51	-3
17	filter sludge holding area				N/A	N/A	3-5	7	35	333	825	0	-3	32	-50
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-13-FS-034
Date:	10/8/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.74	46.5
MDC:		NA	NA	NA	61.0	536	18.3	77

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	maintenance garage floor				N/A	N/A	5-7	3	-5	354	988	1	0	57	2
2	electrical room floor				N/A	N/A	5-7	3	-5	382	1196	2	2	52	-12
3	generator room				N/A	N/A	5-7	6	10	375	1144	1	0	64	20
4	lobby floor				N/A	N/A	10-12	2	-10	508	2132	2	2	55	-4
5	lab floor				N/A	N/A	8-10	1	-15	442	1642	2	2	65	23
6	lab bench				N/A	N/A	8-10	2	-10	414	1434	3	5	65	23
7	top of aeration tank				N/A	N/A	5-7	1	-15	335	847	2	2	62	15
8	steps of effluent tanks				N/A	N/A	5-7	17	64	416	1449	3	5	51	-14
9	steps of primary aeration tanks				N/A	N/A	5-7	15	55	426	1523	2	2	59	7
10	oil & gas walkway				N/A	N/A	5-7	3	-5	351	966	1	0	65	23
11	inside containment between tanks				N/A	N/A	5-7	19	74	429	1545	4	8	65	23
12	floor near workstation				N/A	N/A	8-10	8	20	388	1241	2	2	68	31
13	floor next to tanks				N/A	N/A	6-8	8	20	387	1233	1	0	72	42
14	chemical storage floor				N/A	N/A	6-8	2	-10	336	854	1	0	63	18
15	chemical storage floor				N/A	N/A	5-7	2	-10	359	1025	1	0	64	20
16	in front of filter press				N/A	N/A	5-7	12	40	394	1285	2	2	73	44
17	under press conveyor				N/A	N/A	5-7	6	10	404	1359	0	-3	42	-38
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-13-FS-119	**Item Surveyed:**	**Project:**
Date:	4/24/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	4/30/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	301	2	360
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	294	2.94	65.9
MDC:		NA	NA	NA	37.2	609	12.8	112

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Lab Floor				N/A	N/A	4-6	3	10	401	728	0	-1	25	-52
2	Lab Sink				N/A	N/A	6-8	1	0	344	313	0	-1	37	5
3	Entrance Floor				N/A	N/A	6-8	2	5	342	298	0	-1	28	-38
4	Maintance Floor				N/A	N/A	3-5	6	24	273	-204	1	2	27	-42
5	Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	35	-5
6	Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	36	0
7	Tank				N/A	N/A	5-7	N/A	N/A	N/A	N/A	0	-1	25	-52
8	Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	38	9
9	Tank				N/A	N/A	4-6	N/A	N/A	N/A	N/A	0	-1	30	-28
10	Tank				N/A	N/A	4-6	N/A	N/A	N/A	N/A	0	-1	33	-14
11	Aerator				N/A	N/A	5-7	N/A	N/A	N/A	N/A	0	-1	37	5
12	Floor Next to Tank				N/A	N/A	5-7	27	126	281	-146	2	5	42	28
13	Floor				N/A	N/A	10-12	6	24	189	-815	0	-1	43	33
14	Floor				N/A	N/A	7-10	6	24	348	342	0	-1	38	9
15	Floor				N/A	N/A	7-10	181	875	160	-1026	6	16	49	61
16	Tank Base				N/A	N/A	120-130	N/A	N/A	235	-480	0	-1	38	9
17	Tank Base				N/A	N/A	90-100	N/A	N/A	237	-466	4	11	31	-24
18	Tank Base				N/A	N/A	50-60	N/A	N/A	217	-611	1	2	41	24
19	Tank Base				N/A	N/A	50-60	N/A	N/A	267	-247	3	8	37	5
20	Tank Base				N/A	N/A	15-20	N/A	N/A	244	-415	3	8	33	-14
21	Tank Base				N/A	N/A	20-25	N/A	N/A	N/A	N/A	0	-1	36	0
22	Tank Base				N/A	N/A	15-20	N/A	N/A	N/A	N/A	0	-1	33	-14
23	Tank Base				N/A	N/A	20-25	N/A	N/A	N/A	N/A	1	2	36	0
24	Floor Near Truck Offload				N/A	N/A	7-10	3	10	N/A	N/A	0	-1	25	-52
25	Floor				N/A	N/A	5-7	2	5	N/A	N/A	1	2	35	-5

Survey No.:	WT-13-FS-119
Date:	4/24/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			164675 / PR176413		164675 / PR176413		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.162		0.108		0.354		0.212	
BKG:	*Bcpm**:*			NA	NA		NA	1		301		2		360	
ACF:				NA	NA		NA	1.27		1.27		1.00		1.00	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	11.3		294		2.94		65.9	
MDC:				NA	NA		NA	37.2		609		12.8		112	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Floor				N/A	N/A	5-7	3	10	N/A	N/A	0	-1	34	-9
27	Floor				N/A	N/A	5-7	1	0	N/A	N/A	0	-1	40	19
28	Tank Base				N/A	N/A	15-20	N/A	N/A	N/A	N/A	1	2	51	71
29	Tank Base				N/A	N/A	60-70	N/A	N/A	N/A	N/A	0	-1	58	104
30	Floor				N/A	N/A	7-10	15	68	N/A	N/A	0	-1	44	38
31	Filter Press Area				N/A	N/A	3-5	4	15	N/A	N/A	0	-1	56	94
32	Filter Press Area				N/A	N/A	3-5	13	58	N/A	N/A	0	-1	34	-9
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-13-FS-120
Date:	7/31/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227389 /PR240337		227415 /PR240349		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.159		0.106		0.354		0.401	
BKG:	*Bcpm**:*			NA	NA		NA	1		242		10		521	
ACF:				NA	NA		NA	1.27		1.27		1.00		1.00	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	11.5		269		6.57		41.9	
MDC:				NA	NA		NA	37.9		560		18.2		69.6	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lab floor				N/A	N/A	4-6	0	-5	402	1189	0	-3	43	-23
2	lab floor				N/A	N/A	5-7	1	0	399	1166	0	-3	56	10
3	electrical room floor				N/A	N/A	3-5	3	10	388	1085	0	-3	41	-28
4	office floor				N/A	N/A	5-7	0	-5	386	1070	0	-3	45	-18
5	garagae floor				N/A	N/A	4-6	3	10	313	527	0	-3	65	32
6	floor of blower room				N/A	N/A	3-5	5	20	313	527	0	-3	41	-28
7	floor of brine treatment				N/A	N/A	3-5	13	60	365	914	0	-3	52	0
8	walkway next to brine tanks				N/A	N/A	4-6	6	25	381	1033	1	0	41	-28
9	secondary containment				N/A	N/A	5-7	34	164	448	1530	2	3	46	-15
10	walkway between tanks				N/A	N/A	3-5	0	-5	364	906	1	0	48	-10
11	walkway otherside of tanks				N/A	N/A	3-5	13	60	327	631	1	0	46	-15
12	walkway otherside of tanks				N/A	N/A	3-5	6	25	361	884	1	0	40	-30
13	treatment area				N/A	N/A	3-5	7	30	364	906	0	-3	42	-25
14	chemical storage area				N/A	N/A	3-5	1	0	314	535	0	-3	37	-38
15	storage area				N/A	N/A	3-5	1	0	313	527	2	3	42	-25
16	in front of filter press				N/A	N/A	3-5	5	20	321	587	0	-3	43	-23
17	next to press				N/A	N/A	3-5	4	15	356	847	0	-3	55	7
18	next to press under conveyor				N/A	N/A	3-5	2	5	433	1419	2	3	43	-23
19	between aerators				N/A	N/A	3-5	7	30	315	542	1	0	40	-30
20	floor above influent pumps				N/A	N/A	3-5	6	25	329	646	0	-3	45	-18
21															
22															
23															
24															
25															

Survey No.:	WT-14-FS-027
Date:	10/9/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	4	221	10	771
	ACF:	NA	NA	NA	1.27	1.27	1.00	1.00
	tB:	NA	NA	NA	1	1	10	10
	tS:	NA	NA	NA	1	1	1	1
	Lc:	NA	NA	NA	23.1	257	6.57	51.0
	MDC:	NA	NA	NA	61.0	536	18.2	83

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	floor next to press				N/A	N/A	3-5	2	-10	353	981	2	3	47	-75
2	floor in filter press room				N/A	N/A	3-5	4	0	367	1085	1	0	45	-80
3	middle bay of garage door				N/A	N/A	5-7	3	-5	359	1025	1	0	42	-88
4	polymer mixing room				N/A	N/A	4-6	2	-10	362	1047	0	-3	60	-43
5	office floor				N/A	N/A	3-5	11	35	325	773	1	0	55	-55
6	breakroom floor				N/A	N/A	4-6	14	50	363	1055	1	0	45	-80
7	maintenance garage floor				N/A	N/A	3-5	6	10	399	1322	1	0	40	-93
8	maintenance floor				N/A	N/A	3-5	4	0	372	1122	3	6	48	-73
9	effluent sample				N/A	N/A	3-5	8	20	428	1538	N/A	N/A	N/A	N/A
10	initial solids seperation				N/A	N/A	5-7	8	20	376	1151	3	6	61	-40
11	influent water sampler				N/A	N/A	5-7	7	15	359	1025	0	-3	45	-80
12	motor of aeration tank				N/A	N/A	3-5	15	55	369	1099	2	3	46	-78
13	top of clarifier				N/A	N/A	3-5	12	40	410	1404	3	6	51	-65
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-14-FS-121
Date:	4/23/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/28/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	205	0	508
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	242	0.00	78.3
MDC:		NA	NA	NA	37.2	507	8.5	130

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Truck Offload Area				N/A	N/A	3-5	3	10	409	1485	1	3	48	-13
2	Sludge Separator				N/A	N/A	3-5	1	0	203	-15	0	0	37	-65
3	Influent Water Area				N/A	N/A	3-5	4	15	261	408	0	0	45	-27
4	Under Influent Water Sampler				N/A	N/A	3-5	6	24	279	539	0	0	47	-18
5	Near Grease Catcher				N/A	N/A	3-5	5	19	255	364	1	3	46	-23
6	Near Airation Tank 1				N/A	N/A	3-5	9	39	275	509	0	0	49	-8
7	Near Airation Tank 1				N/A	N/A	3-5	15	68	275	509	0	0	45	-27
8	Near Airation Tank 2				N/A	N/A	3-5	24	112	337	961	0	0	57	29
9	Near Airation Tank 2				N/A	N/A	3-5	7	29	343	1004	1	3	37	-65
10	Near Effluent Water Sampler				N/A	N/A	3-5	10	44	277	524	0	0	50	-4
11	Under Effluent Sampler				N/A	N/A	3-5	8	34	294	648	0	0	42	-42
12	Lunch Room Floor				N/A	N/A	3-5	9	39	281	553	0	0	39	-56
13	Utility Room Floor				N/A	N/A	3-5	12	53	189	-116	0	0	49	-8
14	Bathroom Floor				N/A	N/A	3-5	17	78	348	1041	1	3	48	-13
15	Office Floor				N/A	N/A	3-5	6	24	160	-327	0	0	55	20
16	Office Floor				N/A	N/A	3-5	14	63	235	218	0	0	43	-37
17	Filter Press Room Floor				N/A	N/A	3-5	9	39	237	233	0	0	50	-4
18	Filter Press Room Floor				N/A	N/A	3-5	5	19	217	87	0	0	52	6
19	Outside Under Filter Press Shoot				N/A	N/A	3-5	5	19	267	451	0	0	62	53
20	Sludge Container Area Floor				N/A	N/A	3-5	7	29	244	284	2	6	44	-32
21															
22															
23															
24															
25															

Survey No.:	WT-14-FS-122
Date:	7/23/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/1/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	C690J		227389 /PR240337		227415 /PR240349		185291		PR194723		
Cal. Due Date:				NA	9/21/2013		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.159		0.106		0.354		0.401		
BKG:	*Bcpm**:*			NA	NA	NA	4		221		9		371		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	23.1		257		6.23		35.4		
MDC:				NA	NA	NA	61.0		536		17.7		60		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	office floor				N/A	N/A	3-5	2	-10	274	394	0	-3	47	25
2	hallway floor				N/A	N/A	3-5	2	-10	279	431	0	-3	31	-15
3	restroom floor				N/A	N/A	3-5	3	-5	441	1634	0	-3	31	-15
4	breakroom floor				N/A	N/A	3-5	6	10	294	542	0	-3	44	17
5	breakroom floor				N/A	N/A	3-5	5	5	293	535	0	-3	32	-13
6	initial solids seperator				N/A	N/A	3-5	5	5	315	698	1	0	44	17
7	cleanout area secondary solids seperator				N/A	N/A	3-5	7	15	349	951	0	-3	35	-5
8	top of aeration tank				N/A	N/A	3-5	14	50	325	773	0	-3	39	5
9	top of aeration tank				N/A	N/A	3-5	21	84	334	839	0	-3	40	7
10	walkway between tanks				N/A	N/A	3-5	21	84	374	1137	0	-3	39	5
11	porch of chlorine building				N/A	N/A	3-5	12	40	353	981	1	0	35	-5
12	maintanence floor				N/A	N/A	3-5	2	-10	360	1033	0	-3	33	-10
13	workbench				N/A	N/A	3-5	3	-5	268	349	0	-3	43	15
14	concrete chase near effluent auto sampler				N/A	N/A	3-5	22	89	370	1107	0	-3	39	5
15	first bay of maintanence building				N/A	N/A	3-5	5	5	315	698	0	-3	34	-8
16	polymer mixing room				N/A	N/A	3-5	3	-5	310	661	0	-3	31	-15
17	middle of maintanence area				N/A	N/A	3-5	5	5	304	617	0	-3	40	7
18	filter press room				N/A	N/A	3-5	3	-5	326	780	0	-3	33	-10
19	filter press room under conveyor				N/A	N/A	3-5	1	-15	361	1040	0	-3	41	10
20	next to rolloff				N/A	N/A	3-5	4	0	372	1122	0	-3	29	-20
21															
22															
23															
24															
25															

Survey No.:	WT-15-FS-031
Date:	7/29/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/1/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	4	221	9	371
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.23	35.4
MDC:		NA	NA	NA	61.0	536	17.7	59.9

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	old lab floor				N/A	N/A	3-5	1	-15	336	854	1	0	41	10
2	old lab bench				N/A	N/A	3-5	0	-20	275	401	1	0	30	-18
3	new lab floor				N/A	N/A	3-5	0	-20	280	438	1	0	40	7
4	new lab bench				N/A	N/A	3-5	2	-10	275	401	1	0	37	0
5	dry aerator				N/A	N/A	50-60	244	1190	1892	12413	4	9	25	-30
6	outside fin				N/A	N/A	50-60	143	689	5346	38070	3	6	39	5
7	back of RBC				N/A	N/A	30-40	99	471	3859	27024	5	12	38	2
8	bobcat bucket				N/A	N/A	4-6	3	-5	381	1189	1	0	34	-8
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Reviewed by: _____

Survey No.:	WT-15-FS-032
Date:	4/24/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:

Project:

Contaminant/Limits:

Comments: Raining on day of survey, no directs taken outside

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	221	2	360
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	252	2.94	65.9
MDC:		NA	NA	NA	37.2	525	12.8	112

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Influent Water				N/A	N/A	4-6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Influent Water Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Aeration Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Aeration Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	Digestion Tank				N/A	N/A	40-50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Digestion Tank				N/A	N/A	30-40	N/A	N/A	N/A	N/A	0	-1	47	52
7	Digestion Tank				N/A	N/A	80-100	N/A	N/A	N/A	N/A	0	-1	52	76
8	Digestion Tank				N/A	N/A	20-30	N/A	N/A	N/A	N/A	0	-1	48	57
9	Digestion Tank				N/A	N/A	110-120	N/A	N/A	N/A	N/A	4	11	48	57
10	Digestion Tank				N/A	N/A	100-120	N/A	N/A	N/A	N/A	0	-1	39	14
11	Digestion Tank				N/A	N/A	100-120	N/A	N/A	N/A	N/A	0	-1	33	-14
12	Digestion Tank				N/A	N/A	100-120	N/A	N/A	N/A	N/A	8	22	70	161
13	Effluent Tank				N/A	N/A	4-6	N/A	N/A	N/A	N/A	3	8	54	85
14	Effluent Tank				N/A	N/A	4-6	N/A	N/A	N/A	N/A	0	-1	46	47
15	Chorinator				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	2	52	76
16	Lab Sink				N/A	N/A	3-5	0	-5	208	-95	0	-1	36	0
17	Lab Floor				N/A	N/A	3-5	0	-5	285	466	0	-1	49	61
18	Storage Area				N/A	N/A	3-5	0	-5	255	247	0	-1	56	94
19	Office Floor				N/A	N/A	3-5	5	19	233	87	0	-1	42	28
20															
21															
22															
23															
24															
25															

Survey No.:	WT-15-FS-033
Date:	10/9/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.74	46.5
MDC:		NA	NA	NA	61.0	536	18.3	76.9

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	new lab floor				N/A	N/A	8-10	1	-15	339	877	2	2	49	-20
2	new lab bench				N/A	N/A	6-8	1	-15	320	735	1	0	42	-38
3	old lab floor				N/A	N/A	5-7	2	-10	378	1166	1	0	55	-4
4	maintenance garage floor				N/A	N/A	6-8	8	20	387	1233	1	0	63	18
5	maintenance garage floor				N/A	N/A	6-8	8	20	404	1359	3	5	53	-9
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-16-FS-123
Date:	5/1/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/2/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 / PR 240349	227415 / PR 240349	143878	PR147628
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	283	4	512
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	265	4.16	78.6
MDC:		NA	NA	NA	14.9	551	14.6	131

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Effluent Discharge				N/A	N/A	3-5	2	10	360	522	0	-1	42	-43
2	Chlorine Contact				N/A	N/A	4-6	2	10	399	786	1	2	47	-20
3	Lobby Floor				N/A	N/A	4-6	1	5	290	47	0	-1	40	-53
4	Breakroom Floor				N/A	N/A	4-6	1	5	295	81	0	-1	34	-81
5	Hallway to Sludge Press				N/A	N/A	6-8	0	0	358	508	0	-1	50	-6
6	Back of Sludge Room				N/A	N/A	4-6	1	5	378	644	0	-1	46	-25
7	Sludge Press Room				N/A	N/A	4-6	2	10	451	1138	1	2	34	-81
8	Maintenance Bench				N/A	N/A	5-7	0	0	396	766	0	-1	39	-58
9	Fume Hood				N/A	N/A	5-7	0	0	378	644	0	-1	40	-53
10	Lab Counter				N/A	N/A	5-7	2	10	383	678	0	-1	40	-53
11	Steps of Methanol Capture				N/A	N/A	5-7	5	25	352	468	1	2	40	-53
12	Between Secondary Clarifiers				N/A	N/A	3-5	2	10	340	386	0	-1	44	-34
13	Between Secondary Clarifiers				N/A	N/A	3-5	5	25	385	691	0	-1	41	-48
14	Concrete above Chase to Clarifiers				N/A	N/A	3-5	3	15	416	901	0	-1	33	-86
15	Concrete near Airation Tanks				N/A	N/A	4-6	4	20	338	373	1	2	46	-25
16	Concrete near Airation Tanks				N/A	N/A	6-8	3	15	334	346	0	-1	40	-53
17	Lobby Floor				N/A	N/A	3-5	0	0	275	-54	0	-1	39	-58
18	Conference Room				N/A	N/A	3-5	0	0	304	142	0	-1	39	-58
19	Influent Pump				N/A	N/A	3-5	4	20	255	-190	1	2	37	-67
20															
21															
22															
23															
24															
25															

Survey No.:	WT-16-FS-124
Date:	7/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	230	10	521
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	262	6.57	41.9
MDC:		NA	NA	NA	14.9	546	18.2	70

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	admin outside mens locker				N/A	N/A	3-5	7	35	278	357	0	-3	50	-5
2	floor outside office				N/A	N/A	3-5	0	0	255	186	0	-3	46	-15
3	lobby between labs				N/A	N/A	3-5	2	10	268	282	0	-3	42	-25
4	floor near restroom				N/A	N/A	3-5	1	5	235	37	0	-3	39	-33
5	influent solid handling floor				N/A	N/A	3-5	2	10	289	438	1	0	53	2
6	floor near drain				N/A	N/A	3-5	0	0	298	505	0	-3	53	2
7	influent water processing				N/A	N/A	3-5	2	10	346	862	0	-3	42	-25
8	influent water processing				N/A	N/A	3-5	6	30	309	587	0	-3	40	-30
9	chase behind lab building				N/A	N/A	3-5	6	30	331	750	0	-3	39	-33
10	top of tank behind lab				N/A	N/A	3-5	0	0	343	839	0	-3	43	-23
11	top of aeration tank				N/A	N/A	3-5	7	35	307	572	0	-3	47	-13
12	effluent pump auto sampler				N/A	N/A	4-6	2	10	314	624	0	-3	48	-10
13	maintanence bench				N/A	N/A	4-6	1	5	392	1203	0	-3	39	-33
14	floor near filter press				N/A	N/A	5-7	1	5	327	721	0	-3	51	-3
15	floor under press				N/A	N/A	8-10	1	5	350	891	0	-3	47	-13
16	floor in corner behind press				N/A	N/A	4-6	0	0	326	713	0	-3	50	-5
17	floor of server room				N/A	N/A	5-7	0	0	329	735	0	-3	50	-5
18	old lab floor				N/A	N/A	3-5	0	0	315	631	1	0	47	-13
19	electrical room floor				N/A	N/A	3-5	1	5	307	572	0	-3	36	-40
20	stairwell floor				N/A	N/A	4-6	1	5	387	1166	1	0	49	-8
21	lobby floor				N/A	N/A	3-5	2	10	282	386	0	-3	35	-43
22	breakroom floor				N/A	N/A	3-5	5	25	273	319	0	-3	42	-25
23															
24															
25															

Survey No.:	WT-17-FS-051
Date:	7/30/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/12/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0.00	305	6	395
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	302	5.09	36.5
MDC:		NA	NA	NA	14.9	626	16.0	61.6

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	floor next to filter press				N/A	N/A	3-5	4	20	360	409	0	-2	58	46
2	floor near filter press conveyor				N/A	N/A	3-5	6	30	378	542	1	1	34	-14
3	floor infront of sludge rolloff				N/A	N/A	3-5	0	0	363	431	0	-2	39	-1
4	floor next to rolloff				N/A	N/A	3-5	5	25	356	379	0	-2	31	-21
5	maintanence work bench				N/A	N/A	3-5	0	0	256	-364	0	-2	45	14
6	storage area behind maintanence				N/A	N/A	3-5	0	0	355	371	3	7	51	29
7	garage bay floor				N/A	N/A	4-6	1	5	336	230	1	1	41	4
8	coat rack area				N/A	N/A	3-5	3	15	272	-245	0	-2	37	-6
9	break room				N/A	N/A	3-5	1	5	268	-275	0	-2	28	-29
10	hallway outside bathrooms				N/A	N/A	3-5	0	0	265	-297	0	-2	32	-19
11	conference room floor				N/A	N/A	5-7	2	10	229	-565	0	-2	43	9
12	office area				N/A	N/A	3-5	1	5	302	-22	1	1	48	21
13	lab floor				N/A	N/A	3-5	1	5	235	-520	1	1	31	-21
14	lab sink				N/A	N/A	3-5	3	15	249	-416	0	-2	46	16
15	reception floor				N/A	N/A	3-5	3	15	267	-282	2	4	36	-9
16	pump room floor				N/A	N/A	3-5	4	20	341	267	0	-2	34	-14
17	blower room				N/A	N/A	3-5	0	0	356	379	0	-2	42	6
18	effluent UV application				N/A	N/A	3-5	2	10	361	416	0	-2	38	-4
19	truck offload				N/A	N/A	4-6	11	55	430	929	0	-2	46	16
20	containment bottom				N/A	N/A	3-5	9	45	400	706	0	-2	42	6
21															
22															
23															
24															
25															

Survey No.:	WT-17-FS-125	**Item Surveyed:**	**Project:**
Date:	10/9/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	12/9/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.339	0.376
BKG:	*Bcpm**:*	NA	NA	NA	0	305	7	557
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	302	5.75	46.2
MDC:		NA	NA	NA	14.9	626	17.4	76.5

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	under filter press				N/A	N/A	3-5	27	134	505	1486	0	-2	56	1
2	garage bay floor				N/A	N/A	3-5	19	94	314	313	0	-2	50	-15
3	worked area in garage				N/A	N/A	3-5	18	89	427	906	0	-2	64	22
4	storage room				N/A	N/A	3-5	12	60	457	1129	1	1	43	-34
5	coat rack area				N/A	N/A	3-5	10	50	337	313	0	-2	67	30
6	kitchen/break area				N/A	N/A	3-5	7	35	341	313	1	1	69	35
7	reception floor				N/A	N/A	4-6	8	40	350	313	0	-2	52	-10
8	conference room floor				N/A	N/A	3-5	7	35	342	313	0	-2	46	-26
9	hallway outside of lab				N/A	N/A	3-5	6	30	349	313	1	1	60	11
10	office area				N/A	N/A	3-5	9	45	338	313	0	-2	59	9
11	lab floor				N/A	N/A	5-7	6	29.8	304	313	2	4	58	6
12	lab floor				N/A	N/A	3-5	12	60	347	313	1	1	52	-10
13	offload pad				N/A	N/A	3-5	16	79	480	1300	3	7	64	22
14	containment floor				N/A	N/A	3-5	6	30	676	2756	0	-2	66	27
15	containment floor				N/A	N/A	3-5	22	109	466	1196	2	4	65	25
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-18-FS-011
Date:	10/17/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	E049A		227389 /PR240337		227415 /PR240349		185291		PR194723		
Cal. Due Date:				NA	9/17/2014		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.162		0.108		0.354		0.212		
BKG:	*Bcpm**:*			NA	NA	NA	1		267		3		430		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	11.3		277		3.60		72.0		
MDC:				NA	NA	NA	37.2		575		13.8		121		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	main entrance/driver checkin				N/A	N/A	3-5	6	24	365	713	0	-1	71	132
2	old change area				N/A	N/A	3-5	2	5	324	415	0	-1	74	146
3	lab floor				N/A	N/A	5-7	2	5	386	866	1	2	68	118
4	floor by office door				N/A	N/A	5-7	14	63	449	1324	1	2	78	165
5	floor between sludge tanks				N/A	N/A	5-7	19	87	468	1463	1	2	57	66
6	floor near first tank				N/A	N/A	5-7	15	68	587	2329	2	5	81	179
7	floor between tanks				N/A	N/A	10-15	23	107	796	3850	2	5	72	137
8	floor infront of second tank				N/A	N/A	8-10	21	97	680	3006	0	-1	63	94
9	floor next to atella units				N/A	N/A	10-12	9	39	640	2714	1	2	74	146
10	floor next to second atella unit				N/A	N/A	15-18	16	73	844	4199	2	5	84	194
11	floor between influent and effluent				N/A	N/A	10-12	17	78	600	2423	1	2	53	47
12	floor under new press				N/A	N/A	5-7	41	194	680	3006	2	5	69	123
13	maintanence area floor				N/A	N/A	6-8	19	87	549	2052	0	-1	79	170
14	maintanence area floor				N/A	N/A	6-8	17	78	539	1979	1	2	70	127
15	equipment parking near roll up door				N/A	N/A	4-6	21	97	422	1128	0	-1	80	175
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-18-FS-058
Date:	4/30/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/2/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	272	4	512
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	279	4.16	78.6
MDC:		NA	NA	NA	14.6	580	14.6	131

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Chem Storage Floor				N/A	N/A	5-7	23	112	645	2714	0	-1	46	-25
2	Floor near New Press - not active				N/A	N/A	3-5	20	97	440	1223	2	5	45	-29
3	Between Altela Units				N/A	N/A	10-12	18	87	813	3937	1	2	36	-72
4	On Altela Unit				N/A	N/A	30-40	3	15	1260	7190	N/A	N/A	N/A	N/A
5	Floor				N/A	N/A	10-15	22	107	660	2824	0	-1	46	-25
6	Floor Between Conveyor and Sludge Capture				N/A	N/A	5-7	10	49	595	2351	0	-1	32	-91
7	Floor by Sludge Tank				N/A	N/A	6-8	18	87	619	2525	0	-1	44	-34
8	Side of Slurry Tank				N/A	N/A	3-5	2	10	301	211	0	-1	31	-95
9	Floor near Centerfuge				N/A	N/A	3-5	26	126	541	1958	1	2	35	-76
10	Floor near Door				N/A	N/A	5-7	11	53	517	1783	0	-1	50	-6
11	Floor near tank				N/A	N/A	5-7	30	146	630	2605	0	-1	52	4
12	Floor Betweenn Tanks				N/A	N/A	10-12	17	83	723	3282	0	-1	43	-39
13	Tank Side				N/A	N/A	7-10	N/A	N/A	N/A	N/A	3	7	45	-29
14	Tank Side				N/A	N/A	7-10	N/A	N/A	N/A	N/A	1	2	46	-25
15	Floor Behind Tank				N/A	N/A	7-10	29	141	674	2925	2	5	46	-25
16	Center of Room Floor				N/A	N/A	7-10	41	199	698	3100	0	-1	34	-81
17	Floor Near Roll Off				N/A	N/A	5-7	25	122	662	2838	0	-1	38	-62
18	Floor				N/A	N/A	10-15	24	117	757	3529	0	-1	45	-29
19	Tank				N/A	N/A	5-7	N/A	N/A	N/A	N/A	0	-1	47	-20
20	Tank				N/A	N/A	20-25	N/A	N/A	N/A	N/A	0	-1	44	-34
21	Tank				N/A	N/A	5-7	N/A	N/A	N/A	N/A	2	5	92	193
22	Tank				N/A	N/A	7-10	N/A	N/A	N/A	N/A	1	2	35	-76
23	Tank				N/A	N/A	15-20	N/A	N/A	N/A	N/A	1	2	37	-67
24	Tank				N/A	N/A	7-10	N/A	N/A	N/A	N/A	3	7	36	-72
25	Tank				N/A	N/A	5-7	N/A	N/A	N/A	N/A	3	7	38	-62

Survey No.:	WT-18-FS-058
Date:	4/30/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/2/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	272	4	512
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	279	4.16	78.6
MDC:		NA	NA	NA	14.6	580	14.6	131

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Tank				N/A	N/A	10-12	N/A	N/A	N/A	N/A	1	2	39	-58
27	Tank				N/A	N/A	20-25	N/A	N/A	N/A	N/A	3	7	40	-53
28	Tank				N/A	N/A	15-17	N/A	N/A	N/A	N/A	1	2	46	-25
29	Lab Floor				N/A	N/A	3-5	2	10	319	342	1	2	38	-62
30	Lab Floor				N/A	N/A	3-5	1	5	393	881	0	-1	37	-67
31	Wash Room Floor				N/A	N/A	3-5	2	10	374	742	0	-1	35	-76
32	Change Area Floor				N/A	N/A	3-5	0	0	343	517	0	-1	30	-100
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-18-FS-059
Date:	6/19/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/27/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.1583	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	286	2	456
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	267	2.94	39.2
MDC:		NA	NA	NA	38.1	554	12.8	66

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	breakroom floor				N/A	N/A	3-5	2	5	303	115	0	-1	51	13
2	floor near lab				N/A	N/A	3-5	2	5	360	501	1	2	57	28
3	lab area floor				N/A	N/A	3-5	2	5	334	325	1	2	38	-19
4	floor near sludge tank				N/A	N/A	5-7	6	25	466	1220	1	2	51	13
5	floor near centerfuge				N/A	N/A	5-7	11	50	455	1145	0	-1	45	-1
6	floor under conveyor				N/A	N/A	5-7	27	129	484	1342	0	-1	33	-31
7	floor opposite side rolloff				N/A	N/A	3-5	10	45	476	1287	0	-1	36	-24
8	floor inside distillation containment				N/A	N/A	7-10	15	70	566	1897	0	-1	40	-14
9	floor between distillation racks				N/A	N/A	15-20	35	169	778	3334	2	5	43	-6
10	floor inside distillation containment				N/A	N/A	7-10	27	129	549	1782	0	-1	55	23
11	chemical storage floor				N/A	N/A	5-7	7	30	577	1972	0	-1	42	-9
12	work bench surface				N/A	N/A	3-5	7	30	300	95	2	5	43	-6
13	floor near rollup				N/A	N/A	3-5	20	95	621	2270	2	5	41	-11
14	under tank DW3				N/A	N/A	15-18	51	249	975	4669	8	22	54	21
15	floor near pump				N/A	N/A	15-20	15	70	653	2487	2	5	39	-16
16	floor near batch 3 tank				N/A	N/A	5-7	12	55	590	2060	5	14	49	8
17	between batch tanks				N/A	N/A	10-15	13	60	644	2426	1	2	44	-4
18	floor between PT1 & PT2 tanks				N/A	N/A	10-15	13	60	594	2087	0	-1	59	33
19	floor between PT1 & PT2 tanks				N/A	N/A	5-7	3	10	464	1206	0	-1	53	18
20	floor in front of PT1				N/A	N/A	5-7	15	70	563	1877	3	8	44	-4
21															
22															
23															
24															
25															

Survey No.:	WT-19-FS-080
Date:	6/18/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/27/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:

Contaminant/Limits:

Comments:

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	381	2	456
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	308	2.94	39.2
MDC:		NA	NA	NA	38.1	636	12.8	65.6

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	rolloff storage				N/A	N/A	4-6	5	20	485	705	0	-1	43	-6
2	rolloff storage				N/A	N/A	4-6	5	20	375	-41	0	-1	54	21
3	excavator cab				N/A	N/A	4-6	3	10	261	-813	0	-1	39	-16
4	steel plate under rolloff				N/A	N/A	3-5	6	25	355	-176	0	-1	45	-1
5	near lime silo				N/A	N/A	4-6	4	15	421	271	0	-1	47	3
6	small pump				N/A	N/A	5-7	6	25	386	34	0	-1	46	1
7	containment near press				N/A	N/A	5-7	10	45	460	535	1	2	57	28
8	containment near press				N/A	N/A	5-7	12	55	414	224	3	8	45	-1
9	containment				N/A	N/A	6-8	2	5	429	325	0	-1	57	28
10	lab floor				N/A	N/A	5-7	1	0	352	-197	2	5	48	6
11	floor of filter press				N/A	N/A	3-5	4	15	311	-474	0	-1	47	3
12	secondary containment				N/A	N/A	5-7	8	35	381	0	0	-1	30	-39
13	containment near influent				N/A	N/A	4-6	5	20	435	366	0	-1	44	-4
14	containment near brine				N/A	N/A	5-7	7	30	474	630	0	-1	50	11
15	filter deck				N/A	N/A	5-7	5	20	411	203	2	5	42	-9
16	containment near effluent				N/A	N/A	5-7	5	20	446	440	0	-1	71	63
17	containment near effluent				N/A	N/A	6-8	6	25	445	434	1	2	52	16
18	containment near effluent				N/A	N/A	5-7	7	30	409	190	0	-1	57	28
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-19-FS-078
Date:	10/10/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/10/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	11	564
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	6.74	46.5
MDC:		NA	NA	NA	61.0	536	18.3	76.9

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	rolloff storage area				N/A	N/A	4-6	11	35	425	1515	3	5	48	-22
2	pad near active rolloff				N/A	N/A	4-6	9	25	348	943	2	2	57	2
3	behind centerfuge				N/A	N/A	10-12	9	25	440	1627	1	0	56	-1
4	infront of construction trailer				N/A	N/A	10-12	7	15	403	1352	1	0	68	31
5	construction trailer floor				N/A	N/A	4-6	2	-10	378	1166	1	0	59	7
6	press trailer				N/A	N/A	4-6	10	30	411	1411	1	0	52	-12
7	edge of containment wall				N/A	N/A	6-8	10	30	349	951	6	14	58	4
8	containment in front of influent tank				N/A	N/A	6-8	14	50	427	1530	1	0	67	28
9	containment outside of filters				N/A	N/A	8-10	4	0	454	1731	6	14	55	-4
10	between bag filters				N/A	N/A	12-15	27	114	540	2370	2	2	65	23
11	infront of second brine tank				N/A	N/A	5-7	5	5	478	1909	3	5	56	-1
12	infront of brine tank 4				N/A	N/A	10-15	8	20	497	2050	1	0	52	-12
13	infront of brine tank 6				N/A	N/A	10-12	6	10	430	1553	4	8	65	23
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-19-FS-079
Date:	4/29/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

ACF = Area Correction Factor	**Direct**
T_b = Background Count Time	(dpm) = (cpm - Bcpm)/(eff * ACF)
T_s = Sample Count Time	
R_b = Bkgd count rate	**Removable**
**Bcpm = Background cpm = R_b	(dpm) = (cpm - Bcpm)/ eff
	* dpm readings are per 100cm^2

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	246	2	360
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	266	2.94	65.9
MDC:		NA	NA	NA	14.6	553	12.8	112

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Office/Lab				N/A	N/A	5-7	0	0	274	204	0	-1	50	66
2	Office/Lab				N/A	N/A	5-7	0	0	274	204	1	2	48	57
3	Secondary Containment				N/A	N/A	4-6	9	44	335	648	1	2	33	-14
4	Secondary Containment				N/A	N/A	5-7	9	44	412	1208	1	2	45	42
5	Containment Near Sludge Conveyor				N/A	N/A	6-8	10	49	319	531	1	2	34	-9
6	Containment				N/A	N/A	6-8	2	10	353	779	0	-1	35	-5
7	Back of Sludge Roll-Off				N/A	N/A	3-5	3	15	219	-196	0	-1	31	-24
8	Excavator Floor				N/A	N/A	3-5	2	10	185	-444	2	5	39	14
9	Top of Sludge Reprocessing				N/A	N/A	3-5	14	68	356	801	0	-1	39	14
10	Containment Floor				N/A	N/A	5-7	6	29	359	822	1	2	35	-5
11	Containment Floor				N/A	N/A	5-7	8	39	321	546	1	2	36	0
12	Filter Room				N/A	N/A	5-7	2	10	322	553	1	2	45	42
13	Tank Floor				N/A	N/A	5-7	15	73	269	167	2	5	34	-9
14	Effluent Tank 4				N/A	N/A	10-15	1	5	450	1485	0	-1	44	38
15	Effluent Tank 2				N/A	N/A	10-12	6	29	332	626	1	2	38	9
16	Influent Tank 2				N/A	N/A	6-8	5	24	259	95	0	-1	27	-42
17	Filter Press Floor				N/A	N/A	3-5	1	5	220	-189	1	2	53	80
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-20-FS-069	**Item Surveyed:**	**Project:**
Date:	6/19/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	7/27/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	389	2	456
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	311	2.94	39.2
MDC:		NA	NA	NA	38.1	642	12.8	66

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	reception area floor				N/A	N/A	4-6	3	10	328	-413	0	-1	41	-11
2	break area				N/A	N/A	3-5	2	5	323	-447	0	-1	54	21
3	conference room floor				N/A	N/A	3-5	3	10	301	-596	2	5	41	-11
4	halfway near door				N/A	N/A	3-5	2	5	337	-352	0	-1	41	-11
5	lab floor				N/A	N/A	3-5	5	20	338	-346	0	-1	51	13
6	lab bench				N/A	N/A	4-6	5	20	301	-596	0	-1	50	11
7	floor near door				N/A	N/A	5-7	24	114	441	352	0	-1	59	33
8	floor near sludge transfer				N/A	N/A	10-15	47	229	1056	4520	0	-1	45	-1
9	floor near reaction 2				N/A	N/A	5-7	51	249	698	2094	3	8	40	-14
10	floor near reaction 1				N/A	N/A	10-20	35	169	920	3598	1	2	49	8
11	floor near neutralization				N/A	N/A	20-25	53	259	1688	8802	1	2	45	-1
12	floor near clean water transfer				N/A	N/A	10-12	26	124	545	1057	3	8	50	11
13	cake wash storage				N/A	N/A	3-5	53	259	479	610	1	2	51	13
14	between pump & acid				N/A	N/A	4-6	42	204	466	522	0	-1	36	-24
15	floor near acid wash tank				N/A	N/A	4-6	35	169	526	928	0	-1	57	28
16	floor near sludge tank feed				N/A	N/A	15-20	33	159	916	3571	1	2	47	3
17	floor near chemical storage				N/A	N/A	5-7	66	323	569	1220	0	-1	54	21
18	floor near conveyor				N/A	N/A	5-7	56	274	624	1592	2	5	56	26
19	floor near conveyor out				N/A	N/A	10-12	59	288	760	2514	4	11	52	16
20	under filter press 2				N/A	N/A	6-8	77	378	734	2338	5	14	48	6
21	under filter press 1				N/A	N/A	6-8	93	458	693	2060	0	-1	44	-4
22	press 1 bomb door				N/A	N/A	12-15	150	741	1012	4222	0	-1	53	18
23	press 2 bomb door				N/A	N/A	10-12	68	333	792	2731	8	22	54	21
24	floor near wash sink				N/A	N/A	5-7	67	328	620	1565	3	8	51	13
25	mud off load				N/A	N/A	3-4	8	35	376	-88	4	11	57	28

Survey No.:	WT-20-FS-069
Date:	6/19/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/27/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227415 /PR240349		227415 /PR240349		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.158		0.116		0.354		0.401	
BKG:	*Bcpm**:*			NA	NA		NA	1		389		2		456	
ACF:				NA	NA		NA	1.27		1.27		1.00		1.00	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	11.6		311		2.94		39.2	
MDC:				NA	NA		NA	38.1		642		12.8		66	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	near mud centerfuge				N/A	N/A	3-5	12	55	359	-203	0	-1	45	-1
27	off load pad				N/A	N/A	3-5	31	149	599	1423	1	2	48	6
28	off load pad				N/A	N/A	3-5	21	99	490	684	1	2	50	11
29	water receiving office				N/A	N/A	3-5	0	-5	354	-237	1	2	35	-26
30	loader cab				N/A	N/A	5-7	9	40	319	-474	1	2	58	31
31	sludge floor				N/A	N/A	4-6	13	60	393	27	0	-1	49	8
32	sludge floor				N/A	N/A	3-5	11	50	411	149	0	-1	51	13
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-20-FS-020
Date:	10/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	10/23/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	E049A		227389 /PR240337		227415 /PR240349		185291		PR194723		
Cal. Due Date:				NA	9/17/2014		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.159		0.106		0.354		0.401		
BKG:	*Bcpm**:*			NA	NA	NA	4		221		10		771		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	23.1		257		6.57		51.0		
MDC:				NA	NA	NA	61.0		536		18.2		83.1		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	main lobby floor				N/A	N/A	5-7	1	-15	323	758	2	3	68	-23
2	office floor				N/A	N/A	4-6	6	10	319	728	1	0	79	5
3	conference room floor				N/A	N/A	4-6	3	-5	301	594	0	-3	77	0
4	lab floor				N/A	N/A	5-7	12	40	349	951	1	0	79	5
5	floor near mandoor				N/A	N/A	5-7	25	104	489	1991	2	3	82	12
6	floor near sludge tank				N/A	N/A	20-25	51	233	1162	6990	2	3	65	-30
7	floor near cake wash tank				N/A	N/A	5-7	74	347	654	3216	0	-3	71	-15
8	floor near acid tank				N/A	N/A	15-17	28	119	680	3410	0	-3	74	-8
9	floor near caustic				N/A	N/A	20-25	28	119	810	4375	0	-3	63	-35
10	floor between tanks				N/A	N/A	20-25	72	337	872	4836	2	3	70	-18
11	under front of second story				N/A	N/A	15-20	52	238	1052	6173	3	6	75	-5
12	floor near chemical storage				N/A	N/A	5-7	40	179	54	-1241	4	8	61	-40
13	under cake conveyor				N/A	N/A	6-8	39	174	585	2704	6	14	71	-15
14	under press number				N/A	N/A	15-17	145	699	930	5267	7	17	84	17
15	bomb door press #1				N/A	N/A	15-20	149	719	979	5631	4	8	81	10
16	motor control press				N/A	N/A	7-10	36	159	416	1449	5	11	71	-15
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-20-FS-068
Date:	4/30/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	198	2	360
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	238	2.94	65.9
MDC:		NA	NA	NA	14.6	498	12.8	112

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Floor				N/A	N/A	3-5	5	24	183	-109	0	-1	37	5
2	Floor				N/A	N/A	3-5	6	29	208	73	0	-1	38	9
3	Floor				N/A	N/A	3-5	1	5	208	73	0	-1	39	14
4	Floor				N/A	N/A	4-6	3	15	188	-73	0	-1	32	-19
5	Floor				N/A	N/A	3-5	7	34	211	95	0	-1	47	52
6	Floor				N/A	N/A	6-8	5	24	231	240	0	-1	29	-33
7	Lab Hood				N/A	N/A	4-6	9	44	233	255	1	2	33	-14
8	Lab Hood				N/A	N/A	4-6	6	29	237	284	0	-1	38	9
9	Floor Under Pump				N/A	N/A	8-12	46	224	486	2096	1	2	37	5
10	Floor Between Tanks				N/A	N/A	10-15	62	301	639	3209	0	-1	39	14
11	Floor Between Tanks				N/A	N/A	8-10	44	214	618	3056	0	-1	32	-19
12	Floor by Acid Wash				N/A	N/A	10-12	24	117	402	1485	0	-1	25	-52
13	Floor by Filter Press Steps				N/A	N/A	8-10	35	170	395	1434	4	11	39	14
14	Bomb Door of Filter Press 2				N/A	N/A	20-30	111	540	1411	8827	7	19	47	52
15	Bomb Door of Filter Press 1				N/A	N/A	20-30	6	29	905	5145	3	8	36	0
16	Filter Press 1 Control Panel				N/A	N/A	4-6	31	151	290	670	7	19	43	33
17	Floor by Sludge Settling Tank				N/A	N/A	15-18	58	282	578	2765	1	2	43	33
18	Floor Behind Tank				N/A	N/A	50-80	47	228	994	5793	1	2	41	24
19	Floor Under Filter Press 2				N/A	N/A	10-15	114	554	662	3377	0	-1	34	-9
20	Floor Under Filter Press 1				N/A	N/A	10-12	80	389	684	3537	3	8	26	-47
21	Chem Storage Floor				N/A	N/A	10-15	36	175	307	793	0	-1	49	61
22	Floor near Sludge Conveyor				N/A	N/A	10-12	38	185	476	2023	11	31	51	71
23	Sludge Conveyor				N/A	N/A	20-25	20	97	1027	6033	6	16	50	66
24	Sludge Bin				N/A	N/A	7-10	8	39	305	779	0	-1	39	14
25	Floor Under Sludge Conveyor				N/A	N/A	5-7	2	10	280	597	2	5	39	14

Survey No.:	WT-20-FS-068
Date:	4/30/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	198	2	360
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	238	2.94	65.9
MDC:		NA	NA	NA	14.6	498	12.8	112

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Floor of Machine				N/A	N/A	3-5	16	78	199	7	1	2	32	-19
27	Fresh Water Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	2	30	-28
28	HSF No 3				N/A	N/A	10-15	N/A	N/A	N/A	N/A	0	-1	32	-19
29	HSF No 2				N/A	N/A	20-25	N/A	N/A	N/A	N/A	0	-1	27	-42
30	HSF No 1				N/A	N/A	25-30	N/A	N/A	N/A	N/A	1	2	40	19
31	Under Centerfuge				N/A	N/A	3-5	12	58	343	1055	1	2	43	33
32	Offload Pad				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	42	28
33	Offload Pad				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	36	0
34	HTDSF Tank A				N/A	N/A	40-50	N/A	N/A	N/A	N/A	1	2	38	9
35	HTDSF Tank B				N/A	N/A	15-20	N/A	N/A	N/A	N/A	0	-1	41	24
36	Ground By Hose Connection				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	2	48	57
37	Ground By Hose Connection				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	42	28
38	Ground By Hose Connection				N/A	N/A	3-5	N/A	N/A	N/A	N/A	1	2	33	-14
39	Lab Floor				N/A	N/A	4-6	N/A	N/A	N/A	N/A	0	-1	40	19
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-21-FS-030
Date:	11/6/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/12/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	6	498
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	4.98	43.7
MDC:		NA	NA	NA	61.0	536	15.7	72.8

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	between filter containers				N/A	N/A	40-50	70	327	2031	13445	7	18	61	30
2	behind tanks				N/A	N/A	25-30	44	198	1029	6002	6	15	65	40
3	between pipes				N/A	N/A	8-10	26	109	501	2080	1	1	49	-2
4	floor in walkway to plant				N/A	N/A	10-12	8	20	471	1857	0	-2	71	56
5	between tanks				N/A	N/A	10-12	6	10	558	2503	0	-2	61	30
6	near filter feed tank				N/A	N/A	15-18	134	645	631	3046	2	4	66	43
7	floor near tank				N/A	N/A	10-12	11	35	475	1887	2	4	47	-7
8	floor near 705B tank				N/A	N/A	10-12	18	69	513	2169	0	-2	48	-5
9	floor near 705A tank				N/A	N/A	10-12	41	183	581	2674	2	4	61	30
10	floor near air compressor				N/A	N/A	8-10	12	40	366	1077	2	4	49	-2
11	main floor near rollup door				N/A	N/A	5-8	5	5	371	1114	2	4	48	-5
12	floor near influent pumps				N/A	N/A	8-10	25	104	438	1612	4	9	63	35
13	maintanence floor				N/A	N/A	8-10	3	-5	415	1441	0	-2	47	-7
14	2nd floor next to centerfuge				N/A	N/A	8-10	3	-5	436	1597	1	1	33	-45
15	infront of centerfuge				N/A	N/A	5-7	2	-10	377	1159	3	7	59	24
16	lockerroom floor				N/A	N/A	N/A	5	5	362	1047	0	-2	57	19
17	lab floor				N/A	N/A	5-7	2	-10	326	780	0	-2	60	27
18	break area				N/A	N/A	5-7	7	15	430	1553	2	4	52	6
19	office floor				N/A	N/A	3-5	4	0	355	995	1	1	56	16
20	drying pad				N/A	N/A	10-15	95	451	910	5118	3	7	68	48
21	influent warehouse				N/A	N/A	5-7	3	-5	346	929	0	-2	40	-26
22	influent warehouse				N/A	N/A	5-7	3	-5	376	1151	1	1	62	32
23	influent warehouse				N/A	N/A	5-7	3	-5	350	958	1	1	59	24
24															
25															

Survey No.:	WT-21-FS-126
Date:	4/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* µRem/hr	*Gamma*	*Corr µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	223	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	253	4.16	75.0
MDC:		NA	NA	NA	37.2	527	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	floor inside maintanence				N/A	N/A	4-6	52	248	584	2627	3	7	43	-17
2	walkway				N/A	N/A	4-6	4	15	238	109	0	-1	54	35
3	walkway				N/A	N/A	4-6	5	19	305	597	0	-1	43	-17
4	walkway				N/A	N/A	6-8	10	44	300	560	2	5	51	21
5	process pump containment				N/A	N/A	5-7	36	170	338	837	2	5	39	-36
6	maintanence floor				N/A	N/A	3-5	1	0	316	677	1	2	34	-59
7	maintanence bench				N/A	N/A	4-6	7	29	262	284	0	-1	50	16
8	polymer pump				N/A	N/A	3-5	4	15	249	189	1	2	44	-12
9	base of chum tank				N/A	N/A	3-5	3	10	279	408	1	2	55	40
10	mix tank 705A				N/A	N/A	20-40	14	63	470	1797	1	2	40	-31
11	mix tank 705B				N/A	N/A	20-30	12	53	484	1899	3	7	62	73
12	mix tank 705C				N/A	N/A	70-100	72	345	419	1426	13	36	47	2
13	filter feed 707				N/A	N/A	10-15	90	433	2677	17858	1	2	36	-50
14	floor				N/A	N/A	5-7	11	49	373	1092	0	-1	47	2
15	floor				N/A	N/A	5-7	5	19	283	437	0	-1	50	16
16	floor inside containment				N/A	N/A	5-7	5	19	261	277	1	2	50	16
17	floor under sand filter tank				N/A	N/A	45-59	19	87	372	1084	0	-1	51	21
18	floor under sand filter tank				N/A	N/A	35-40	40	190	410	1361	4	10	47	2
19	sand filter 3				N/A	N/A	7-10	59	282	424	1463	0	-1	32	-69
20	outside				N/A	N/A	5-7	22	102	881	4788	1	2	43	-17
21	outside				N/A	N/A	5-7	35	165	1482	9162	1	2	47	2
22	outside				N/A	N/A	5-7	45	214	1623	10188	8	21	49	11
23	outside				N/A	N/A	5-7	16	73	435	1543	1	2	48	7
24	outside				N/A	N/A	7-10	45	214	656	3151	2	5	47	2
25	containment				N/A	N/A	30-50	45	214	1047	5996	1	2	51	21

Survey No.:	WT-21-FS-126
Date:	4/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		***Dose Rate*** µRem/hr	***Gamma***	***Corr µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	223	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	253	4.16	75.0
MDC:		NA	NA	NA	37.2	527	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	around primary separation tanks				N/A	N/A	10-12	71	340	983	5531	2	5	42	-22
27	floor of containment				N/A	N/A	7-10	23	107	648	3093	0	-1	32	-69
28	floor of containment				N/A	N/A	5-7	53	253	1088	6295	5	13	46	-3
29	floor of containment				N/A	N/A	80-110	41	194	923	5094	1	2	64	82
30	floor of containment				N/A	N/A	25-30	79	379	1049	6011	0	-1	56	44
31	floor of containment				N/A	N/A	15-20	35	165	694	3428	4	10	50	16
32	water receiving office				N/A	N/A	15-20	94	452	613	2838	0	-1	40	-31
33	waste room				N/A	N/A	15-20	30	141	636	3006	4	10	46	-3
34	waste room				N/A	N/A	15-20	47	224	701	3479	10	27	55	40
35	floor under filter presses				N/A	N/A	5-10	11	49	318	691	1	2	47	2
36	floor under filter presses				N/A	N/A	5-10	5	19	254	226	N/A	N/A	N/A	N/A
37	near sludge tank 710A				N/A	N/A	5-7	N/A	N/A	N/A	N/A	0	-1	47	2
38	near sludge tank 710A				N/A	N/A	5-7	N/A	N/A	N/A	N/A	4	10	48	7
39	near sludge tank 710A				N/A	N/A	5-7	4	15	248	182	5	13	39	-36
40	locker room				N/A	N/A	3-5	2	5	257	247	1	2	47	2
41	lab floor				N/A	N/A	5-7	1	0	192	-226	2	5	56	44
42	break room				N/A	N/A	3-5	5	19	292	502	1	2	51	21
43	floor of storage areas				N/A	N/A	5-9	1	0	292	502	0	-1	38	-41
44	floor of storage areas				N/A	N/A	5-10	2	5	256	240	0	-1	59	59
45	floor of storage areas				N/A	N/A	5-11	2	5	278	400	0	-1	47	2
46	floor of storage areas				N/A	N/A	5-12	1	0	242	138	1	2	51	21
47															
48															
49															
50															

Survey No.:	WT-21-FS-127
Date:	6/10/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/22/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	299	6	582
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	273	5.09	44.3
MDC:		NA	NA	NA	14.9	566	16.0	73.2

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	warehouse floor				N/A	N/A	3-5	4	20	333	230	0	-2	54	-10
2	sample tray				N/A	N/A	3-5	5	25	377	529	0	-2	46	-30
3	warehouse floor near door				N/A	N/A	3-5	9	45	359	407	0	-2	41	-43
4	warehouse floor				N/A	N/A	3-5	4	20	400	684	0	-2	40	-45
5	work bench				N/A	N/A	3-5	0	0	332	224	0	-2	50	-20
6	warehouse floor				N/A	N/A	4-6	4	20	353	366	0	-2	47	-28
7	forklift floor				N/A	N/A	3-5	3	15	268	-210	1	1	47	-28
8	floor near roll up				N/A	N/A	4-6	2	10	390	617	1	1	50	-20
9	floor near trough				N/A	N/A	5-7	18	90	523	1518	4	10	56	-5
10	maintenance floor				N/A	N/A	4-6	3	15	386	590	1	1	61	7
11	maintenance bench				N/A	N/A	4-6	11	55	359	407	0	-2	53	-13
12	floor behind polymer mix				N/A	N/A	5-7	5	25	501	1369	0	-2	46	-30
13	floor outside maintenance				N/A	N/A	6-8	3	15	410	752	0	-2	51	-18
14	floor near 705C				N/A	N/A	7-10	43	214	480	1227	3	7	43	-38
15	floor near 705B				N/A	N/A	10-12	13	65	466	1132	1	1	60	4
16	floor near 705A				N/A	N/A	12-15	9	45	550	1701	1	1	50	-20
17	floor near chemical tank				N/A	N/A	4-6	6	30	421	827	2	4	41	-43
18	floor near trench				N/A	N/A	5-7	31	154	482	1240	0	-2	50	-20
19	floor near sludge tank				N/A	N/A	5-7	5	25	395	651	0	-2	47	-28
20	floor near filter feed				N/A	N/A	10-12	0	0	519	1491	1	1	53	-13
21	floor near trench intersection				N/A	N/A	5-7	67	333	563	1789	6	15	61	7
22	floor near waste bin				N/A	N/A	10-12	3	15	548	1687	1	1	65	17
23	floor near sand filter 1				N/A	N/A	4-6	14	70	436	928	0	-2	49	-23
24	floor near sand filter 2				N/A	N/A	7-10	52	259	513	1450	1	1	42	-40
25	floor near sand filter 3				N/A	N/A	5-7	53	264	500	1362	1	1	61	7

Survey No.:	WT-21-FS-127
Date:	6/10/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/22/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	299	6	582
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	273	5.09	44.3
MDC:		NA	NA	NA	14.9	566	16.0	73.2

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	floor of sludge holding area				N/A	N/A	5-7	108	537	670	2514	11	29	61	7
27	floor behind sludge tank				N/A	N/A	4-6	31	154	431	894	0	-2	46	-30
28	drain near filter press				N/A	N/A	4-6	12	60	378	535	2	4	37	-53
29	drain near filter press				N/A	N/A	5-7	5	25	375	515	0	-2	47	-28
30	sludge tank 710A				N/A	N/A	5-7	3	15	341	285	0	-2	46	-30
31	sludge tank 710B				N/A	N/A	5-7	4	20	363	434	0	-2	64	14
32	lab floor				N/A	N/A	5-7	3	15	291	-54	0	-2	37	-53
33	lab floor				N/A	N/A	3-5	1	5	305	41	3	7	46	-30
34	office floor				N/A	N/A	4-6	5	25	322	156	0	-2	33	-63
35	break room floor				N/A	N/A	3-5	4	20	393	637	2	4	60	4
36	sludge offload pad				N/A	N/A	3-5	10	50	402	698	1	1	48	-25
37	sludge drying pad				N/A	N/A	3-5	33	164	660	2446	0	-2	57	-3
38	sludge drying pad				N/A	N/A	3-5	31	154	755	3090	0	-2	48	-25
39	sludge excavator floor				N/A	N/A	3-5	6	30	441	962	0	-2	59	2
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-22-FS-001
Date:	11/7/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/11/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	4	528
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	4.07	45.0
MDC:		NA	NA	NA	61.0	536	14.3	75

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	water receiving floor				N/A	N/A	5-7	3	-5	338	869	1	2	46	-18
2	water receiving floor				N/A	N/A	5-7	2	-10	370	1107	1	2	61	22
3	chemical storage floor				N/A	N/A	3-5	9	25	376	1151	1	2	55	6
4	chemical storage floor				N/A	N/A	5-7	17	64	486	1969	0	-1	61	22
5	office floor				N/A	N/A	3-5	1	-15	342	899	0	-1	66	35
6	lab floor				N/A	N/A	6-8	1	-15	344	914	2	4	58	14
7	filter press				N/A	N/A	8-10	4	0	257	267	1	2	54	3
8	near neutrailization				N/A	N/A	10-12	59	273	646	3157	4	10	66	35
9	between rolloff and rollup				N/A	N/A	10-15	32	139	582	2682	0	-1	56	9
10	near filter box				N/A	N/A	20-25	43	193	649	3179	1	2	65	32
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-22-FS-048
Date:	4/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	197	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	238	4.16	75.0
MDC:		NA	NA	NA	14.6	497	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	change room floor				N/A	N/A	4-5	13	63	274	560	0	-1	33	-64
2	floor near pump				N/A	N/A	3-5	21	102	301	757	0	-1	49	11
3	outside bathroom				N/A	N/A	3-5	3	15	258	444	0	-1	44	-12
4	inside bathroom				N/A	N/A	3-5	2	10	256	429	0	-1	52	25
5	office carpet				N/A	N/A	3-5	1	5	215	131	0	-1	45	-8
6	lab floor				N/A	N/A	3-5	41	199	586	2831	0	-1	54	35
7	containment				N/A	N/A	5-7	13	63	379	1324	0	-1	55	40
8	containment				N/A	N/A	15-17	16	78	434	1725	0	-1	59	59
9	containment				N/A	N/A	15-17	50	243	514	2307	0	-1	46	-3
10	containment				N/A	N/A	5-7	22	107	439	1761	1	2	44	-12
11	containment				N/A	N/A	5-7	11	53	332	982	1	2	42	-22
12	containment				N/A	N/A	5-7	11	53	342	1055	2	5	48	7
13	on tank 504				N/A	N/A	20-30	12	58	301	757	0	-1	53	30
14	on tank 637				N/A	N/A	40-60	2	10	461	1921	0	-1	42	-22
15	on tank 603				N/A	N/A	100-120	145	705	461	1921	14	38	51	21
16	on tank 610				N/A	N/A	100-130	26	126	2331	15530	1	2	55	40
17	on tank 632				N/A	N/A	100-120	10	49	480	2059	2	5	119	342
18	on tank 504				N/A	N/A	120-190	10	49	471	1994	1	2	37	-45
19	in front of dump				N/A	N/A	3-5	9	44	308	808	1	2	37	-45
20	in front of dump				N/A	N/A	3-5	5	24	353	1135	1	2	35	-55
21	drain				N/A	N/A	3-5	172	836	784	4272	0	-1	51	21
22	drain				N/A	N/A	3-5	146	710	1628	10414	0	-1	44	-12
23	apron of rolloff bay				N/A	N/A	3-5	2	10	264	488	0	-1	35	-55
24	floor near rolloff				N/A	N/A	3-5	9	44	311	830	1	2	42	-22
25	floor near press				N/A	N/A	3-5	8	39	302	764	2	5	56	44

Survey No.:	WT-22-FS-048
Date:	4/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	197	4	466
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	238	4.16	75.0
MDC:		NA	NA	NA	14.6	497	14.6	125

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	filter press				N/A	N/A	3-5	6	29	344	1070	1	2	48	7
27	office floor				N/A	N/A	3-5	0	0	207	73	0	-1	36	-50
28	chemistry bench				N/A	N/A	3-5	0	0	164	-240	0	-1	38	-41
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-22-FS-049
Date:	6/5/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	261	6	395
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	255	5.09	36.5
MDC:		NA	NA	NA	38.1	530	16.0	61.6

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	offload pad				N/A	N/A	3-5	85	418	685	2873	1	1	33	-16
2	offload pad				N/A	N/A	3-5	96	473	703	2995	0	-2	40	1
3	offload pad near tank 1				N/A	N/A	4-6	116	572	696	2948	0	-2	37	-6
4	offload pad near tank 2				N/A	N/A	4-6	109	537	803	3673	0	-2	39	-1
5	offload pad near tank 3				N/A	N/A	10-12	284	1408	1203	6383	1	1	44	11
6	offload pad near tank 4				N/A	N/A	4-6	31	149	524	1782	1	1	47	19
7	offload pad near tank 5				N/A	N/A	6-8	23	109	596	2270	0	-2	40	1
8	offload pad near tank 6				N/A	N/A	6-8	13	60	429	1138	0	-2	33	-16
9	floor near pump				N/A	N/A	4-6	13	60	361	678	0	-2	40	1
10	office floor				N/A	N/A	3-5	0	-5	305	298	0	-2	41	4
11	lab floor				N/A	N/A	3-5	5	20	259	-14	2	4	34	-14
12	lab floor near hood				N/A	N/A	3-5	3	10	251	-68	0	-2	35	-11
13	storage area floor				N/A	N/A	3-5	2	5	362	684	1	1	31	-21
14	filter press room floor in front of rolloff				N/A	N/A	3-5	38	184	534	1850	2	4	47	19
15	sludge tank room floor				N/A	N/A	10-12	40	194	600	2297	2	4	34	-14
16	compressor floor				N/A	N/A	3-4	4	15	337	515	1	1	29	-26
17	offload station floor				N/A	N/A	3-5	2	5	284	156	0	-2	42	6
18	offload station floor				N/A	N/A	3-5	1	0	329	461	0	-2	34	-14
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-22-FS-053	**Item Surveyed:**	**Project:**
Date:	6/18/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	7/27/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	1	389	2	456
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.6	311	2.94	39.2
MDC:		NA	NA	NA	38.1	642	12.8	66

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	filterpress deck				N/A	N/A	5-7	88	433	898	3449	11	31	51	13
2	front of sludge tank trailer				N/A	N/A	4-6	13	60	495	718	1	2	42	-9
3	floor near tank valve				N/A	N/A	4-6	11	50	459	474	2	5	46	1
4	work bench maintenance				N/A	N/A	3-5	29	139	39	-2372	1	2	46	1
5	office floor				N/A	N/A	3-5	23	109	399	68	0	-1	48	6
6	lab bench				N/A	N/A	3-5	2	5	315	-501	0	-1	48	6
7	floor near clarifier				N/A	N/A	5-7	11	50	407	122	1	2	54	21
8	floor near hose connecting lumella to clarifier				N/A	N/A	5-7	25	119	506	793	0	-1	38	-19
9	floor on opposite side of lumella				N/A	N/A	8-10	39	189	1112	4899	13	36	72	66
10	floor by flock tank				N/A	N/A	5-7	32	154	481	623	3	8	55	23
11	floor near valve				N/A	N/A	5-7	11	50	433	298	0	-1	52	16
12	platform for mixing pumps				N/A	N/A	6-8	4	15	284	-712	2	5	53	18
13	chemical storage deck				N/A	N/A	5-7	15	70	403	95	2	5	60	36
14	pad				N/A	N/A	10-12	17	80	631	1640	1	2	40	-14
15	pad				N/A	N/A	5-7	7	30	494	712	1	2	57	28
16	pad				N/A	N/A	4-6	8	35	516	861	1	2	46	1
17	step of conex box				N/A	N/A	5-7	5	20	333	-379	1	2	53	18
18	storage conex				N/A	N/A	5-7	5	20	298	-617	2	5	42	-9
19	containment floor				N/A	N/A	8-10	7	30	436	318	9	25	40	-14
20	base of tank 2				N/A	N/A	15-20	8	35	488	671	0	-1	39	-16
21	base of tank 66742				N/A	N/A	20-30	51	249	744	2406	5	14	52	16
22	secondary containment				N/A	N/A	7-10	3	10	506	793	1	2	32	-34
23	secondary containment				N/A	N/A	7-10	N/A	N/A	N/A	N/A	0	-1	39	-16
24	guard floor				N/A	N/A	5-7	3	10	391	14	1	2	36	-24
25	guard floor				N/A	N/A	5-7	0	-5	364	-169	0	-1	31	-36

Survey No.:	WT-23-FS-007
Date:	10/24/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/9/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.339	0.376
BKG:	*Bcpm**:*	NA	NA	NA	0	305	7	557
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	302	5.75	46.2
MDC:		NA	NA	NA	14.9	626	17.4	76.5

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	office-lab floor				N/A	N/A	3-5	4	20	387	609	4	10	51	-13
2	lab bench				N/A	N/A	3-5	1	5	376	527	1	1	49	-18
3	breakroom				N/A	N/A	5-7	5	25	431	936	3	7	58	6
4	production floor outside of office				N/A	N/A	5-7	35	174	465	1189	11	30	70	38
5	walkway near effluent tanks				N/A	N/A	3-5	9	45	422	869	2	4	77	57
6	floor between office and sludge box				N/A	N/A	7-10	6	30	414	810	2	4	67	30
7	floor outside boiler room				N/A	N/A	5-7	27	134	532	1686	2	4	53	-7
8	between boiler and storage area				N/A	N/A	5-7	11	55	437	981	0	-2	57	3
9	floor next to first atella rack				N/A	N/A	20-25	18	89	771	3462	2	4	47	-23
10	between A and B rack				N/A	N/A	20-25	9	45	654	2592	1	1	57	3
11	floor in front of Atela A				N/A	N/A	30-35	17	84	1143	6225	1	1	52	-10
12	floor next to B rack				N/A	N/A	20-25	14	69	782	3543	5	13	55	-2
13	floor in corner				N/A	N/A	15-20	15	74	530	1671	2	4	65	25
14	floor next to C rack				N/A	N/A	5-7	17	84	460	1151	5	13	62	17
15	floor in front of C rack				N/A	N/A	6-8	42	208	471	1233	2	4	74	49
16	floor next to D rack				N/A	N/A	10-12	55	273	802	3692	0	-2	58	6
17	floor between A & D rack				N/A	N/A	7-10	35	174	546	1790	3	7	56	1
18	next to D rack				N/A	N/A	7-10	46	228	436	973	N/A	N/A	N/A	N/A
19	floor near first tank				N/A	N/A	7-10	10	50	442	1018	1	1	59	9
20	floor near third tank				N/A	N/A	7-10	5	25	447	1055	5	13	56	1
21	floor under sludge tank				N/A	N/A	3-5	10	50	427	906	6	16	54	-5
22	floor near first sludge tank				N/A	N/A	3-5	7	35	419	847	1	1	53	-7
23	floor between filter press folloff and door				N/A	N/A	3-5	15	74	429	921	3	7	57	3
24	side of filter press				N/A	N/A	6-8	2	10	253	-386	1	1	55	-2
25	top of mixing tank				N/A	N/A	3-5	6	30	302	-22	N/A	N/A	N/A	N/A

Survey No.:	WT-23-FS-054
Date:	4/22/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	199	0	508
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	239	0.00	78.3
MDC:		NA	NA	NA	37.2	499	8.47	130

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Offload Area				N/A	N/A	3-5	16	73	309	801	1	3	40	-51
2	Offload Area				N/A	N/A	3-5	4	15	364	1201	0	0	50	-4
3	Ramp				N/A	N/A	3-5	12	53	419	1601	0	0	47	-18
4	Sludge Storage				N/A	N/A	5-7	13	58	383	1339	0	0	53	10
5	Sludge Storage				N/A	N/A	15-20	8	34	565	2663	1	3	54	15
6	Floor Near Filter Press				N/A	N/A	3-5	6	24	492	2132	0	0	51	1
7	Floor Near Influent Tank				N/A	N/A	3-5	4	15	286	633	0	0	52	6
8	Floor Near Influent Tank				N/A	N/A	3-5	4	15	254	400	0	0	44	-32
9	Floor				N/A	N/A	3-5	2	5	258	429	0	0	49	-8
10	Floor				N/A	N/A	4-6	3	10	350	1099	0	0	60	43
11	Floor in the Maintenance Area				N/A	N/A	3-5	5	19	277	568	0	0	45	-27
12	Floor Near Boiler				N/A	N/A	3-5	3	10	273	539	1	3	42	-42
13	Floor Near Evaporators				N/A	N/A	3-5	9	39	335	990	0	0	55	20
14	Floor Near Evaporators				N/A	N/A	3-5	2	5	306	779	0	0	47	-18
15	Floor Near Evaporators				N/A	N/A	3-5	2	5	271	524	0	0	50	-4
16	Floor Near Evaporators				N/A	N/A	3-5	11	49	358	1157	1	3	44	-32
17	Floor Near Rol-Up Door				N/A	N/A	3-5	2	5	341	1033	0	0	41	-46
18	Floor Near Evaporators				N/A	N/A	3-5	4	15	343	1048	1	3	57	29
19	Floor Near Evaporators				N/A	N/A	3-5	11	49	370	1244	0	0	48	-13
20	Floor Near Tank				N/A	N/A	3-5	3	10	257	422	3	8	51	1
21	Floor Near Tank				N/A	N/A	3-5	2	5	295	699	0	0	45	-27
22	Floor Near Tank				N/A	N/A	3-5	1	0	407	1514	0	0	41	-46
23	Floor Near Tank				N/A	N/A	8-12	2	5	318	866	0	0	45	-27
24	Floor Near Tank				N/A	N/A	5-7	0	-5	319	873	1	3	39	-56
25	Floor Near Tank				N/A	N/A	3-5	1	0	309	801	0	0	41	-46

Survey No.:	WT-23-FS-054
Date:	4/22/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***				***Removable***				
							Alpha		Beta-Gamma		Alpha		Beta-Gamma		
Instrument Model:				NA	Bicron		Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1		
Instrument SN:				NA	C690J		164675 / PR176413		164675 / PR176413		185291		PR194723		
Cal. Due Date:				NA	9/21/2013		4/18/2014		4/18/2014		11/15/2013		11/15/2013		
x, y int.:	*Efficiency:*			NA	NA	NA	0.162		0.108		0.354		0.212		
BKG:	*Bcpm**:*			NA	NA	NA	1		199		0		508		
ACF:				NA	NA	NA	1.27		1.27		1.00		1.00		
tB:				NA	NA	NA	1		1		10		10		
tS:				NA	NA	NA	1		1		1		1		
Lc:				NA	NA	NA	11.3		239		0.00		78.3		
MDC:				NA	NA	NA	37.2		499		8.47		130		
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Floor Near Sludge Tank				N/A	N/A	4-6	3	10	297	713	0	0	43	-37
27	Floor Near Sludge Tank				N/A	N/A	10-12	5	19	344	1055	0	0	44	-32
28	Filter Press				N/A	N/A	4-6	3	10	269	509	2	6	55	20
29	Clarifier 1				N/A	N/A	3-5	1	0	208	65	0	0	48	-13
30	Clarifier 2				N/A	N/A	3-5	5	19	345	1062	0	0	52	6
31	Breakroom Floor				N/A	N/A	5-7	2	5	267	495	0	0	64	62
32	Office Floor				N/A	N/A	4-6	3	10	301	742	0	0	50	-4
33	Effluent Tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	51	1
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-23-FS-055
Date:	7/29/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	8/12/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227389 /PR240337	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0	305	10	454
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	302	6.57	39.1
MDC:		NA	NA	NA	14.9	626	18.2	65

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lab floor				N/A	N/A	3-5	1	5	325	149	0	-3	48	6
2	lab bench (check source in cabinet above)				N/A	N/A	6-8	2	10	405	743	0	-3	45	-1
3	breakroom				N/A	N/A	3-5	2	10	344	290	0	-3	43	-6
4	production floor outside of office				N/A	N/A	3-5	2	10	351	342	0	-3	46	1
5	walkway near effluent tanks				N/A	N/A	4-6	9	45	398	691	0	-3	52	16
6	floor near effluent tanks				N/A	N/A	4-6	5	25	359	401	0	-3	39	-16
7	floor in walkway outside boiler room				N/A	N/A	5-7	8	40	430	929	1	0	45	-1
8	between boiler and parts shelf				N/A	N/A	4-6	5	25	356	379	1	0	40	-13
9	next to pump storage shelf				N/A	N/A	4-6	3	15	353	357	0	-3	39	-16
10	floor between Atela 1 and boiler room				N/A	N/A	6-8	12	60	459	1144	1	0	36	-23
11	floor in front of Atela 1				N/A	N/A	5-7	7	35	428	914	0	-3	49	9
12	floor between Atela rack 1 & 2				N/A	N/A	6-8	5	25	526	1642	2	3	38	-18
13	floor infront of Atela 2 rack				N/A	N/A	5-7	12	60	416	825	1	0	45	-1
14	floor next to Atela 2				N/A	N/A	5-7	17	84	478	1285	0	-3	47	4
15	floor inside rollup door				N/A	N/A	3-5	8	40	394	661	0	-3	60	36
16	floor next to Atela 3				N/A	N/A	4-6	12	60	474	1255	0	-3	47	4
17	floor between Atela 3 & 4				N/A	N/A	10-12	20	99	914	4524	0	-3	42	-8
18	next to Atela 4				N/A	N/A	5-7	39	193	609	2258	0	-3	62	41
19	floor center of allyway				N/A	N/A	3-5	4	20	438	988	2	3	54	21
20	floor next to tank				N/A	N/A	4-6	23	114	488	1359	7	17	43	-6
21	floor near tank				N/A	N/A	4-6	1	5	418	839	1	0	32	-33
22	floor near neutralization tank				N/A	N/A	4-6	1	5	384	587	0	-3	46	1
23	back corner near rollup				N/A	N/A	4-6	1	5	350	334	0	-3	51	14
24	in front of filter cake rolloff				N/A	N/A	3-5	12	60	347	312	0	-3	44	-3
25	filter press bomb door				N/A	N/A	4-6	6	30	256	-364	N/A	N/A	N/A	N/A

Survey No.:	WT-24-FS-016
Date:	11/7/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/12/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4.00	221	6.00	498
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	4.98	43.7
MDC:		NA	NA	NA	61.0	536	15.7	73

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	floor in effluent storage				N/A	N/A	3-5	7	15	422	1493	2	4	50	1
2	floor near filter cake rolloff				N/A	N/A	7-10	12	40	657	3239	3	7	57	19
3	floor inside containment near drain				N/A	N/A	3-5	23	94	454	1731	0	-2	55	14
4	floor between effluent tanks				N/A	N/A	5-7	29	124	529	2288	2	4	58	22
5	floor in back corner of effluent				N/A	N/A	3-5	41	183	487	1976	2	4	60	27
6	between rolloff & rolling door				N/A	N/A	8-10	11	35	463	1798	1	1	65	40
7	near bag filters				N/A	N/A	5-7	12	40	480	1924	1	1	61	30
8	walkway outside lab				N/A	N/A	6-8	3	-5	477	1902	1	1	55	14
9	offload pad				N/A	N/A	6-8	24	99	524	2251	1	1	54	11
10	under steps to press				N/A	N/A	20-25	41	183	816	4420	2	4	32	-47
11	floor near pH1				N/A	N/A	15-20	18	69	491	2006	2	4	53	9
12	floor near pH2				N/A	N/A	6-8	10	30	488	1983	3	7	66	43
13	office floor				N/A	N/A	5-7	5	5	357	1010	2	4	55	14
14	floor near settling tank				N/A	N/A	10-12	98	466	708	3618	1	1	57	19
15	floor between INB 1&2				N/A	N/A	5-7	83	392	663	3283	1	1	53	9
16	floor between INB 3&4				N/A	N/A	6-8	38	169	617	2942	2	4	47	-7
17	floor in isle between tanks				N/A	N/A	6-8	17	64	550	2444	0	-2	61	30
18	bathroom floor				N/A	N/A	5-7	8	20	361	1040	0	-2	51	3
19	lab-incoming reception				N/A	N/A	3-5	10	30	403	1352	0	-2	49	-2
20	filter press				N/A	N/A	8-10	5	5	274	394	1	1	51	3
21															
22															
23															
24															
25															

Survey No.:	WT-24-FS-064
Date:	6/5/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	7/30/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.401
BKG:	*Bcpm**:*	NA	NA	NA	0.00	311	6.00	395
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	278	5.09	36.5
MDC:		NA	NA	NA	14.9	576	16.0	61.6

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Concrete Offload				N/A	N/A	3-5	7	35	397	583	0	-2	37	-6
2	Wood Deck				N/A	N/A	3-5	2	10	332	142	0	-2	33	-16
3	Concrete Floor				N/A	N/A	3-5	6	30	388	522	1	1	29	-26
4	Concrete Floor / Secondary Containment				N/A	N/A	3-5	16	80	410	671	0	-2	28	-29
5	Between Tanks				N/A	N/A	3-5	18	90	463	1030	1	1	38	-4
6	Near Outbound Tank 4				N/A	N/A	3-5	22	109	448	928	0	-2	40	1
7	Floor Near Outside Wall				N/A	N/A	3-5	104	517	594	1918	2	4	36	-9
8	Floor Near Filter Press				N/A	N/A	10-15	56	279	554	1647	1	1	36	-9
9	floor near settling tank				N/A	N/A	4-6	143	711	705	2670	0	-2	32	-19
10	floor near INB 1				N/A	N/A	4-6	10	50	488	1199	0	-2	49	24
11	floor near INB 2				N/A	N/A	4-6	20	99	418	725	0	-2	39	-1
12	floor near INB 3				N/A	N/A	5-7	70	348	957	4377	2	4	39	-1
13	floor near INB 4				N/A	N/A	3-5	18	90	449	935	0	-2	37	-6
14	floor near INB 5				N/A	N/A	6-8	11	55	408	657	1	1	35	-11
15	office floor				N/A	N/A	3-5	2	10	316	34	1	1	33	-16
16	bathroom floor				N/A	N/A	4-6	0	0	318	47	0	-2	43	9
17	platform on Ph 2				N/A	N/A	10-15	2	10	519	1409	0	-2	3	-91
18	lab bench top				N/A	N/A	3-5	1	5	331	136	0	-2	35	-11
19	floor near filters				N/A	N/A	5-7	8	40	418	725	1	1	36	-9
20	near door to offload				N/A	N/A	8-10	3	15	451	949	0	-2	32	-19
21	top of filter press				N/A	N/A	5-7	7	35	269	-285	0	-2	44	11
22															
23															
24															
25															

Survey No.:	WT-24-FS-065
Date:	4/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* µRem/hr	*Gamma*	*Corr µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	216	3	430
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	249	3.60	72.0
MDC:		NA	NA	NA	37.2	519	13.8	121

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Offload Bay				N/A	N/A	3-5	19	87	340	902	0	-1	40	-14
2	Offload Bay				N/A	N/A	3-5	9	39	323	779	0	-1	58	71
3	Offload Bay				N/A	N/A	3-5	1	0	288	524	2	5	47	19
4	Wood Deck Near Entrance				N/A	N/A	3-5	3	10	184	-233	0	-1	48	24
5	Inside Entrance Door				N/A	N/A	3-5	7	29	314	713	0	-1	44	5
6	Floor Near Filters				N/A	N/A	4-5	17	78	322	771	0	-1	50	33
7	Floor Near Filter Waste				N/A	N/A	3-5	9	39	372	1135	1	2	39	-19
8	Under Effluent Tank				N/A	N/A	3-5	10	44	326	801	2	5	26	-80
9	Near pH-2 Tank				N/A	N/A	5-7	4	15	306	655	0	-1	39	-19
10	Under pH-2 Tank				N/A	N/A	25-30	2	5	1509	9410	1	2	52	42
11	Under pH-1 Tank				N/A	N/A	15-20	2	5	545	2394	2	5	51	38
12	Floor Near Settling Tank				N/A	N/A	3-5	12	53	342	917	3	8	58	71
13	Floor Near Exterior Wall				N/A	N/A	3-5	22	102	330	830	1	2	48	24
14	Floor Near Exterior Wall				N/A	N/A	3-5	9	39	321	764	3	8	37	-28
15	Floor Between Incoming water and Settling Tank				N/A	N/A	3-5	20	92	339	895	2	5	57	66
16	General Walkway				N/A	N/A	3-5	99	476	614	2896	0	-1	39	-19
17	General Walkway				N/A	N/A	3-5	19	87	290	539	3	8	37	-28
18	Break Room				N/A	N/A	3-5	5	19	228	87	1	2	35	-38
19	Office				N/A	N/A	3-5	2	5	208	-58	0	-1	42	-5
20	Bathroom				N/A	N/A	3-5	5	19	196	-146	1	2	108	307
21	Inbound Tank 1				N/A	N/A	4-8	1	0	330	830	0	-1	69	123
22	Inbound Tank 2				N/A	N/A	5-7	0	-5	244	204	2	5	44	5
23	Inbound Tank 3				N/A	N/A	3-5	2	5	197	-138	1	2	41	-9
24	Inbound Tank 4				N/A	N/A	3-5	2	5	160	-408	0	-1	43	0
25	Inbound Tank 5				N/A	N/A	3-5	1	0	175	-298	1	2	40	-14

Survey No.:	WT-24-FS-065
Date:	4/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:					**Project:**
Contaminant/Limits:					
Comments:					

Parameters		***Dose Rate*** µRem/hr	***Gamma***	***Corr µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	216	3	430
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	249	3.60	72.0
MDC:		NA	NA	NA	37.2	519	13.8	121

No.	*Descriptions*	*x*	*y*	*z*	*µRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Tank 5 Valve				N/A	N/A	3-5	11	49	321	764	2	5	51	38
27	Tank 4 Valve				N/A	N/A	3-5	13	58	308	670	1	2	44	5
28	Tank 3 Valve				N/A	N/A	3-5	38	180	717	3646	3	8	55	57
29	Tank 2 Valve				N/A	N/A	3-5	37	175	434	1586	1	2	39	-19
30	Tank 1 Valve				N/A	N/A	3-5	71	340	352	990	2	5	45	9
31	Work Bench				N/A	N/A	3-5	5	19	288	524	0	-1	54	52
32	Work Bench				N/A	N/A	3-5	6	24	223	51	1	2	53	47
33	Filter Press				N/A	N/A	5-7	2	5	146	-509	1	2	38	-24
34	Baffle Clarifier				N/A	N/A	3-5	30	141	292	553	2	5	60	80
35	Lab Floor				N/A	N/A	5-7	7	29	254	277	1	2	43	0
36	Floor				N/A	N/A	5-7	8	34	283	488	2	5	54	52
37	Roll-Off				N/A	N/A	20-30	5	19	340	902	0	-1	54	52
38	Roll-Off				N/A	N/A	40-50	19	87	223	51	2	5	59	76
39	Floor				N/A	N/A	5-7	17	78	295	575	1	2	37	-28
40	Floor Near Sump				N/A	N/A	5-7	20	92	267	371	0	-1	39	-19
41	Floor				N/A	N/A	5-7	27	126	362	1062	0	-1	55	57
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	WT-25-FS-006
Date:	10/10/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	12/11/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	E049A		227389 /PR240337	227415 /PR240349	143878	PR147628
Cal. Due Date:		NA	9/17/2014		4/18/2014	4/18/2014	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	NA	NA	NA	0.159	0.106	0.362	0.376
BKG:	*Bcpm**:*	NA	NA	NA	4	221	4	528
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	23.1	257	4.07	45.0
MDC:		NA	NA	NA	61.0	536	14.3	75

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	storage trailer floor				N/A	N/A	4-6	32	139	418	1463	0	-1	57	11
2	storage trailer floor				N/A	N/A	5-7	27	114	370	1107	5	13	53	1
3	lab floor				N/A	N/A	5-7	47	213	368	1092	3	7	49	-10
4	lab bench				N/A	N/A	5-7	1	-15	342	899	0	-1	43	-26
5	front of effluent tank				N/A	N/A	5-7	16	60	400	1330	1	2	45	-21
6	front of mixing tank				N/A	N/A	5-7	19	74	403	1352	2	4	47	-15
7	monroe sludge thickener				N/A	N/A	5-7	26	109	608	2875	6	15	45	-21
8	under lumella				N/A	N/A	10-12	22	89	502	2087	1	2	61	22
9	pumps for influent mixers				N/A	N/A	5-7	24	99	406	1374	3	7	54	3
10	secondary containment around filter cake boxes				N/A	N/A	12-14	33	144	757	3982	26	71	75	59
11	chemical storage floor				N/A	N/A	8-10	10	30	329	802	2	4	52	-2
12	infront of supersack storage				N/A	N/A	20-30	12	40	524	2251	2	4	73	54
13	inside offload containment				N/A	N/A	5-7	12	40	349	951	1	2	36	-45
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	WT-25-FS-052	**Item Surveyed:**	**Project:**
Date:	5/3/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	5/5/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415 /PR240349	227415 /PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	354	9	423
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	297	6.23	71.4
MDC:		NA	NA	NA	14.9	614	17.7	120

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Wood Platform Under Filter Press				N/A	N/A	4-6	65	323	596	1640	9	23	45	13
2	Active Sludge Press				N/A	N/A	10-12	53	264	653	2026	2	3	40	-11
3	Floor Between Sludge Press and Slurry Tank				N/A	N/A	10-15	75	373	917	3815	7	17	51	41
4	Secondary Lumella				N/A	N/A	5-7	16	80	600	1667	2	3	44	8
5	Pump Control Panel Housing				N/A	N/A	4-6	13	65	383	197	6	14	41	-6
6	Secondary Lumella Pumps				N/A	N/A	3-5	3	15	342	-81	4	9	49	32
7	Lumella				N/A	N/A	5-7	67	333	484	881	4	9	62	93
8	Office Floor				N/A	N/A	4-6	20	99	386	217	0	-3	48	27
9	Lab Floor				N/A	N/A	5-7	32	159	385	210	1	0	43	3
10	Lab Bench				N/A	N/A	5-7	19	95	345	-61	1	0	45	13
11	Outside Lab Trailer Next to Effluent Tanks				N/A	N/A	4-6	10	50	405	346	0	-3	48	27
12	Under Primary Lumella				N/A	N/A	8-10	4	20	544	1287	1	0	45	13
13	Pump Control Floor				N/A	N/A	3-5	2	10	417	427	0	-3	46	17
14	Mix Tank 2				N/A	N/A	7-10	12	60	425	481	2	3	49	32
15	Floor Between Effulent and Mix Tanks				N/A	N/A	7-10	17	85	567	1443	2	3	51	41
16	Base of Mix Tank 1				N/A	N/A	5-7	15	75	455	684	0	-3	47	22
17	Chem Storage				N/A	N/A	3-5	15	75	417	427	2	3	44	8
18	Rolloff Decon area				N/A	N/A	7-10	5	25	546	1301	2	3	65	107
19	Containment Floor				N/A	N/A	10-15	2	10	610	1735	1	0	41	-6
20	Containment Floor				N/A	N/A	15-20	3	15	864	3456	1	0	53	51
21	Chem Connex Flooor				N/A	N/A	3-5	8	40	330	-163	3	6	55	60
22	Incoming Water Contaiment Floor				N/A	N/A	14-16	6	30	349	-34	1	0	43	3
23	Incoming Water Contaiment Floor				N/A	N/A	7-12	25	124	782	2900	3	6	51	41
24	Security Area				N/A	N/A	3-6	1	5	381	183	0	-3	48	27
25	Lower Containment				N/A	N/A	5-7	1	5	562	1409	1	0	31	-53

Landfills

Survey No.:	LF-01-FS-073
Date:	4/25/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/28/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:					**Project:**
Contaminant/Limits:					
Comments:					

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	339	0	508
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	290	0.00	78.3
MDC:		NA	NA	NA	14.9	601	8.5	130

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	lobby floor				N/A	N/A	3-5	0	0	339	0	0	0	35	-75
2	conference room floor				N/A	N/A	4-6	2	10	237	-691	0	0	49	-8
3	bathroom floor				N/A	N/A	3-5	2	10	215	-840	0	0	53	10
4	office floor				N/A	N/A	5-7	4	20	209	-881	0	0	50	-4
5	scale house				N/A	N/A	3-5	1	5	215	-840	0	0	45	-27
6	floor				N/A	N/A	6-8	1	5	319	-136	0	0	37	-65
7	rolloff				N/A	N/A	120-130	N/A	N/A	N/A	N/A	0	0	44	-32
8	floor				N/A	N/A	3-5	2	10	330	-61	0	0	52	6
9	floor				N/A	N/A	10-12	5	25	432	630	0	0	59	39
10	rolloff				N/A	N/A	80-100	N/A	N/A	N/A	N/A	1	3	36	-70
11	rolloff				N/A	N/A	100-120	N/A	N/A	N/A	N/A	4	11	53	10
12	floor				N/A	N/A	3-5	3	15	297	-285	0	0	45	-27
13	concrete pad				N/A	N/A	3-5	5	25	317	-149	0	0	46	-23
14	scale				N/A	N/A	3-5	0	0	232	-725	0	0	49	-8
15	breakroom floor				N/A	N/A	3-5	0	0	231	-732	1	3	52	6
16	bathroom Floor				N/A	N/A	5-8	1	5	200	-942	0	0	52	6
17	office floor				N/A	N/A	3-5	6	30	19	-2168	0	0	51	1
18	maintenance shop				N/A	N/A	3-5	2	10	326	-88	2	6	49	-8
19	maintenance shop				N/A	N/A	3-5	0	0	276	-427	0	0	39	-56
20	excavator bucket				N/A	N/A	3-5	8	40	27	-2114	0	0	57	29
21	excavator cab				N/A	N/A	3-5	2	10	255	-569	1	3	55	20
22	pumphouse floor				N/A	N/A	3-5	2	10	324	-102	0	0	47	-18
23	pumphouse floor				N/A	N/A	3-5	1	5	329	-68	0	0	48	-13
24	pumphouse floor				N/A	N/A	4-6	4	20	454	779	1	3	41	-46
25	electrical				N/A	N/A	6-8	6	30	354	102	2	6	54	15

Survey No.:	LF-01-FS-073
Date:	4/25/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/28/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total***		***Removable***	
					Alpha	Beta-Gamma	Alpha	Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	339	0	508
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	290	0.00	78.3
MDC:		NA	NA	NA	14.9	601	8.5	130

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	raw leachate pad				N/A	N/A	3-5	0	0	352	88	0	0	61	48
27	floor				N/A	N/A	3-5	1	5	325	-95	1	3	29	-103
28	floor				N/A	N/A	3-5	2	10	291	-325	0	0	42	-42
29	catwalk floor				N/A	N/A	3-5	1	5	198	-955	0	0	51	1
30	empty concentrate tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	54	15
31	full concentrate tank				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	40	-51
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Violia Greeentree Survey Data Sheet

Survey No.:	LF-02-FS-135	**Item Surveyed:**	**Project:**
Date:	4/26/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	Instrument was wet and not functioning for Points 1 - 8
Count Rm. Tech.:	A. Gumbert		
Date Counted:	4/28/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	267	0	508
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	277	0.00	78.3
MDC:		NA	NA	NA	37.2	575	8.5	130

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Lobby Floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	54	15
2	Office Floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	49	-8
3	Common Area Floor				N/A	N/A	5-7	N/A	N/A	N/A	N/A	0	0	58	34
4	Common Area Floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	60	43
5	Hallway				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	45	-27
6	Back Office				N/A	N/A	7-10	N/A	N/A	N/A	N/A	0	0	52	6
7	Conference Room Floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	0	46	-23
8	Conference Room Floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	2	6	55	20
9	Scale House Floor				N/A	N/A	3-5	4	15	377	801	0	0	49	-8
10	Shop Floor				N/A	N/A	3-5	6	24	413	1062	1	3	43	-37
11	Shop Floor				N/A	N/A	4-6	6	24	442	1274	0	0	36	-70
12	Vendinng Area				N/A	N/A	3-5	6	24	432	1201	0	0	66	72
13	Office Floor				N/A	N/A	4-6	3	10	400	968	2	6	44	-32
14	New Maintenance Floor				N/A	N/A	4-6	1	0	392	910	1	3	41	-46
15	New Maintenance Floor				N/A	N/A	3-5	3	10	417	1092	0	0	40	-51
16	Volvo Loader				N/A	N/A	3-5	2	5	256	-80	0	0	45	-27
17	Cat D8 Dozer				N/A	N/A	3-5	1	0	287	146	1	3	54	15
18	Cat D8 Dozer				N/A	N/A	3-5	0	-5	299	233	0	0	49	-8
19	Leachate Pump				N/A	N/A	5-7	9	39	294	196	0	0	49	-8
20	Leachate Treatment Plant Floor				N/A	N/A	3-5	3	10	396	939	0	0	61	48
21	Office Floor				N/A	N/A	4-6	2	5	340	531	0	0	46	-23
22	Breakroom Floor				N/A	N/A	3-5	2	5	311	320	1	3	38	-60
23	Storage Above Office				N/A	N/A	3-5	2	5	280	95	1	3	39	-56
24	Containment Floor				N/A	N/A	3-5	4	15	346	575	0	0	46	-23
25	Lab Floor				N/A	N/A	3-5	3	10	315	349	1	3	48	-13

Violia Greeentree Survey Data Sheet

Survey No.:	LF-02-FS-135
Date:	4/26/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	4/28/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:

Project:

Contaminant/Limits:

Comments: Instrument was wet and not functioning for Points 1 - 8

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		164675 / PR176413	164675 / PR176413	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.162	0.108	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	1	267	0	508
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	11.3	277	0.00	78.3
MDC:		NA	NA	NA	37.2	575	8.5	130

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Tank				N/A	N/A	3-5	4	15	397	946	0	0	44	-32
27	Filter Press				N/A	N/A	3-5	0	-5	320	386	1	3	49	-8
28	Tank				N/A	N/A	3-5	4	15	363	699	0	0	39	-56
29	Floor of Pretreatment				N/A	N/A	3-5	2	5	383	844	1	3	60	43
30	Floor of Pretreatment				N/A	N/A	3-5	3	10	414	1070	0	0	64	62
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	LF-03-FS-076
Date:	5/13/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	311	1	473
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	278	2.08	75.5
MDC:		NA	NA	NA	14.9	576	11.6	126

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	entrance floor				N/A	N/A	3-5	4	20	417	718	0	0	44	-16
2	floor near rollup				N/A	N/A	3-5	2	10	412	684	1	3	49	8
3	floor under filter press				N/A	N/A	3-5	1	5	39	-1843	0	0	46	-6
4	floor near valve on sludge tank				N/A	N/A	3-5	1	5	414	698	1	3	49	8
5	floor under lumella				N/A	N/A	3-5	13	65	462	1023	1	3	53	27
6	floor near sand filters				N/A	N/A	4-6	4	20	412	684	1	3	41	-30
7	floor near effluent tank				N/A	N/A	3-5	3	15	386	508	0	0	55	36
8	floor near sump in front of sludge surge tank				N/A	N/A	3-5	0	0	388	522	0	0	49	8
9	floor in storage area behind sludge tank				N/A	N/A	4-6	3	15	380	468	2	5	50	13
10	mens room floor				N/A	N/A	3-5	4	20	446	915	0	0	34	-63
11	breakroom floor				N/A	N/A	4-6	2	10	454	969	0	0	34	-63
12	lab floor				N/A	N/A	5-7	0	0	396	576	0	0	35	-58
13	lab bench				N/A	N/A	3-5	0	0	846	3625	0	0	39	-39
14	electrical				N/A	N/A	3-5	1	5	432	820	0	0	45	-11
15	floor outside utility room				N/A	N/A	3-5	4	20	483	1166	2	5	37	-49
16	maintenance entrance floor				N/A	N/A	3-5	2	10	416	712	0	0	52	22
17	bay 1 floor				N/A	N/A	3-5	1	5	389	529	0	0	55	36
18	bay 2 floor				N/A	N/A	3-5	1	5	350	264	1	3	55	36
19	top of tool box				N/A	N/A	3-5	1	5	267	-298	0	0	46	-6
20	office floor				N/A	N/A	3-5	0	0	397	583	1	3	39	-39
21	abandon tank pad				N/A	N/A	3-5	2	10	443	894	0	0	43	-20
22	collection trough center of tank pads				N/A	N/A	3-5	1	5	419	732	1	3	43	-20
23	scale lobby				N/A	N/A	4-6	1	5	338	183	0	0	40	-34
24	office floor				N/A	N/A	4-6	1	5	333	149	0	0	39	-39
25	office floor				N/A	N/A	3-5	2	10	380	468	0	0	36	-53

Survey No.:	LF-03-FS-076
Date:	5/13/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	311	1	473
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	278	2.08	75.5
MDC:		NA	NA	NA	14.9	576	11.6	126

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	lobby floor				N/A	N/A	4-6	7	35	383	488	0	0	39	-39
27	hallway by restrooms				N/A	N/A	4-6	16	80	365	366	1	3	39	-39
28	training room floor near water coooler				N/A	N/A	3-5	17	85	435	840	N/A	N/A	N/A	N/A
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	LF-04-FS-132
Date:	5/13/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	280	4	475
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	264	4.16	75.7
MDC:		NA	NA	NA	14.9	548	14.6	126

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Lab Bench				N/A	N/A	3-5	2	10	312	217	1	2	52	21
2	Lab Floor				N/A	N/A	3-5	3	15	452	1166	0	-1	50	12
3	Floor Under Filter Press				N/A	N/A	3-5	2	10	385	712	0	-1	42	-26
4	Floor				N/A	N/A	3-5	0	0	416	922	0	-1	50	12
5	Floor near Chemical Storage				N/A	N/A	3-5	2	10	398	800	0	-1	54	31
6	Floor near Lumella				N/A	N/A	3-5	3	15	382	691	0	-1	46	-7
7	Floor Under Sludge Tank				N/A	N/A	3-5	2	10	323	291	0	-1	46	-7
8	Floor near HVAC				N/A	N/A	3-5	1	5	304	163	0	-1	52	21
9	Floor infront of tank				N/A	N/A	3-5	1	5	338	393	0	-1	54	31
10	Floor Under Second Filter				N/A	N/A	3-5	0	0	426	989	0	-1	50	12
11	Containment Floor				N/A	N/A	3-5	14	70	400	813	1	2	49	7
12	Containment Floor				N/A	N/A	3-5	3	15	443	1105	0	-1	53	26
13	Gas Plant Office Floor				N/A	N/A	3-5	0	0	328	325	0	-1	40	-35
14	Gas Plant Entry				N/A	N/A	3-5	1	5	389	739	0	-1	43	-21
15	Near Generators				N/A	N/A	3-5	1	5	413	901	0	-1	49	7
16	Near Compressed Gas Tanks				N/A	N/A	5-7	2	10	510	1559	0	-1	48	2
17	Transfer Station Floor				N/A	N/A	3-6	13	65	346	447	0	-1	52	21
18	Transfer Station Floor				N/A	N/A	3-5	N/A	N/A	N/A	N/A	0	-1	45	-12
19	Break Room Floor				N/A	N/A	4-6	1	5	374	637	0	-1	34	-64
20	Restroom Floor				N/A	N/A	3-5	2	10	384	705	0	-1	45	-12
21	Bench in Maintenance Area				N/A	N/A	3-5	1	5	272	-54	0	-1	45	-12
22	Office Floor				N/A	N/A	5-7	3	15	322	285	0	-1	38	-45
23	Office Floor				N/A	N/A	3-5	1	5	309	197	0	-1	50	12
24															
25															

Survey No.:	LF-05-FS-050	**Item Surveyed:**	**Project:**
Date:	5/14/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	5/17/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0.00	303	7	485
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	274	5.50	76.5
MDC:		NA	NA	NA	14.9	569	16.6	128

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	reception area floor				N/A	N/A	3-4	3	15	333	203	0	-2	49	2
2	kitchen				N/A	N/A	2-3	3	15	308	34	0	-2	44	-21
3	training room				N/A	N/A	3-5	2	10	372	468	3	6	48	-2
4	maintenance desk				N/A	N/A	3-5	1	5	302	-7	0	-2	45	-17
5	shop floor				N/A	N/A	3-5	1	5	309	41	0	-2	38	-50
6	shop floor				N/A	N/A	4-6	3	15	375	488	1	1	46	-12
7	parts area				N/A	N/A	3-5	2	10	376	495	1	1	49	2
8	large storage igloo				N/A	N/A	3-5	2	10	408	712	1	1	48	-2
9	large storage igloo				N/A	N/A	3-5	1	5	422	806	1	1	47	-7
10	parking lot for gargabe trucks				N/A	N/A	3-5	1	5	340	251	0	-2	67	87
11	parking lot for gargabe trucks				N/A	N/A	3-5	3	15	410	725	2	4	43	-26
12	lobby of gas plant				N/A	N/A	3-5	1	5	394	617	1	1	40	-40
13	between cat generators				N/A	N/A	3-4	1	5	350	318	0	-2	47	-7
14	between cat generators				N/A	N/A	3-5	2	10	320	115	0	-2	63	68
15	near lube tanks				N/A	N/A	4-6	0	0	374	481	2	4	41	-35
16	floor drain between generator 2 and 3				N/A	N/A	3-5	2	10	382	535	1	1	48	-2
17	behind generator 1				N/A	N/A	4-6	2	10	379	515	0	-2	63	68
18	control room near safety equipment				N/A	N/A	4-6	5	25	377	501	1	1	56	35
19	office floor				N/A	N/A	3-5	2	10	369	447	0	-2	50	7
20	maintenance floor				N/A	N/A	4-6	0	0	365	420	1	1	49	2
21	maintenance floor wood inlay				N/A	N/A	3-5	3	15	298	-34	1	1	59	50
22	maintenance floor				N/A	N/A	3-5	1	5	412	739	0	-2	43	-26
23	maintenance office-lunch room				N/A	N/A	3-5	1	5	381	529	1	1	58	45
24	pump house floor				N/A	N/A	3-5	3	15	365	420	0	-2	49	2
25	floor near drain leachate pump				N/A	N/A	3-5	6	30	426	833	0	-2	39	-45

Survey No.:	LF-05-FS-050
Date:	5/14/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/17/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:		**Project:**
Contaminant/Limits:		
Comments:		

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* *µRem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0.00	303	7	485
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	274	5.50	76.5
MDC:		NA	NA	NA	14.9	569	16.6	128

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	emergcncy leachate storage				N/A	N/A	4-6	6	30	442	942	0	-2	45	-17
27	scalehouse floor				N/A	N/A	4-6	1	5	288	-102	0	-2	49	2
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Survey No.:	LF-07-FS-131
Date:	5/14/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	312	1	473
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.0	278	2.08	75.5
MDC:		NA	NA	NA	14.9	577	11.6	126

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Office Floor				N/A	N/A	3-4	2	10	326	95	0	0	38	-44
2	Office Floor				N/A	N/A	2-3	0	0	308	-27	0	0	35	-58
3	Office Floor				N/A	N/A	3-5	0	0	262	-339	1	3	51	17
4	Scale House Floor				N/A	N/A	3-5	10	50	369	386	1	3	46	-6
5	Scale House Floor				N/A	N/A	3-5	1	5	370	393	0	0	42	-25
6	Maintenance Floor				N/A	N/A	4-6	5	25	350	257	0	0	49	8
7	Maintenance Floor				N/A	N/A	3-5	0	0	420	732	2	5	38	-44
8	Maintenance Floor				N/A	N/A	3-5	2	10	378	447	1	3	42	-25
9	Maintenance Storage				N/A	N/A	3-5	3	15	425	766	0	0	34	-63
10	Maintenance Office				N/A	N/A	3-5	3	15	355	291	1	3	31	-77
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	LF-07-FS-134
Date:	5/15/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:														**Project:**	
Contaminant/Limits:															
Comments:															
Parameters				***Dose Rate*** mRem/hr	***Gamma***		***Corr*** ***µRem***	***Total***				***Removable***			
								Alpha		Beta-Gamma		Alpha		Beta-Gamma	
Instrument Model:				NA	Bicron			Model 2360 / 43-89		Model 2360 / 43-89		2929/43-10-1		2929/43-10-1	
Instrument SN:				NA	C690J			227415 /PR240349		227415 /PR240349		185291		PR194723	
Cal. Due Date:				NA	9/21/2013			4/18/2014		4/18/2014		11/15/2013		11/15/2013	
x, y int.:	*Efficiency:*			NA	NA		NA	0.158		0.116		0.354		0.212	
BKG:	*Bcpm**:*			NA	NA		NA	0.00		293		4		475	
ACF:				NA	NA		NA	1.27		1.27		1.00		1.00	
tB:				NA	NA		NA	1		1		10		10	
tS:				NA	NA		NA	1		1		1		1	
Lc:				NA	NA		NA	0.00		270		4.16		75.7	
MDC:				NA	NA		NA	14.9		560		14.6		126	
No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Maintenance Floor				N/A	N/A	3-5	4	20	365	488	3	7	42	-26
2	Maintenance Floor				N/A	N/A	5-7	3	15	394	684	0	-1	35	-59
3	Maintenance Floor				N/A	N/A	5-7	2	10	392	671	0	-1	46	-7
4	Maintenance Floor				N/A	N/A	3-5	1	5	427	908	0	-1	43	-21
5	Parts Floor				N/A	N/A	3-5	1	5	373	542	0	-1	57	45
6	Office Space				N/A	N/A	3-5	0	0	372	535	0	-1	47	-2
7	Kitchen Floor (tile)				N/A	N/A	3-5	1	5	582	1958	0	-1	39	-40
8	Scale House Floor				N/A	N/A	3-5	0	0	531	1613	0	-1	51	17
9	Flare Building				N/A	N/A	3-5	3	15	410	793	0	-1	50	12
10	Water Treatment Floor				N/A	N/A	3-5	0	0	362	468	0	-1	53	26
11	Water Treatment Floor				N/A	N/A	3-5	1	5	375	556	N/A	N/A	N/A	N/A
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															

Survey No.:	LF-08-FS-070
Date:	5/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/20/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:

Contaminant/Limits:

Comments:

Project:

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	267	1	473
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	258	2.08	75.5
MDC:		NA	NA	NA	14.9	536	11.6	126

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	kitchen floor (tile)				N/A	N/A	3-6	5	25	520	1714	1	3	46	-6
2	conference floor (carpet)				N/A	N/A	3-5	1	5	302	237	0	0	43	-20
3	hallway floor (carpet)				N/A	N/A	3-5	2	10	348	549	0	0	41	-30
4	storage floor (carpet)				N/A	N/A	3-4	3	15	360	630	0	0	50	13
5	lobby floor				N/A	N/A	3-4	2	10	289	149	1	3	45	-11
6	scale floor				N/A	N/A	3-5	1	5	331	434	1	3	54	32
7	scale floor near bathroom				N/A	N/A	3-5	2	10	326	400	0	0	43	-20
8	maintenance office				N/A	N/A	3-5	2	10	40	-1538	0	0	55	36
9	maintenance floor				N/A	N/A	3-5	3	15	317	339	0	0	62	69
10	steel work bench				N/A	N/A	3-5	0	0	276	61	0	0	44	-16
11	Cat 320 excavator				N/A	N/A	3-5	1	5	284	115	0	0	50	13
12	Cat 320 track				N/A	N/A	3-5	2	10	279	81	0	0	39	-39
13	breakroom floor				N/A	N/A	3-5	4	20	354	590	1	3	58	51
14	compressor office floor				N/A	N/A	3-5	1	5	291	163	1	3	57	46
15	compressor office floor				N/A	N/A	3-5	0	0	330	427	0	0	45	-11
16	compressor station floor				N/A	N/A	10-12	0	0	547	1897	2	5	36	-53
17	compressor floor near filter				N/A	N/A	10-15	0	0	488	1498	0	0	51	17
18	near condensate tank				N/A	N/A	4-6	0	0	355	596	0	0	38	-44
19	near compressor on floor				N/A	N/A	3-5	1	5	356	603	0	0	44	-16
20															
21															
22															
23															
24															
25															

Survey No.:	LF-09-FS-133	**Item Surveyed:**	**Project:**
Date:	5/16/2013	**Contaminant/Limits:**	
Survey Tech.:	J. Hubler	**Comments:**	
Count Rm. Tech.:	A. Gumbert		
Date Counted:	5/21/2013		
Survey Type:	Characterization		
Level of Posting:	N/A		

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	275	4	475
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	261	4.16	75.7
MDC:		NA	NA	NA	14.9	543	14.6	126

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*μRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Conference Room Floor				N/A	N/A	3-5	3	15	313	257	0	-1	39	-40
2	Kitchen Floor				N/A	N/A	5-7	1	5	347	488	0	-1	57	45
3	Office Floor				N/A	N/A	3-5	4	20	297	149	1	2	47	-2
4	Basement Breakroom Floor				N/A	N/A	5-7	0	0	355	542	0	-1	50	12
5	Scale House Floor				N/A	N/A	3-5	0	0	311	244	1	2	55	35
6	Scale House Floor				N/A	N/A	3-5	0	0	297	149	0	-1	38	-45
7	Sludge Room Floor				N/A	N/A	4-6	3	15	364	603	0	-1	48	2
8	Entrance to Water Treatment				N/A	N/A	3-5	0	0	344	468	0	-1	46	-7
9	Under Lumella				N/A	N/A	3-5	2	10	343	461	2	5	32	-73
10	Under Neutralization Tank				N/A	N/A	3-5	2	10	324	332	0	-1	41	-31
11	Under Lime Slurry Tank				N/A	N/A	3-5	1	5	341	447	0	-1	43	-21
12	Incoming Leachate Storage				N/A	N/A	3-5	3	15	377	691	0	-1	35	-59
13	Compressor Sation				N/A	N/A	3-5	4	20	381	718	0	-1	47	-2
14	Mainentance Work Bench				N/A	N/A	3-5	0	0	26	-1687	0	-1	56	40
15	Steel Plate on Floor				N/A	N/A	5-7	1	5	272	-20	0	-1	41	-31
16	Parts Building Floor				N/A	N/A	3-5	1	5	475	1355	0	-1	42	-26
17	Parts Building Office				N/A	N/A	3-5	4	20	386	752	0	-1	48	2
18	Excavator Cab				N/A	N/A	3-5	3	15	325	339	0	-1	37	-50
19	Excavator Track				N/A	N/A	4-6	4	20	360	576	1	2	41	-31
20	Service Garage Floor				N/A	N/A	3-5	1	5	355	542	0	-1	68	97
21	Service Garage Floor				N/A	N/A	5-7	1	5	369	637	1	2	31	-78
22	Service Garage Floor				N/A	N/A	5-7	4	20	381	718	0	-1	56	40
23	Second Story Office				N/A	N/A	3-5	1	5	274	-7	0	-1	42	-26
24	Breakroom Floor				N/A	N/A	3-5	0	0	313	257	0	-1	57	45
25	Restroom Floor				N/A	N/A	3-5	0	0	319	298	1	2	35	-59

Survey No.:	LF-09-FS-133
Date:	5/16/2013
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	5/21/2013
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per $100cm^2$

Item Surveyed:	
Contaminant/Limits:	
Comments:	
Project:	

Parameters		*Dose Rate* mRem/hr	*Gamma*	*Corr* μ*Rem*	*Total* Alpha	*Total* Beta-Gamma	*Removable* Alpha	*Removable* Beta-Gamma
Instrument Model:		NA	Bicron		Model 2360 / 43-89	Model 2360 / 43-89	2929/43-10-1	2929/43-10-1
Instrument SN:		NA	C690J		227415/ PR240349	227415/ PR240349	185291	PR194723
Cal. Due Date:		NA	9/21/2013		4/18/2014	4/18/2014	11/15/2013	11/15/2013
x, y int.:	*Efficiency:*	NA	NA	NA	0.158	0.116	0.354	0.212
BKG:	*Bcpm**:*	NA	NA	NA	0	275	4	475
ACF:		NA	NA	NA	1.27	1.27	1.00	1.00
tB:		NA	NA	NA	1	1	10	10
tS:		NA	NA	NA	1	1	1	1
Lc:		NA	NA	NA	0.00	261	4.16	75.7
MDC:		NA	NA	NA	14.9	543	14.6	126

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	μ*Rem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
26	Near Pump on Floor				N/A	N/A	3-5	1	5	350	508	0	-1	37	-50
27	Near Filter on Floor				N/A	N/A	3-5	1	5	335	407	1	2	45	-12
28	Floor Near Compressors				N/A	N/A	3-5	3	15	333	393	0	-1	42	-26
29	Gas Production office				N/A	N/A	3-5	1	5	335	407	0	-1	47	-2
30	Gas Production Breakroom				N/A	N/A	5-7	0	0	335	407	0	-1	45	-12
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Gas Distribution and End Use Operations

Survey No.:	CP-01-FS-136
Date:	9/11/2014
Survey Tech.:	J. Hubler
Count Rm. Tech.:	A. Gumbert
Date Counted:	9/11/2014
Survey Type:	Characterization
Level of Posting:	N/A

Notes:

ACF = Area Correction Factor

T_b = Background Count Time

T_s = Sample Count Time

R_b = Bkgd count rate

**Bcpm = Background cpm = R_b

Direct

(dpm) = (cpm - Bcpm)/(eff * ACF)

Removable

(dpm) = (cpm - Bcpm)/ eff

* dpm readings are per 100cm^2

Item Surveyed:	**Propenizer Filters**
Contaminant/Limits:	
Comments:	

Project:

Parameters		***Dose Rate*** mRem/hr	***Gamma***	***Corr*** ***µRem***	***Total*** Alpha	***Total*** Beta-Gamma	***Removable*** Alpha	***Removable*** Beta-Gamma
Instrument Model:		N/A	Bicron		N/A	N/A	2929/43-10-1	2929/43-10-1
Instrument SN:		N/A	EO49A		N/A	N/A	143878	PR147628
Cal. Due Date:		N/A	9/17/2014		N/A	N/A	10/24/2014	10/24/2014
x, y int.:	*Efficiency:*	N/A	N/A	N/A	N/A	N/A	0.3619	0.3759
BKG:	*Bcpm**:*	N/A	N/A	N/A	N/A	N/A	3	549
ACF:		N/A	N/A	N/A	N/A	N/A	1	1
tB:		N/A	N/A	N/A	N/A	N/A	10	10
tS:		N/A	N/A	N/A	N/A	N/A	1	1
Lc:		N/A	N/A	N/A	N/A	N/A	3.52	45.86
MDC:		N/A	N/A	N/A	N/A	N/A	8.29	223.06

No.	*Descriptions*	*x*	*y*	*z*	*mRem/hr*	*cpm*	*µRem/hr*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*	*cpm*	**dpm*
1	Filter 1				N/A	N/A	20-30	N/A	N/A	N/A	N/A	2	5	62	19
2	Filter 2				N/A	N/A	30-40	N/A	N/A	N/A	N/A	10	27	68	35
3	Filter 3				N/A	N/A	40-50	N/A	N/A	N/A	N/A	3	7	61	16
4	Filter 4				N/A	N/A	20-30	N/A	N/A	N/A	N/A	7	19	71	43
5	Filter 5				N/A	N/A	20-30	N/A	N/A	N/A	N/A	6	16	65	27
6	Filter 6				N/A	N/A	20-30	N/A	N/A	N/A	N/A	2	5	67	32
7	Filter 7				N/A	N/A	30-40	N/A	N/A	N/A	N/A	8	21	67	32
8	Filter 8				N/A	N/A	20-30	N/A	N/A	N/A	N/A	5	13	58	8
9	Filter 9				N/A	N/A	20-30	N/A	N/A	N/A	N/A	3	7	59	11
10	Filter 10				N/A	N/A	20-30	N/A	N/A	N/A	N/A	8	21	68	35
11	Filter 11				N/A	N/A	20-30	N/A	N/A	N/A	N/A	11	30	91	96
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															