TA-16 Bldg 16-340
Rubble Pile

Water Quality and RCRA
Los Alamos National Laboratory
ENVP-RCRA K490
P. O. Box 1663
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Phone: 505-667-0666/Fax: 505-667-5224

Date 9-6-06

Number of Pages Excluding Cover Sheet: 37

To: Katie Chamberlain Fax: 428-2567

From: John Tymkowych Phone: 667-9603

Message:

Katie,

Per our phone conversation, field sampling notes & notes on data compilation. Call me if you have any questions.

John T.

6638

340 Piles: Surface Sample Hits (C or G denotes Composite or Grab)

Grid 1	2 G Toluene .028 ppm	3	4 C Toluene .017 ppm DRO 180 ppm	5 G DRO 1300ppm	6	7 C DRO 1300ppm	8	9
10	11 G	12	13 G Nitrobenzene 1.8 ppm DRO 750 ppm Toluene .018 ppm — Q	14	15	16 C HMX 1.7ppm DRO 2600ppm	17	18 G HMX 1.5 ppm DRO 5600 ppm
19 C Toluene .028ppm Naph .054 ppm DRO 400 ppm Nitrobenzene 1.5ppm PCB .030 ppm	20 G DRO 290ppm	21 G	22	23 C DRO 380ppm	24	25	26	27 C
28	29 G	30 C	31	32 C Toluene .025ppm DRO 210ppm	33 T: See 32	34	35	36 G Toluene .013ppm DRO 2900ppm
37 C Toluene .016ppm	38 C	39 G	40	41	42 C	43	44 G	45 G DRO 4400ppm Nitrobenzene 2.6ppm 4 Amino-2,6-Dinitrotoluene 18ppm
46	47	48 C Toluene .018ppm DRO 380ppm	49	50 C	51	52	53	54 G

340 Piles: Middle and Bottom Sample Hits (C or G denote Composite or Grab)

Grid 1	2 G Naph 7.7ppm p/m Xyl .012ppm DRO 840ppm	3	4 C	5 G	6	7 C Naph 5.7ppm DRO 290ppm	8	9
10	11 G Naph 7.5 ppm DRO 480ppm	12	13 C 1,2,4 Tirmethylbenzene .04 ppm 1,3,5 Trimethylbenzene.012ppm Naph 6.3 ppm DRO 720 ppm	14	15	16 C	17	18 G
19 C	20 G	21 G Naph 6.3 ppm DRO 450ppm	22	23 C	24	25	26	27 C DRO 2800 ppm
28	29 G Naph 6.6ppm HMX .28ppm DRO 760ppm	30 C HMX .24 ppm Naph 4.2 ppm DRO 540 ppm	31	32 G Naph 3.1 ppm DRO 240ppm	33	34	35	36 G
37	38 C Naph 4.2ppm DRO 910ppm	39 G Naph 6.7 ppm DRO 620 ppm	40	41	42 C Naph .38 ppm	43	44 G Naph .35ppm DRO 2200 ppm	45 G
46	47	48 C	49	50 C HMX .16ppm DRO 880ppm	51	52	53	54 G

340
VOCs (qual.)

page 2

		ppm	
Grid 23	Acetone	.017	J
777-CT	Methylene Chloride	.011	JB V, V4
	Naph.	.008	JB V, V4
	Toluene	.004	JB V, V4
Grid 16	Naphthalene	.007	JB V, V4
754-CT	Toluene	.005	JB V, V4
Grid 5-Dup	Naph.	.012	JB V, V4
771-GT	Toluene	.004	JB V, V4
Grid 18	Meth. Chlor.	.008	JB V, V4
571-GT	Naph.	.013	JB V, V4
	Toluene	.009	B V, V4
Grid 32+33	Acetone	.014	J
784-CT	Naph.	.009	JB U, V4
Grid. 48	Naph	.018	JB U, V4
807-CT			
Sludge Beyond berm, South side			
1020-CT	Toluene	.001	J
Grid 38	1,2,4 Trimethylbenzene	.006	J
988 MB-C	Ethylbenzene	.004	J
	o-xylene	.004	J
	p/m xylene	.009	J
	Toluene	.014	R

MB - middle/bottom sample
T - Top sample
C - composite
G - grab

340
VOC's (qualified)

		in ppm	qualifier
Grid 2 VOC's (qualified)			
Sample # 821-G	1,3 Dichlorobenzene	.002	J U, V8
TOP	Naphthalene	.022	B, U, V4
Grid 13	1,3 Dichlorobenzene	.002	J U, V8
800-GT	1,2,4 Trichlorobenzene	.004	J
TOP	Naphthalene	.013	JB U, V4
Grid 37	Naphthalene	.013	JB U, V4
837-CT			
Top			
Grid 36			
579-GT	Methylene Chloride	.007	JB U, V4
1			
Grid 7			
596-CT	Naphthalene	.022	B
	Toluene	.008	B U, V4
Grid 5	Naph.	.011	J
763-GT	Toluene	.004	J
Grid 45	Methylene Chloride	.020	JB U, V4
587-GT	Naphthalene	.012	JB U, V4
	Toluene	.004	JB U, V4

340 VOC's (qual.)

		ppm	qual.
Grid 38 cont.	MEK	.11	J
	B Chloromethane	.083	J V1 V8
Grid 13	Ethylbenzene	.004	J
948 MB-C	p/m xylene	.009	J
	o-Xylene	.005	J
	Toluene	.016	B
	B Chloromethane	.064	J V1 V8
West Background	Naph	.012	JB V1 V8
1066-G	Toluene	.005	JB V1 V8
Grid 29	Toluene	.036	J
996-MB-G			
North Background	Naph.	.041	JB V1 V8
1044-MB-C	Toluene	.014	J
Grid 21	1,2,4 Trimethylbenzene	.030	J
956-MB-C	Toluene	.033	J
Grid 21-Dup	MEK	.12	J
964-MB-G	Toluene	.020	J
Sludge	MEK	.023	JB U1 V4
910	Toluene	.002	J U1 V8

340 VOCs (qual.)

		ppm	Q proj
East Background 1073-C	Naph.	.068	JB
Grid 39 980-MB-G	1,2,4 Trimethylbenzen	.006	J
	MBK	.006	J
	o-xylene	.003	J
	Toluene	.016	B
	MEK	.078	J
	Acetone	.12	J
South Background 1051-G	Toluene	.002	JB U, V4
	Naph.	.25	B
Grid 7 1028-MB-C	1,2,4 Trimethylbenzene	.009	J
	Ethylbenzene	.002	J
	Toluene	.030	B
	Chloromethane	.053	J U, V8
Grid 11 1004-MB-G	1,2,4 Trimethylbenzene	.007	J
	Ethylbenzene	.004	J
	o-xylenes	.004	J
	p/m-xylenes	.009	J
	Chloromethane	.066	J U, V8
Grid 2 1012-MB-G	Chloromethane	.072	J U, V8
	1,2,4 Trimethylbenzene	.010	J
	1,3,5 Trimethylbenzene	.004	J
	MBK	.006	J U, V8
	Ethylbenzene	.005	J

	540 VOCs (equal)	ppm	Q
Grid 2 cont.	o-xylene	.005	J
	Toluene	.015	B
Sludge 859	MEK	.030	JB U, V
	Naph.	.16	J+, V 4a
Grid 54 86b-MB-G	Naph.	.11	J, V3a J V4a
Grid 44 874-MB-G	1,2,4 Trimethylbenzene	.035	J V4a
	Naph.	.35	J V3a V4a
	Toluene	.002	J U, V4 V1
Sludge 888	MEK	.010	J U, V4
	Naph.	.024	J V4a
Grid 42 903-MB-C	1,1,2,2, Tetrachloroethane	.019	U, V8
	1,2,4 Trimethylbenzene	.029	J
	MEK	.097	J U, V8
	Acetone	.39	B
	Chlorobenzene	.019	JB U, V
	Chloromethane	.073	JB
	Ethylbenzene	.033	J
	o-xylene	.036	J U, V8
	Styrene	.024	B U, V8
	Toluene	.054	JB
Grid 56 925-MB-C	Acetone	.41	B
	Chloromethane	.057	JB

340 VOCs (qual)

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Grid 50 cont.

	ppm	Q
Naph.	.090	JB
Styrene	.042	JB
Toluene	.086	B

Attachment D: VOC Data-Validation Checklist

Yes	No	n/a	(check one)	Assign qualifier listed below if criteria = Yes: Detected analyte	Undetected analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	J, V9	UJ, V9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, V9a	R, V9a
☐	☒	☐	3. The instrument performance check was not present or fails acceptance criteria.	R, V16a	R, V16a
☐	☒	☐	4. The initial calibration was not present.	R, V16	R, V16
☐	☒	☐	5. The initial calibration did not have 5 calibration points and a low standard at the reporting limit.	R, V7	R, V7
☐	☒	☐	6. The initial calibration analyte %RSD was >30% .	J, V7a	UJ, V7a
☐	☒	☐	7. The analyte minimum RRF was <0.05.	J, V7b	R, V7b
☐	☒	☐	8. The CCV was not present.	R, V16	R, V16
☐	☒	☐	9. The continuing calibration analyte %D was >25%.	J, V7a	UJ, V7a
☐	☒	☐	10. The analyte minimum RRF was <0.05.	J, V7b	R, V7b
☐	☒	☐	11. The method blank was not reported.	R, V4b	R, V4b
☒	☐	☐	12. The analyte detected in the method blank and sample result for analyte was < 5x/10x the amount in the blank.	U, V4	N/A
☐	☒	☐	13. The analyte detected in the method blank and sample result for analyte was >5x/10x the amount in the method blank.	J, V4a	N/A
☐	☒	☐	14. The IS information was not present.	R, V2a	R, V2a
☐	☒	☐	15. The IS areas in CCV were <50% or >200% of the previous days' IS areas.	J, V1	UJ, V1
☐	☒	☐	16. The IS retention times had shifted by >30 s.	J, V0	UJ, V0
☐	☒	☐	17. The sample IS areas were >200% of the daily CCV IS areas.	J, V1b	N/A
☐	☒	☐	18. The sample IS areas were <50% but are ≥10% of the daily CCV IS areas.	J, V1a	UJ, V1a
☐	☒	☐	19. The sample IS areas were <10% of the daily CCV IS areas.	J, V2	R, V2
☐	☒	☐	20. The surrogate information was not present.	R, V3f	R, V3f
☐	☒	☐	21. The surrogate %R was >UAL.	J+, V3	N/A
☐	☒	☐	22. The surrogate %R was <LAL but ≥10%.	J-, V3a	UJ, V3c
☐	☒	☐	23. The surrogate %R was <10%.	J-, V3b	R, V3d
☐	☒	☐	24. The surrogate recoveries were (1) <LAL and (1) >UAL.	J, V3e	UJ, V3e
☐	☒	☐	25. The LCS information was not present.	R, V12	R, V12
☐	☒	☐	26. The LCS %R was >UAL.	J+, V12d	N/A
☐	☒	☐	27. The LCS %R was <LAL but ≥10%.	J-, V12b	UJ, V12c
☐	☒	☐	28. The LCS %R was <10%.	J-, V12a	R, V12a
☐	☒	☐	29. The mass spectral information was missing.	R, V8a	R, V8a
☒	☐	☐	30. The mass spectrum did not meet method specifications.	U, V8	N/A
☐	☒	☐	31. The TICs were requested but not reported.	R, V11	R, V11
☐	☒	☐	32. The sample was diluted inappropriately.	N/A	U, V10
☐	☒	☐	33. Other obvious data-quality issues were identified.	___, V19	___, V19

Sep-06-06 07:48 From-ESH-5 GROUP OFFICE LANL +505 665 2192 T-067 P.010 F-890

Middle & Bottom (WATER)

N

E

1	~~2~~ G	3	4	5	6	~~7~~ C Done	8	9
10	~~11~~ G	12	~~13~~ C	14	15	16	17	18
19	20	~~21~~ Done G	22	23	24	25	26	~~27~~ Done C
28	~~29~~ Done G	~~30~~ Done C	31	~~32~~ Done G	33	34	~~35~~	36
37	~~38~~ Done C	~~39~~ Done G	40	41	~~42~~ Done C	43	~~44~~ Done G	45
46	47	48	49	~~50~~ Done C	51	52	53	~~54~~ Done G

TOP, MIDDLE, LOWER SAMPLES:

GRID 170

38, 7, 32, 39, 52, 54, 42, 13, 36, 50, 21, 20, 35, 44, 29

5 Samples outside of grid. Replace w/ grid 164: 11, 2, 27 for 5

WATER

PREPARED BY	
DATE	

TOP / MIDDLE / TUFF INTERFACE

GRAB SAMPLES:

2, 11, 21, 29, 32, 39, 44, 54

COMPOSITE SAMPLES:

7, 13, 27, 30, 38, 42, 50

SAMPLE IN THIS ORDER

✓27 - COMPOSITE
✓54 - GRAB
✓44 - GRAB
✓7 - COMPOSITE
✓42 - COMPOSITE
✓50 - COMPOSITE
✓32 - GRAB
✓13 - COMPOSITE
✓21 - GRAB
✓30 - COMPOSITE
✓39 - GRAB
✓38 - COMPOSITE
✓29 - GRAB
✓11 - GRAB
✓2 - GRAB

PREPARED BY	
DATE	

GRID #27 - COMPOSITE MATRIX:
TIME: 10:20 #5 845-85
DATE: 9/6/05
MATRIX: concrete, soil, construction debris
SAMPLE ANALYSES/CONTAINER:
GRO UOC (125 ml g) UOC (2-40 ml g HCl) SVOC/HE/DRO (250 ml g
TAL METALS (125 ml g) TCLP pH METALS (2-250 ml g)
ASBESTOS (500 ml P) PCB (250 ml g) RAD (500 ml P)
GPS COORDINATES: PICTURES:
SAMPLER: Terrence Garcia / Consuela Montoya
PICTURE: ✓

GRID # 54 - GRAB MATRIX: Concrete, soil, construction debris
TIME: 10:35 866 - 873
DATE: 9/6/05
GPS COORDINATES: PICTURES: ✓
SAMPLE ANALYSES/CONTAINER:
UOC/GRO (125 ml g) UOC (2-40 ml g HCl) tripblank
SVOC/HE/DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS/pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER: Terrence Garcia / C. Montoya
PICTURE: ✓

PREPARED BY
DATE

GRID # 44 - GRAB MATRIX: concrete, soil, construct debris
TIME: 10:55 874 - 881
DATE: 9/6/05
GPS COORDINATES: PICTURES: ✓
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P).
SAMPLER: Derrence Garcia / C. Montoya

GRID # 7 COMPOSITE MATRIX: construction debris concrete, soil
TIME:
DATE: 05 SURC 1028 - 1035
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (TRIP BLANK 2-40 ml g HCl)
SVOC / HE / DRO (250 ml g) TAL Metals (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

DUP. Grid # 7 05 1036 - 104

PREPARED BY
DATE

GRID # 42 COMPOSITE MATRIX: construction debris concrete, soil
TIME: 11:25 OSSWRC 896 - 903
DATE: 9/6/05
GPS COORDINATES: PICTURES: ✓
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (TRIP BLANK 2-40 ml g HCL)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER: Derrence Garcia / C. Montoya

GRID # 50 - COMPOSITE MATRIX: construction debris concrete, soil
TIME: 11:50 OSSWRC 918 - 925
DATE: 9/6/05
GPS COORDINATES: PICTURES: ✓
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (TRIP BLANK 2-40 ml g HCL)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER: Derrence Garcia / C. Montoya

PREPARED BY
DATE

GRID # 32 - GRAB MATRIX:
TIME: 8:35 055WRC 940 - 947
DATE: 9-7-05
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) 571 VOC (TRIP BLANK 2-40 ml g HCl) 572
SVOC / HE / DRO (250 ml g) 573 TAL METALS (125 ml g) 574
TCLP METALS / pH (2-250 ml g) 575 ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

GRID # 13 - COMPOSITE MATRIX:
TIME: 055WRC 948-955
DATE:
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

PREPARED BY
DATE

GRID # 21 - GRAB MATRIX:
TIME: 05SWRC 956 - 963
DATE: Dup. 05SWRC 964 - 971
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

GRID # 30 - COMPOSITE MATRIX: 05SWRC 972-979
TIME:
DATE:
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

PREPARED BY	
DATE	

GRID # 39 - GRAB MATRIX: 05SWRC 983-987
TIME:
DATE: 9-7-05
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40ml g HCl)
SVOC / HE / DRO (250 ml g) TAL METALS (125ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500ml P)
PCB (250 ml g) RAD (500ml P)
SAMPLER:

GRID # 38 - COMPOSITE MATRIX: 988 - 995
TIME:
DATE: 9-7-05
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40ml g HCl)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

PREPARED BY	
DATE	

GRID # 29 - GRAB MATRIX: 05SWRC 996 - 1003
TIME:
DATE: 9-7-05
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HEI DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

GRID # 11 - GRAB MATRIX: 05SWRC 1004 - 1011
TIME:
DATE: 9-7-05
GPS COORDINATES: PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HEI DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

PREPARED BY	
DATE	

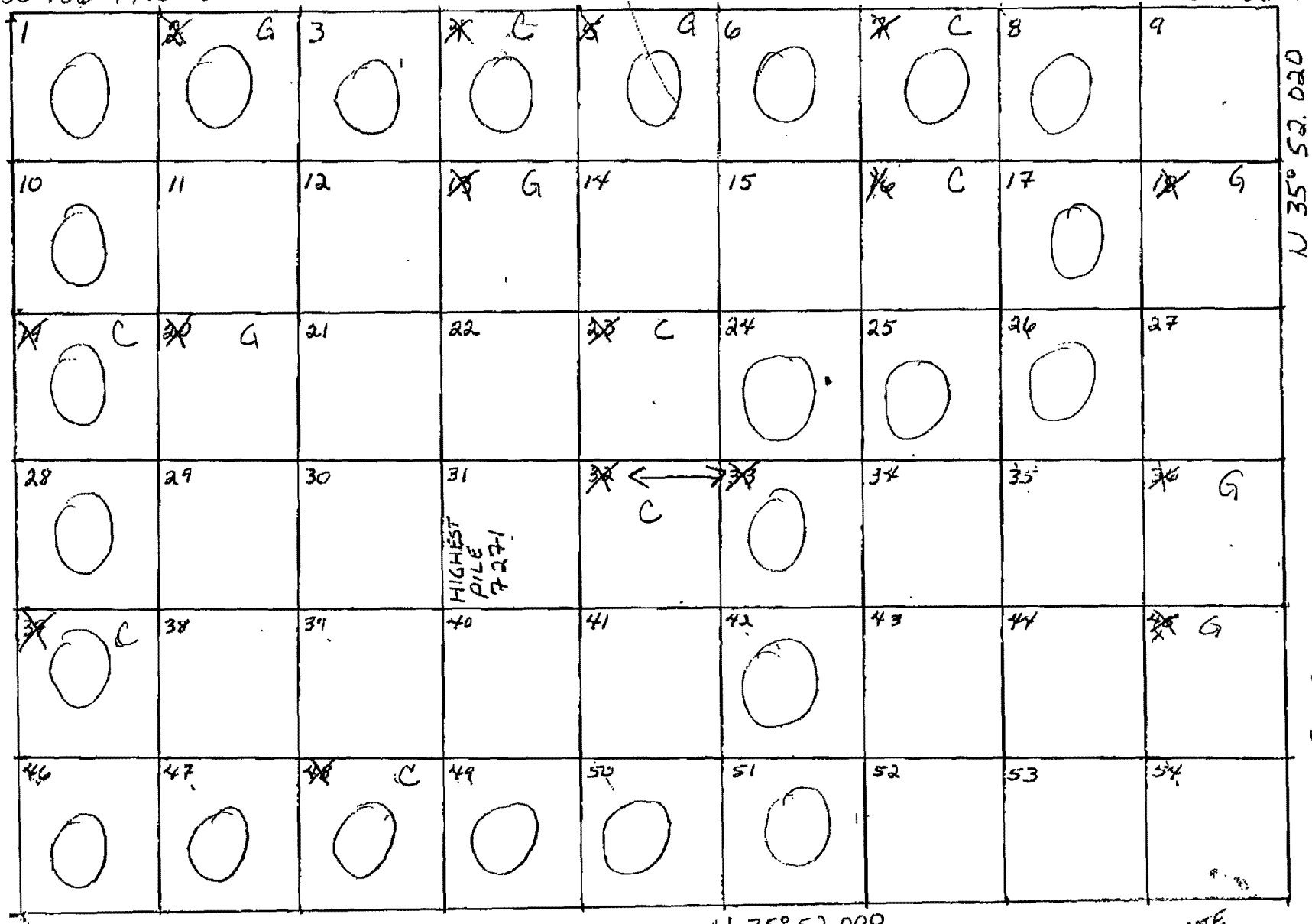
GRID #2 - GRAB MATRIX: 05 SURC 1012 - 1018
TIME:
DATE: 9-7-05
GPS COORDINATES PICTURES:
SAMPLE ANALYSES / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HE / DRO (250 ml g) TAL METALS (125 ml g)
TCLP METALS / pH (2-250 ml g) ASBESTOS (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:

GRID #13 - Composite MATRIX:
TIME: 05 SURC 948 - 955
DATE:
GPS Coord: Pictures
VOC / GRO (125 ml g) VOC (trip blank 2-40 ml g HCl)
SVOC / HE / DRO (250 ml g) TAL metals (125 ml g)
TCLP metals / pH (2-250 ml g) Asbestos (500 ml p)
PCB (250 ml g) Rad (500 ml p)
Sampler

N 35° 52.030
W 106° 17.546

1 WATER

N 35° 52.022
W 106° 17.514



N 35° 52.020
W 106° 17.507

E

ELEVATION: 7262

N 35° 52.030
W 106° 17.558
N100'

N200'

N 35° 52.000
W 106° 17.525

2 DUPLICATE WATER

N 35° 51.993
W 106° 17.520

3 WATER

O - SOIL/CONCRETE PILES BOUNDARY

TOP LAYER: GRID 1/33 & 1/34
45, 4, 18, 7, 13, 33, 2, 5, 19

BIASED SAMPLE: 48
S COMPOSITE 32 & 33

20' = ELEVATION

PERFORMED BY
DATE

TOP LAYER SAMPLES
GRAB (EVERY OTHER SAMPLE):
2, 5, 13, 18, 20, 32, 33, 37, 48
COMPOSITE: 4, 7, 16, 19, 23, 36, 45

FOR EACH SAMPLE NOTE:
~ TIME OF SAMPLE / DATE OF SAMPLE
~ TYPE OF SAMPLE (MATRIX)
~ TYPE OF SAMPLE (GRAB OR COMPOSITE) & PRESERVATIL
~ EACH SAMPLE CONTAINER SIZE
SAMPLE NUMBER
~GRID NUMBER
SAMPLING TO BEGIN AT EAST SIDE AND MOVE
TOWARDS WEST ENCOMPASSING NORTH TO SOUTH
EXAMPLE:
GRID #18 TOP LAYER
GRAB of CONCRETE
8:15 9/2/2005
125 ml glass VOC
05SWRC568
GPS COORDINATE
WATER SAMPLES: 1, 2, 3, 4 (BEYOND BERM TOWARD CANYON
DESCRIPTION OF WATER
WATER w/ OIL SHEEN
8:30 9/2/2005
125 ml glass

WATER SAMPLES

#1 - NORTH OF PILE POOL

MATRIX DESCRIPTION: 853 — 858

TIME: 10:20

DATE: 9-6-05

GPS COORDINATES:

SAMPLE ANALYSES / CONTAINER:

VOC/GRO (2-40 ml g) VOC (trip blanks 2-40 ml HCl)

SVOC / HCl / DRO (2-1-L g)

TAL METALS / pH (250 ml P)

TCLP metals (2-1-L g) CN - (2 ~~1-L~~ 1-L P NaOH)

PCB (2-1-L g)

WASTEWATER?

#1 SLUDGE ? 859 — 865.

MATRIX DESCRIPTION: 861-A SVOC

TIME: 10:30

DATE: 9-6-05

GPS COORDINATES: PICTURES:

SAMPLE ANALYSES / CONTAINER:

VOC/GRO (125 ml g) VOC (trip blanks 2-40 ml g HCl)

SVOC / HCl / DRO (250 ml g)

TAL METALS (125 ml g) TCLP METALS (250 ml g)

ASBESTOS (1L ~~500 ml~~ P) PCB (250 ml g) RAD (500 ml P)

SAMPLER:

PREPARED BY
DATE

2 WATER SOUTH OF PILES

MATRIX DESCRIPTION: 882-887

TIME: 11:20

DATE: 9/6/05

GPS COORDINATES:

sample ANALYES/container:

VOC/GRO (2-40 ml g) VOC (trip blanks 2-40 ml HCl)

SVOC/HE/DRO (2-1-Lg)

TAL METALS/pH (250 ml P) CN (1-L-P NaOH)

TCLP metals (2-1-Lp) Total Metals (1-L-P HN

PCB (2-1-Lg)

WASTEWATER?

SAMPLE: Shannon Duran-Dinwiddie

2 SLUDGE

MATRIX DESCRIPTION: sludge 888-895

TIME: 11:15

DATE: 9/6/05

GPS COORDINATES: PICTURES: ✓

sample ANALYSES/CONTAINER:

VOC/GRO (125 ml g) VOC (Trip blanks 2-40 ml g H

SVOC/HE/DRO (250 ml g)

TAL METALS (125 ml g) TCLP METALS (250 ml g

ASBESTOS (1L P) PCB (250 ml g) RAD (1L)

DUP 2
#3 WATER SOUTH OF PILES (POND 2)

MATRIX DESCRIPTION: WATER (MUDDY) (calcium carbonate base) 904 - 909

TIME: 11:37 904-A (Totals)

DATE: 9/6/05 904-B (CN)

GPS COORDINATES:

sample analyses container:

VOC/GRO (2-40 ml/g) VOC (Trip blanks 2-40 ml

SVOC/HE/DRO (2 - 1Lg)

TAL METALS/pH (250 ml P)

TCLP metals (2-1-Lg) Total Metals (1-L-P HNO_3

PCB (2-1-Lg) CN (1-L-P NaOH)

WASTE WATER?

SAMPLER: Shannon Duran-Dinwiddy

DUP 2
#3 - SLUDGE from POND #2 (calcium cabonate appear

MATRIX DESCRIPTION: slightly muddy, white sheen

TIME: 11:50 910 - 917

DATE: 9/6/05

GPS COORDINATES: Pictures ✓

sample ANALYSES/CONTAINER:

VOC/GRO (.125 ml/g) VOC (tripblanks 2-40 ml/g HC

SVOC/HE/DRO (250 ml/g)

TAL METALS (125 ml/g) TCLP METALS (250 m

ASBESTOS (1Lp) PCB (250 ml/g) RAD (1Lp)

sampler: Shannon Duran-Dinwiddy

PREPARED BY
DATE

#3~~4~~ WATER ~~BEYOND BERM~~ D.R.

THERE IS NO WATER BEYOND BERM

MATRIX DESCRIPTION:

TIME: ~~9~~ DR 8:35 926 - 931

DATE: 9/ (CN) 926-A

GPS COORDINATES: 92

Sample analyses/ CONTAINER:

VOC/GRO (2-40 ml/g) VOC (Tripblanks 2-40ml H

SVOC/HE/DRO (2-1-Lg)

TAL METALS/pH (250 ml P)

TCLP METALS (2-1-Lg)

PCB (2-1-Lg) CN (1-L-P NaOH)

WASTE WATER: muddy - no sheen

SAMPLER: Shannon Duran - Dinwiddie

#3~~4~~ SLUDGE FROM POND #3

MATRIX DESCRIPTION: muddy sludge 932 - 939

TIME: 9:00

DATE:

GPS COORDINATES: PICTURES: ✓

Sample ANALYSES/ CONTAINER:

VOC/GRO (125 ml/g) VOC (Tripblanks 2-40 ml/g HC

SVOC/HE/DRO (250 ml/g)

TAL METALS (125 ml/g) TCLP METALS (250 ml/g

ASBESTOS (1LP) PCB (250 ml/g) RAD (1LP)

Sampler: Shannon Duran - Dinwiddie

PREPARED BY
DATE

TOP LAYER SOIL / CONCRETE

GRAB SAMPLES:
2, 5, 13, 18, 20, 36, 45

COMPOSITE SAMPLES:
4, 7, 16, 19, 23, 32 & 33, 37, 48

SAMPLE IN THIS ORDER:

✓ 18	- GRAB			SAMPLED
✓ 36	- GRAB			SAMPLED
✓ 45	- GRAB		TB	SAMPLED
✓ 7	- COMPOSITE			SAMPLED
✓ 16	- COMPOSITE		TB	SAMPLED
✓ 5	- GRAB			SAMPLED
✓ 23	- COMPOSITE			SAMPLED
✓ 32-33	- COMPOSITE		TB	SAMPLED
✓ 4	- COMPOSITE		TB	SAMPLED
✓ 13	- GRAB			
✓ 48	- COMPOSITE		TB	
✓ 20	- GRAB			
✓ 2	- GRAB		TB	
✓ 19	- COMPOSITE			
37	- COMPOSITE		TB	

SAMPLING TEAM:
DUSTIE RICH, JOHN TYMKOWYCH, JOHN WILCOX
RICK VELASQUEZ, ADRIAN MARTINEZ

PREPARED BY
DATE

GRID # 18 - GRAB MATRIX: concrete, gravel, soil metals, roofing mater
TIME: 9:45
DATE: 9/2/05
GPS COORDINATES: PICTURE: 2
SAMPLE ANALYSES / CONTAINER:
VOC/GRO (125 ml g) VOC (trip blank 2-40ml HCl)
SVOC/HE/DRO (250ml g) TAL metals (125ml g)
TCLP metals/pH (2-250 ml g) ASBESTOS (500ml P)
PCB (250ml g) RAD (500ml P)
SAMPLER: R Velasquez
OSSWRC571-578

GRID # 36 - GRAB MATRIX: GRAVEL, ROOFING MATER METAL, SOIL, CONCRETE
TIME: 9:50
DATE: 9/2/05
GPS COORDINATES: PICTURES: 2
SAMPLE ANALYSIS / CONTAINER:
VOC/GRO (125 ml g)
SVOC/HE/DRO (250 ml g) TAL metals (125 ml g
TCLP metals/pH (2-250 ml g) ASBESTOS (500 ml
PCB (250 ml g) RAD (500 ml P)
SAMPLER: Rick Velasquez, Adrianne Martinez
Sample #'s OSSWRC579-586

Dustie
670-2214

PREPARED BY
DATE

GRID ~~#45~~ GRAB - MATRIX: GRAVEL, Roofing material
TIME: 10:10 soil, concrete
DATE: 9/2/05
GPS COORDINATES: PICTURES: 2
SAMPLE ANALYSIS / CONTAINER:
VOC / GRO (125 ml g) VOC (trip blank 40 ml g HCl
SVOC/HE/DRO (250 mL g) TAL Metals (125 mL g)
TCLP/pH (2-250 mL g) Asbestos (500 mL p)
PCB (250 mL g) Rad (500 mL p)
Sampler: Rick Velasquez, Adrian Martinez
Sample #'s 05 SWRC 587 - 595

GRID # 7 ~~Grab~~ Comp JAW 9/2/05 Matrix: roofing material gravel, concrete, metal asphalt
Time: 10:45 GPS Coord.:
Date: 9/2/05 PICTURES: 2
Sample Analysis (container)
VOC/GRO (125 mL g) SVOC/HE/DRO (250 mL g)
TAL Metals (125 mL p) TCLP Metals/pH (2-250 mL g)
Asbestos (500 mL p) PCB (250 mL g)
Rad (500 mL p)
Sampler: Rick Velasquez, Adrian Martinez
Sample #'s: 05 SWRC 596 - ~~453~~ 603

PREPARED BY
DATE

GRID #16 - Composite Matrix: Concrete, soil, root
Time: 10:25 Date: 9/2/05 roofing materia
GPS Coord.: PICTURES: 2
Sample Analysis (container):
VOC/GRO (125 mL g) SVOC/HE/~~G~~DRO (250ml g) D 9/2/05
TAL Metals (125 mL g) TCLP metals/pH (2-250mL g)
Asbestos (500 mL p) PCB (250 mL g)
Rad (500 mL p)
Sampler: Rick Velasquez, Adrian Martinez
Sample #'s 05 SWRC ~~596~~ 754 - 762

GRID # 5 GRAB MATRIX:
TIME: 11:15 DATE: 9/2
GPS Coordinate: PICTURES: 2
Sample Analysis / CONTAINER:
VOC/GRO (125ml g) SVOC/HE/DRO (250ml g)
TAL metals (125 ml g) TCLP metals/pH (2-250ml g)
Asbestos (500ml P) PCB (250ml g) RAD (500ml P)
Sampler: Rick Velasquez, Adriana Martinez
SAMPLE NUMBERS: 05SWRC763-770

PREPARED BY	
DATE	

GRID # ~~23~~ 5 - ~~COMPOSITE~~ GRAB DR MATRIX:
TIME: 11:15
GPS COORDINATES:
SAMPLE ANALYSIS / CONTAINER: PICTURES: 2
~~VOC/GRO (125ml g)~~ DR
TAL metals (125ml g) SVOC/HE/DRO (250ml g)
TCLP metals / pH (2-250ml g) Asbestos (500ml P)
PCB (250ml g) RAD (500ml P)
SAMPLER: Rick Velasquez, Adrian Martinez
SAMPLE SET IS A DUPLICATE OF GRID #5
SAMPLE #'s OSSWRC771-776
~~SAMPLE #~~ D.R.

GRID #23 COMPOSITE MATRIX:
TIME: 11:35 DATE: 9/2/05
GPS COORDINATES: PICTURES-2
SAMPLE ANALYSIS / CONTAINER:
TAL METALS (125ml g) SVOC/HE/DRO (250ml g)
TCLP metals / pH (2-250ml g) Asbestos (500ml P)
PCB (250ml g) RAD (500ml P)
SAMPLER: Adrian Martinez - Rick Velasquez
SAMPLE #'s OSSWRC777 - 783

GRID 32 & 33 COMPOSITE MATRIX:
TIME:
DATE:
GPS COORDINATES
SAMPLE ANALYSIS/CONTAINER:
VOA/GRO (125 ml g) SVOC/HE/DRO (250 ml g
VOA (2-40 ml g trip blanks HCl) TAL metals (125 ml g)
TCLP metals/pH (2-250 ml g) Asbestos (500 ml P)
PCB (250 ml g) RAD (500 ml P)
SAMPLER:
SAMPLE NUMBERS: 05SWRC784 ~~785~~ - 05SWRC791

GRID # 4 COMPOSITE MATRIX:
TIME: 11:40
DATE:
GPS COORDINATES:
SAMPLE ANALYSIS/CONTAINER:
VOA/GRO (125 ml g) VOA (2-40 ml g HCl trip blank)
TAL metal (125 ml g) TCLP metals/pH (2-250 ml g)
Asbestos (500 ml P) PCB (250 ml g)
RAD (500 ml P) SVOA/HE/DRO (250 ml g)
SAMPLER:
SAMPLE #'S 05SWRC792-799

PREPARED BY
DATE

GRID # 13 GRAB MATRIX: Small Piece Glass, Gravel, Roofing material
TIME:
DATE:
GPS COORDINATES
SAMPLE ANALYSIS | CONTAINER:
VOA | GRO (125ml g) TAL metals (125ml g)
TCLP metals | pH (2-250ml g) SVOA | HE | DRO (250ml g)
Asbestos (500ml P) PCB (250ml g) RAD (500ml P)
SAMPLER:
SAMPLE #'s 801 - 806

GRID # 48 - COMPOSITE TB MATRIX:
TIME: 12:05
DATE:
GPS COORDINATES
SAMPLE ANALYSIS | CONTAINER: SVOC | HE | DRO (250ml g)
VOA | GRO (125ml g) VOA (2-40ml g HCl trip blank
TAL metals (125ml g) TCLP metals | pH (2-250ml g)
Asbestos (500ml P) PCB (250ml g) RAD (500ml P)
SAMPLER:
SAMPLE #'s: 807 - ~~813~~ DR 814

PREPARED BY	
DATE	

~~GRAB~~ GRID #20 GRAB MATRIX:
TIME: 12:15
DATE:
GPS COORDINATES: PICTURES:
SAMPLE ANALYSIS / CONTAINER:
TAL METALS (125 ml g) SVOA / HE / DRO (250 ml g)
TCLP metals / pH (2-250 ml g) Asbestos (500 ml P)
PCB (250 ml g) RAD (500 ml P) VOA/GRO (125 ml g)
SAMPLER: Adrian Martinez / Rick Velasquez
SAMPLE #'s: 05SWRC815 - 05SWRC820

GRID # 2 - GRAB (TB) MATRIX:
TIME: 12:15
DATE:
GPS COORDINATES:
SAMPLE ANALYSIS / CONTAINER: VOA (2-40 ml g trip blank H
TAL METALS (125 ml g) SVOA / HE / DRO (250 ml g)
TCLP metals / pH (2-250 ml g) Asbestos (500 mL P)
PCB (250 ml g) RAD (500 ml P) GRO VOA (125 ml g)
SAMPLER: Rick Velasquez / ~~Rick~~ Adrian Martinez
SAMPLE #: 05SWRC-821 - 05SWRC829

PREPARED BY
DATE

GRID #19 COMPOSITE MATRIX:
TIME:
DATE:
GPS Coordinates:
SAMPLE ANALYSIS / CONTAINER:
UOC/GRO (125 ml g) SVOC/HE/DRO (250 ml g)
TAL metals (125 ml P) TCLP metals / pH (2-250 ml g)
Asbestos (500 ml P) PCB (250 ml g) RAD (500 ml P)
SAMPLER:
SAMPLE #: 830 - 05SWRC 836

GRID #37 COMPOSITE MATRIX:
TIME:
DATE:
GPS COORDINATES:
SAMPLE ANALYSIS / CONTAINER:
UOC/GRO (125 ml g) SVOC/HE/DRO (250 ml g)
UOC (2-40 ml g HCl trip blank) TAL metals (125 ml P
TCLP metals / pH (2-250 ml g) Asbestos (500 ml P)
PCB (250 ml g) RAD (500 ml P)

Samples were taken on grid DL 837 - 844

SLUDGE FROM BEYOND BERM (SOUTH SIDE)
WATER DRAINAGE AREA (COMPOSITE)
MATRIX DESCRIPTION:
TIME: 055WRC 1020 - 1027
DATE: PICTURES:
GPS COORDINATES:
SAMPLE ANALYSES / CONTAINER:
VOC / TPH-GRO (125ml g) VOC (trip blanks 2-40ml g HCl)
SVOC / HE / DRO (250ml g) ~~TAL DR~~ TAL METALS (125ml g)
TCLP Metals (~~250ml g~~ 1L P) ASBESTOS (1-L-P) PCB (250ml g
GROSS α β (1-L-P)
DUPLICATES:
SVOC / HE / DRO (250ml g) TCLP metals (~~250ml g~~ 1L P)
PCB (250 ml g) TAL metals (125 ml g)

N-C S-G ~~DUP~~ (WATER FLOW)
E-C W-G ~~DUPLICATE~~

PREPARED BY
DATE

BACKGROUND SAMPLES:

NORTH: COMPOSITE PICTURES:
DESCRIPTION OF WHERE SAMPLES WERE TAKEN:

MATRIX: 05SWRC 1044 - 1050
GPS COORDINATES:
SAMPLE ANALYSIS / CONTAINER:
VOC/GRO (125 ml g) SVOC/HE/DRO (250 ml g)
TAL METALS (125 ml g) TCLP metals/pH (2-250 ml g)
ASBESTOS (1-L ~~500 ml~~ P) PCB (250 ml g) GROSS RAD (1-L ~~500 ml~~ P)

SOUTH: GRAB / DUPLICATE PICTURES:
DESCRIPTION OF WHERE SAMPLES WERE TAKEN:

MATRIX:
GPS COORDINATES: 05SWRC 1051 - 1058
SAMPLE ANALYSIS / CONTAINER:
VOC/GRO (125 ml g) SVOC/HE/DRO (250 ml g)
TAL METALS (125 ml g) TCLP metals/pH (2-250 ml g)
ASBESTOS (1-L ~~500 ml~~ P) PCB (250 ml g)
GROSS RAD (1-L-P) VOC trip (40 ml g HCl)

VOC/GRO (125 ml g) SVOC/HE/DRO (250 ml g)
TAL Metals (125 ml g) TCLP METALS/pH (2-250 ml

PREPARED BY	
DATE	

EAST: COMPOSITE MATRIX:
DESCRIPTION OF WHERE SAMPLES WERE TAKEN:
TIME:
DATE: 4-7-05 05 SWLC 1073 - 1080
GPS COORDINATES: PICTURES:
SAMPLE ANALYSIS | CONTAINER:
VOC | GRO (125 ml g) SVOC | HE | DRO (250ml g)
TAL Metals (125ml g) TCLP metals | pH (2-250
ASBESTOS (1-L-P) PCB (250ml g)
GROSS RAD (1-L-P)
sampler

WEST: GRAB
MATRIX:
DESCRIPTION OF WHERE SAMPLES WERE TAKEN:
TIME:
DATE: 9-7-05 05 SWLC 1064 - 1072
GPS COORDINATES:
PICTURES:
SAMPLE ANALYSIS | CONTAINER:
VOC | GRO (125 ml g) SVOC | HE | DRO (250ml g)
TAL Metals (125 ml g) TCLP METALS | pH (2-250m
ASBESTOS (1-L-P) PCB (250 ml g)
GROSS RAD (1-L-P)

18 N-35° 52.012
Location W-106° 17.510
Elavation 7257

5 N-35° 52.020
Location W-106° 17.525
Elavation 7259

36 N-35° 52.004
Location W-106° 17.154
Elavation 7252

7 N-35° 52.018
Location W-106° 17.516
Elavation 7255

45 N-35° 52.003
Location W-106° 17.515
elavation 7252

16 N-35° 52.015
Location W-106° 17.518
Elavation 7262

32+33 N-35° 52.009
Location W-106° 17.525
Elavation 7249

2 N-35° 52.024
Location W-106° 17.543
Elavation 7259

23 N-35° 52.013
Location W-106° 17.528
Elavation 7261

20 N-35° 52.016
Location W-106° 17.544
Elavation 7264

13 N-35° 52.015
Location W-106° 17.533
Elavation 7263

19 N-35° 52.019
Location W-106° 17.548
Elavation 7265

4 N-35° 52.021
Location W-106° 17.531
Elavation 7263

37 N-35° 52.014
Location W-106° 17.553
Elavation 7269

pg 2 of 3 9/06/05 Sigma Rubble for Dustiek

#27 N 35° 52.014'
W 106° 17.511'
Elev 7257 ft

#13 N 35° 52.018'
W 106° 17.528'
Elev 7261 ft

#54 N 35° 52.004'
W 106° 17.516'
Elev. 7256 ft

#21 N 35° 52.016'
W 106° 17.530'
Elev 7263 ft

#44 N 35° 52.008'
W 106° 17.520'
Elev 7255 ft

#30 N 35° 52.012'
W 106° 17.53'
Elev 7267 ft

#7 N 35° 52.018'
W 106° 17.515'
Elev. 7258 ft

#39 N 35° 52.009'
W 106° 17.533'
Elev 7265 ft

#42 N 35° 52.009'
W 106° 17.526'
Elev 7261 ft

#38 N 35° 52.010'
W 106° 17.535'
Elev 7265 ft

#50 N 35° 52.006'
W 106° 17.531'
Elev 7255 ft

#29 N 35° 52.012'
W 106° 17.533'
Elev 7266 ft

#32 N 35° 52.012'
W 106° 17.527'
Elev 7252 ft

#11 N 35° 52.018'
W 106° 17.531'
Elev 7261 ft

#48 N- 35° 52.007
Longitude W- 106° 17.543
Elevation 7264

pg 2 of 3 9/06/05 Sigma Rubble for Dustie R

#27 N 35° 52.014'
W 106° 17.511'
Elev 7257 ft

#13 N 35° 52.018'
W 106° 17.528'
Elev 7261 ft

#54 N 35° 52.004'
W 106° 17.516'
Elev. 7256 ft

#21 N 35° 52.016'
W 106° 17.530'
Elev 7263 ft

#44 N 35° 52.008'
W 106° 17.520'
Elev 7255 ft

#30 N 35° 52.012'
W 106° 17.53'
Elev 7267 ft

#7 N 35° 52.018'
W 106° 17.515'
Elev. 7258 ft

#39 N 35° 52.009'
W 106° 17.533'
Elev 7265 ft

#42 N 35° 52.009'
W 106° 17.526'
Elev 7261 ft

#38 N 35° 52.010'
W 106° 17.535'
Elev 7265 ft

PG 3 of 3 Sigma Rubble 9/6/05 for Dustie R

#2 N 52.020' 35°
W 17.531' 106°
Elev 7271 ft

9/9/05 for Dustie R

Sludge Pond "Sludge-Pool 1"
N 35° 52.022'
W 106° 17.516'
Elev 7245 ft

Pool #2 - Sludge pond #2
N 35° 51.000'
W 106° 106. 17.520'
Elev 7256 ft

POOL #3 / Sludge Pond #3
N 35° 51.996'
W 106° 17.519'

Runoff site - South of Pile
N 35° 51.986'
W 106° 17.527'
Elev 7247 ft