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NAS FORT WORTH
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FINAL PHASE 3 RCRA FACILITY INVESTIGATION WORK PLAN ADDENDUM FOR OIL WATER SEPARATORS NAS FORT WORTH TX

11/1/2000

INTERNATIONAL TECHNOLOGIES

654 0

File: 17G
P.W.

NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 1654

654 1 File: P.W. 17A-77

TOWNITEC
Leslie McPherson
FM ERB
Rgb 22 NOV 200
FYI/R/C + File.
TKS!
Pleasure Andrie has
a copy for review too

United States Air Force
NAS Fort Worth JRB
Fort Worth, Texas

Final
Phase 3 RFI Work Plan Addendum for Oil/Water Separators (OWS) NAS Fort Worth JRB, Fort Worth, Texas

IT CORPORATION
A Member of The IT Group

AFCEE Contract No. F41624-97-D-8047
Delivery Order 039

Project No. 768579
Novemb r 2000

E \Covers\Carswell\004 CDR\lh

IT Corporation 654 2
312 Directors Drive
Knoxville, TN 37923-4799
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A Member of The IT Group

the IT group

November 20, 2000

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Mr. Don Ficklen
AFCEE/ERD
3207 North Road
Brooks AFB, TX 78235-5363

Subject: **Final Phase 3 RFI Work Plan Addendum for Oil/Water Separators, NAS Fort Worth JRB, Fort Worth, Texas**
Contract F41624-94-D-8047, Delivery Order 039
IT Project Number 768579

Dear Mr. Ficklen:

Per our teleconference on November 16, 2000, please find enclosed a copy of the Final Phase 3 RFI Work Plan Addendum. The proposed sampling scheme has been revised to characterize depth intervals five feet above and five feet below previous sample locations which exhibited contaminant concentrations that exceeded base-specific background concentrations and/or medium-specific concentrations established by the Texas Natural Resource Conservation Commission.

A revised comment response matrix was presented in a previous submittal (See Attachment 1). As stated during the November 16, 2000 teleconference, the Phase 3 sampling activities will begin on November 27, 2000. The revised starting date will permit the completion of data analysis and validation. The RRS 2 Closure Report cannot be completed before the AFCEE contract expires (Attachment 2).

The actions necessary to complete the investigation leading to closure of the 21 OWS sites (19 sites with 1 OWS and 2 sites with 2 OWSs) are shown in Attachments 3 and 4. These two attachments comprise the Phase 3 sampling plan addendum. Five OWS sites are included in the Draft RCRA Facility Investigation Closure Report for Oil/Water Separator Sites (dated November 2000), two OWS sites are included within HydroGeoLogic reports for closure, and fourteen OWS sites will require additional Phase 3 sampling as shown in the figures.

Attachment 4 contains the completely revised copies of Figures 2 through 15 (Note: These were originally Figures 3 through 16). The figures include revisions to show all previous sampling locations with analytical concentrations above background, the proposed Phase 3 sample locations, and the proposed analytes for each of the added samples.

06-029

Please contact me at (865) 690-3211 if there are any questions.

Sincerely,

Willard S. Carter, PMP
Sr. Project Manager

Audrey Medina-Unitec (1 Copy)
3207 North Road, Bldg. 532
Brooks AFB, TX 78235-5363

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NAS Ft. Worth, TX 76127

DCMAO Atlanta (Letter)
Attn: Ms Mickey Lapp
805 Walker Street
Marietta, GA 30060

Mr. Charles Pringle (1 Copy)
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3207 North Road, Bldg 532
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Bcc:

Will Carter-IT Corporation (1 Copy)
Beth Summers-IT Corporation (2 Copy)
Ken Hurley-HGL (1 Copy)
Melanie Costello-HGL (1 Copy)

Attachment 1

Comment/Response Matrix

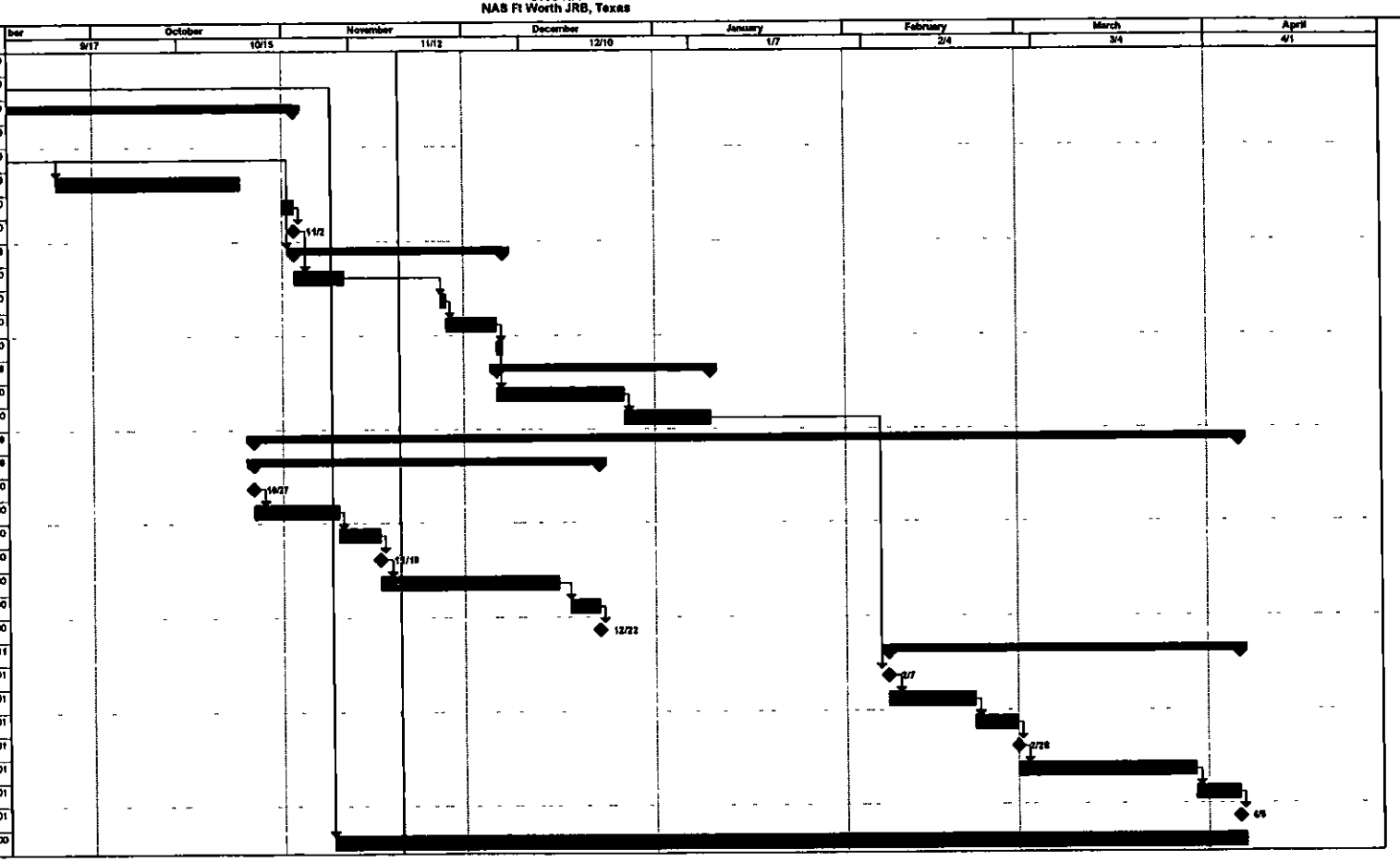
Note: Please see previous submittal for the Comment/Response Matrix. The final proposed field sampling activities were presented to AFCEE and Unitec during a teleconference with IT Corporation on November 16, 2000.

Attachment 2

Schedule

Attachment 2 - Phase 3 Project Schedule
OWS RFI
NAS Ft Worth JRB, Texas

ID	Task Name	Duration	Start
1	Proposal	0 days	Thu 6/3/00
2	Notice to proceed	0 days	Tue 8/1/00
3	Plans	88 days	Wed 8/2/00
4	Work Plan addendum	0 days	Wed 8/2/00
5	Review plans	20 days	Thu 8/3/00
6	Revise Plans	22 days	Mon 9/25/00
7	Review Plans at RPM	2 days	Wed 11/1/00
8	Issue F OWS Plans	0 days	Thu 11/2/00
9	Environmental sampling	24 days	Fri 11/3/00
10	Clearance	6 days	Fri 11/3/00
11	Mobilization	1 day	Mon 11/27/00
12	Sampling	6 days	Tue 11/28/00
13	Demob	1 day	Wed 12/6/00
14	Data Management	26 days	Wed 12/6/00
15	Analyses	15 days	Wed 12/6/00
16	Data Validation	10 days	Wed 12/27/00
17	RFI Reports	116 days	Fri 10/27/00
18	RFI RR81 Report	41 days	Fri 10/27/00
19	Draft	0 days	Fri 10/27/00
20	AF Review	10 days	Fri 10/27/00
21	Revision	5 days	Fri 11/10/00
22	Draft Final	0 days	Thu 11/16/00
23	TNRCC Review	21 days	Fri 11/17/00
24	Revision DF	5 days	Mon 12/18/00
25	Final	0 days	Fri 12/22/00
26	RFI RR82 Report	41 days	Wed 2/7/01
27	Draft	0 days	Wed 2/7/01
28	AF Review	10 days	Thu 2/8/01
29	Revision	5 days	Thu 2/22/01
30	Draft Final	0 days	Wed 2/28/01
31	TNRCC Review	21 days	Thu 3/1/01
32	Revision DF	5 days	Fri 3/30/01
33	Final	0 days	Thu 4/5/01
34	Project Administration	107 days	Thu 11/9/00



Project: OWS NAS Ft Worth
Date: Mon 11/20/00

Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary

Mon 11/20/00

654 6

Attachment 3

Proposed Oil/Water Separator RFI Closure Matrix
Phase 3 Sampling Plan Addendum
NAS Fort Worth JRB, Texas
November 20, 2000

Attachment 3

Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
2	1015	SWMU 47			Sample	5	7	0	The OWS was closed in-place in September 2000. Five additional boring locations will be sampled to delineate arsenic, cadmium and copper concentrations in surface and subsurface soils. The samples will be collected at intervals 5 feet above and 5 feet below the intervals which exhibited elevated concentrations of arsenic, cadmium, and copper during previous investigations. Additionally, soil samples will be collected from soil boring SB101509 to confirm/replicate (with SPLP analysis if required) arsenic and cadmium concentrations that exceeded MSCs during the Law (1995) investigation Once all analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2
3	1027	SWMU 44			Sample	3	6	0	This OWS requires additional sampling to delineate arsenic, cadmium, and copper concentrations. Soil samples will be collected at three depths (0-3 feet, 5-7 feet, and 10-12 feet) to delineate elevated concentrations of arsenic, cadmium, and copper identified during previous investigations Once all analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.

Attachment 3

Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
4	1060	AOC 11			Sample	3	9	1	The OWS was removed in September 2000 and seven confirmation soil samples were collected from the sides and floor of the excavation for analysis of arsenic and cadmium. All arsenic and cadmium concentrations detected in the seven confirmation soil samples were below the respective background UTLs. Additional sampling is recommended to delineate arsenic, cadmium and copper concentrations exceeding background/MSC during previous investigations. Additionally, samples will be collected from a confirmation soil boring located in the center of the former OWS site since excavated soils were backfilled into the excavation. In each of the three proposed borings, samples will be collected at intervals of 0-2 feet, 5-7 feet, 10-12 feet, and 15-17 feet bgs. A groundwater sample shall also be collected from monitoring well WITCTA022 to confirm arsenic and cadmium concentrations in groundwater. Once all analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.

Attachment 3

Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
5	1064	AOC 10			Sample	5	10	1	Additional sampling is recommended to delineate arsenic, cadmium, copper, and/or manganese concentrations exceeding background in subsurface samples Additionally, a confirmation soil boring will be sampled to confirm/replicate arsenic and cadmium concentrations detected above MSCs, and to confirm elevated concentrations of copper and manganese detected during the Law (1995) investigation. In each of the five proposed borings, soil samples will be collected at 5-foot intervals until the water table is encountered SPLP will be performed on selected samples in which the detected concentration exceeds both background and MSC. Additionally, a groundwater sample will be collected from monitoring well WITCTA035 to confirm the manganese concentration detected during the Phase 1 investigation. Once all analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.
NA	1101	ND	Report						The sample results are adequate to close the OWS under RRS 1 standards The site is included in the RRS 1 closure report
NA	1145	AOC 13		HGL Report					HGL has removed this OWS and will include it in their closure report. Figure not included

Attachment 3

Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
6	1190	SWMU 52			Sample	3	3	1	Additional sampling is necessary to delineate arsenic and cadmium concentrations in surface and subsurface soils Additionally, a surface soil sample will be collected to confirm/replicate past arsenic and cadmium concentrations that exceeded background and MSCs. Soil samples will be collected at 0-2 feet and 4-6 feet bgs at each proposed location to adequately characterize the extent of elevated concentrations. SPLP will be performed on the confirmation soil sample if a detected analyte concentration exceeds both background and MSC An additional groundwater sample will be collected from WITCTA032 for arsenic to confirm the elevated concentration detected during the Phase I investigation. Once all analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.
7	1191	SWMU 37			Sample	3	0	0	Additional sampling is necessary to delineate arsenic and cadmium concentrations in the surface to 5 foot sampling interval. Additionally, confirmation soil samples will be collected to confirm/replicate arsenic and cadmium concentrations that exceeded background and MSCs during previous investigations. Because groundwater is typically encountered at 4 feet bgs in this area, only the surface to 5 feet bgs interval will be sampled at the three proposed soil borings. SPLP will be performed on selected samples in which a detected analyte concentration exceeds both background and MSC. Once all analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.

Attachment 3

Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
8	1194	SWMU 35			Sample	3	3	0	Additional sampling is necessary to delineate cadmium and/or benzene concentrations in surface and subsurface soils Additionally, confirmation soil samples will be collected to confirm/replicate the cadmium and benzene concentrations that exceeded background and/or MSCs during the Law (1995) investigation. The soil samples will be collected from two intervals (0-5 feet and 5-10 feet bgs) because groundwater is typically encountered at 9 feet bgs in this area. SPLP will be performed on selected samples in which the detected cadmium concentration exceeds both background and MSC. Once the benzene and/or cadmium concentrations have been delineated to background, closure of this site will be recommended under RRS 2.
NA	1320	ND	Report						The OWS is included in the RRS 1 Closure Report.
9	1414	SWMU 41			Sample	2	6	0	Additional sampling is necessary to delineate arsenic, cadmium, copper and lead concentrations in surface and subsurface soil Additionally, confirmation surface and subsurface soil samples will be collected to confirm/replicate the arsenic, cadmium, copper and/or lead concentrations that exceeded background and/or MSCs during the Law (1995) investigation Soil samples will be collected such that the intervals 5 feet above and 5 feet below the previous sample depths with elevated concentrations will be characterized. SPLP will be performed on selected samples in which a detected analyte concentration exceeds both background and MSC. Once the analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.
NA	1423	ND	Report						The OWS is included in the RRS 1 Closure Report.

Attachment 3

Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
10	1602	ND			Sample	4	7	0	Additional sampling is necessary to delineate chromium concentrations in the surface, and arsenic and chromium concentrations in subsurface soils. Soil samples will be collected such that the intervals 5 feet above and 5 feet below the previous sample depths with elevated concentrations will be characterized. SPLP will be performed on selected samples in which the detected analyte concentration exceeds both background and MSC. Once the analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.
NA	1628	SWMU 7	HGL Report						HGL was assigned this OWS and has received a No Further Action (NFA) letter from TNRCC. Figure not included.
11	1643	SWMU 40			Sample	1	0	0	A confirmation surface soil sample is recommended to confirm the maximum chlorobenzene concentration detected above background (i e., MQL) during the Phase 1 investigation. Based upon the confirmation sample result for chlorobenzene, the site may be recommended for closure under RRS 1.
12	1655	ND			Sample	0	2	1	An additional soil boring is necessary to confirm/replicate the elevated manganese concentration detected at the 10 foot sampling interval during the Phase 1 investigation. Therefore, soil samples will be collected at intervals of 5-7 feet and 10-12 feet bgs from the proposed boring. It is also recommended that monitoring well WITCTA004 be resampled for manganese to confirm the result found during the Phase 1 investigation. Assuming that manganese concentrations in soil and groundwater are below RRS 1 levels, the site may be recommended for closure under RRS 1.
NA	1656	ND	Report						The OWS is included in the RRS 1 Closure Report.

Attachment 3

Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
13	3358	ND			Sample	1	1	0	A confirmation surface soil sample is necessary to confirm/replicate the arsenic, cadmium, and lead concentrations that exceeded both background and MSC concentrations during the Phase 1 investigation. Therefore, soil samples will be collected at depths of 0-2 feet and 5-7 feet bgs to adequately characterize arsenic, cadmium, and lead concentrations at this location. SPLP will be performed on the sample if a detected analyte concentration exceeds both background and MSC
14	4146	ND			Sample	2	2	0	Additional sampling is necessary to delineate lead concentrations in surface soil to the west of the site. Additionally, a confirmation surface soil sample is recommended to confirm/replicate the lead concentration that exceeded both background and MSC during the Phase 1 investigation Analysis for silver by 7000 series will be performed on the confirmation surface sample to provide evidence that silver concentrations detected during previous investigations were the result of matrix interferences associated with Method 6010. SPLP analyses will be performed if required. The site will then be recommended for closure under RRS 2.
NA	4160	ND	Report						The OWS is included in the RRS 1 Closure Report.

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Attachment 3

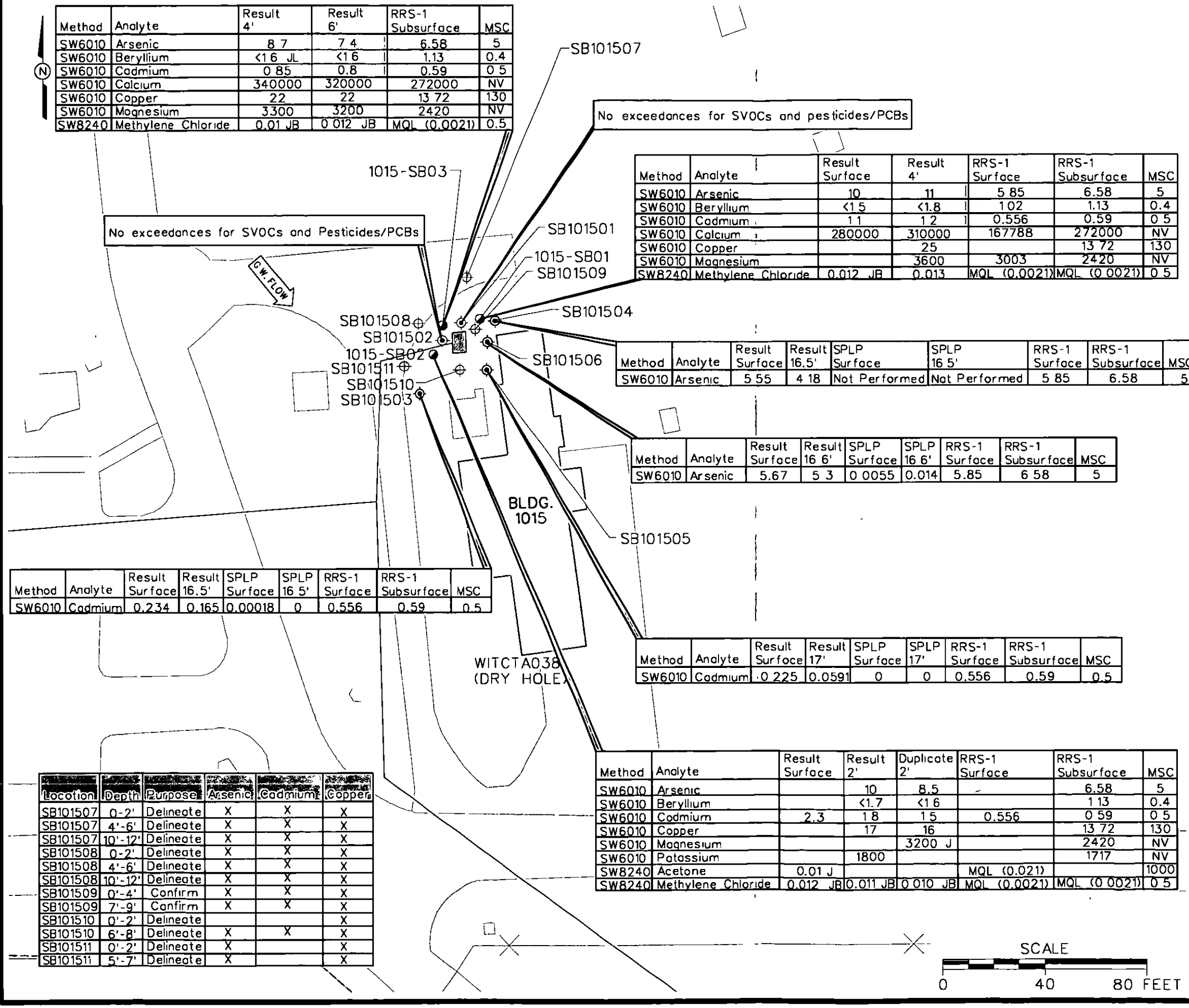
Oil Water Separator Closure Matrix
NAS Fort Worth JRB, Texas
DO 039, Project 768579

Figure No.	OWS	SWMU/ AOC	Next Action			Phase 3 Action			Rationale for Phase 3
			RRS 1	RRS 2	Phase 3	Surface	Subsurface	GW	
15	4210	AOC 12			Sample	4	12	0	Additional sampling is necessary to delineate arsenic, cadmium, cobalt, copper, lead and/or manganese concentrations in surface and subsurface soil samples Additionally, confirmation soil samples are recommended to confirm/replicate arsenic, cadmium, copper and/or lead concentrations exceeding both background and/or MSCs from previous investigations. Because groundwater is typically found at approximately 19 feet bgs in this area, soil samples will be collected from each of the four proposed borings at intervals of 0-2 feet, 4-6 feet, 9-11 feet, and 14-17 feet bgs SPLP will be performed on selected samples in which the detected analyte concentration exceeds both background and MSC. Once the analyte concentrations have been delineated to background, closure of this site will be recommended under RRS 2.
Total analyses:						**39**	**68**	**4**	

NA = Not available
ND = Not determined
GW = Groundwater
OWS = Oil/Water Separator.
HGL = HydroGeoLogic, Inc.
MSC = Medium-Specific Concentration.
RRS = Risk Reduction Standard.
VOC = Volatile Organic Compound
SVOC = Semi-Volatile Organic Compound.
SPLP = Synthetic Precipitation Leaching Procedure. A maximum of 2 samples per site may be submitted to the laboratory for analysis (i.e., the 2 samples with the highest concentrations above RRS 2 will be submitted for SPLP analysis, if required).

Attachment 4

Phase 3 – Figures 2 through 15
Proposed Oil/Water Separator RFI
Phase 3 Sampling Plan
NAS Fort Worth JRB, Texas
November 20, 2000



Method	Analyte	Result 4'	Result 6'	RRS-1 Subsurface	MSC
SW6010	Arsenic	8 7	7 4	6.58	5
SW6010	Beryllium	<1 6 JL	<1 6	1.13	0.4
SW6010	Cadmium	0 85	0.8	0.59	0 5
SW6010	Calcium	340000	320000	272000	NV
SW6010	Copper	22	22	13 72	130
SW6010	Magnesium	3300	3200	2420	NV
SW8240	Methylene Chloride	0.01 JB	0 012 JB	MQL (0.0021)	0.5

Method	Analyte	Result Surface	Result 4'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	10	11	5 85	6.58	5
SW6010	Beryllium	<1 5	<1.8	1 02	1.13	0.4
SW6010	Cadmium	1 1	1 2	0.556	0.59	0 5
SW6010	Calcium	280000	310000	167788	272000	NV
SW6010	Copper		25		13 72	130
SW6010	Magnesium		3600	3003	2420	NV
SW8240	Methylene Chloride	0.012 JB	0.013	MQL (0.0021)	MQL (0 0021)	0 5

Method	Analyte	Result Surface	Result 16.5'	SPLP Surface	SPLP 16 5'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	5 55	4 18	Not Performed	Not Performed	5 85	6.58	5

Method	Analyte	Result Surface	Result 16 6'	SPLP Surface	SPLP 16 6'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	5.67	5 3	0 0055	0.014	5.85	6 58	5

Method	Analyte	Result Surface	Result 16.5'	SPLP Surface	SPLP 16 5'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Cadmium	0.234	0.165	0.00018	0	0.556	0.59	0.5

Method	Analyte	Result Surface	Result 17'	SPLP Surface	SPLP 17'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Cadmium	0 225	0.0591	0	0	0.556	0.59	0.5

Method	Analyte	Result Surface	Result 2'	Duplicate 2'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic		10	8.5	-	6.58	5
SW6010	Beryllium		<1.7	<1 6		1 13	0.4
SW6010	Cadmium	2.3	1 8	1 5	0.556	0 59	0 5
SW6010	Copper		17	16		13 72	130
SW6010	Magnesium			3200 J		2420	NV
SW6010	Potassium		1800			1717	NV
SW8240	Acetone	0.01 J			MQL (0.021)		1000
SW8240	Methylene Chloride	0.012 JB	0.011 JB	0 010 JB	MQL (0.0021)	MQL (0 0021)	0 5

Location	Depth	Purpose	Arsenic	Cadmium	Copper
SB101507	0-2'	Delineate	X	X	X
SB101507	4'-6'	Delineate	X	X	X
SB101507	10'-12'	Delineate	X	X	X
SB101508	0-2'	Delineate	X	X	X
SB101508	4'-6'	Delineate	X	X	X
SB101508	10'-12'	Delineate	X	X	X
SB101509	0'-4'	Confirm	X	X	X
SB101509	7'-9'	Confirm	X	X	X
SB101510	0'-2'	Delineate			X
SB101510	6'-8'	Delineate	X	X	X
SB101511	0'-2'	Delineate	X		X
SB101511	5'-7'	Delineate	X		X

LEGEND

- BUILDING 1015 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP SOIL BORING (SVOCs AND PESTICIDES/PCBs)
- IT CORP. PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP PHASE 3 BORING
- LAW ENGINEERING SOIL BORING (VOCs AND METALS)
- G.W FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE

MSC - MEDIUM-SPECIFIC CONCENTRATION

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL. FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION

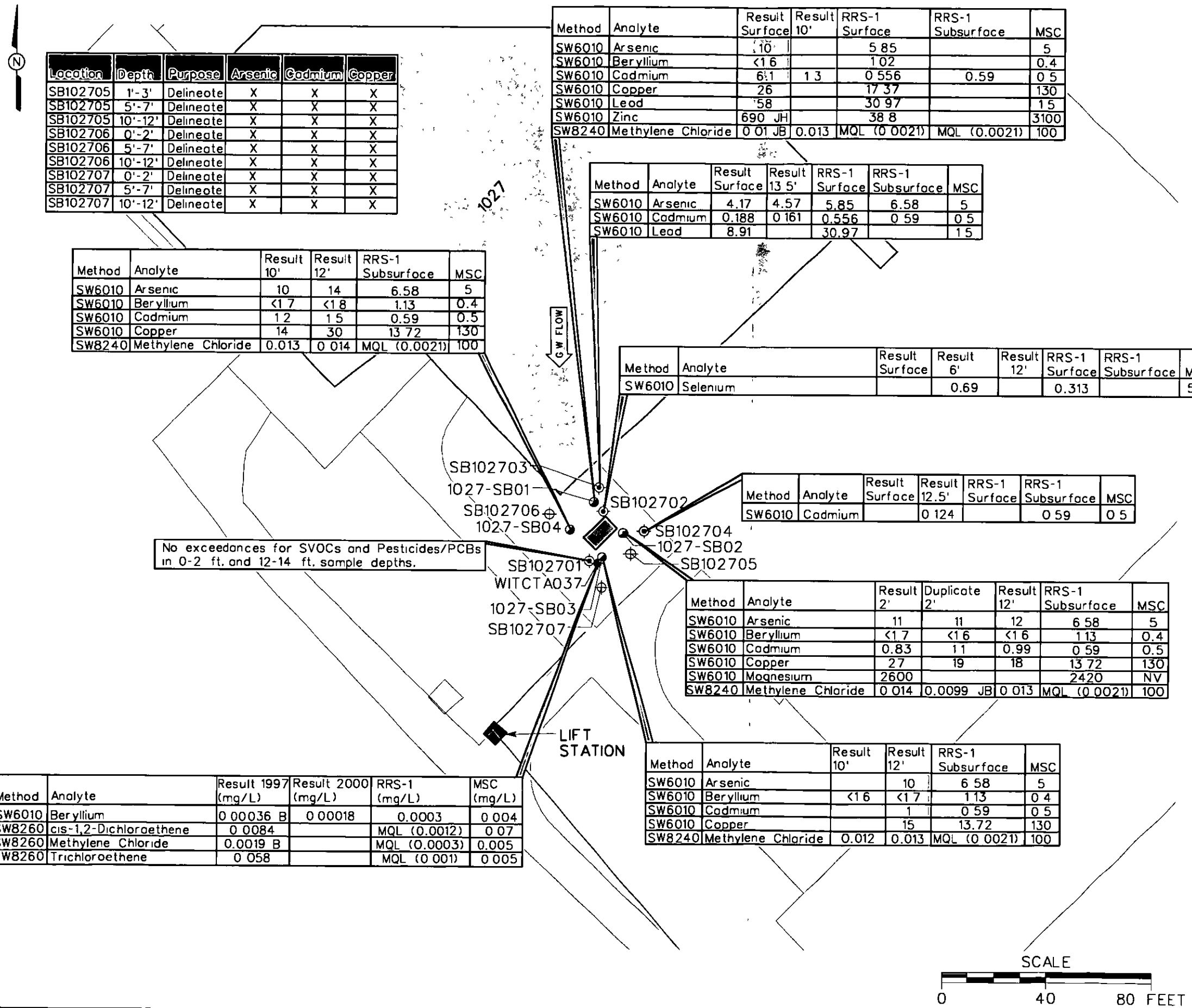
SOURCE: DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION

FIGURE 2
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1015 OWS (SWMU 47)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 220 | PROJ NO 768579
INITIATOR K HURLEY | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/14/00 | REVISION NO 3
STARTING DATE 10/23/00 | DRAWN BY V CRAFT
09 56 32 11/20/00
mcraft c:\cadd\design\768579es 220



Location	Depth	Purpose	Arsenic	Cadmium	Copper
SB102705	1'-3'	Delineate	X	X	X
SB102705	5'-7'	Delineate	X	X	X
SB102705	10'-12'	Delineate	X	X	X
SB102706	0'-2'	Delineate	X	X	X
SB102706	5'-7'	Delineate	X	X	X
SB102706	10'-12'	Delineate	X	X	X
SB102707	0'-2'	Delineate	X	X	X
SB102707	5'-7'	Delineate	X	X	X
SB102707	10'-12'	Delineate	X	X	X

Method	Analyte	Result Surface	Result 10'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	10		5 85		5
SW6010	Beryllium	<1 6		1 02		0.4
SW6010	Cadmium	6.1	1 3	0 556	0.59	0 5
SW6010	Copper	26		17 37		130
SW6010	Lead	58		30 97		1 5
SW6010	Zinc	690 JH		38 8		3100
SW8240	Methylene Chloride	0 01 JB	0.013	MQL (0 0021)	MQL (0.0021)	100

Method	Analyte	Result Surface	Result 13 5'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	4.17	4.57	5.85	6.58	5
SW6010	Cadmium	0.188	0 161	0.556	0 59	0 5
SW6010	Lead	8.91		30.97		1 5

Method	Analyte	Result 10'	Result 12'	RRS-1 Subsurface	MSC
SW6010	Arsenic	10	14	6.58	5
SW6010	Beryllium	<1 7	<1 8	1.13	0.4
SW6010	Cadmium	1 2	1 5	0.59	0.5
SW6010	Copper	14	30	13 72	130
SW8240	Methylene Chloride	0.013	0 014	MQL (0.0021)	100

Method	Analyte	Result Surface	Result 6'	Result 12'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Selenium		0.69		0.313		5 0

Method	Analyte	Result Surface	Result 12.5'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Cadmium		0 124		0 59	0 5

Method	Analyte	Result 2'	Duplicate 2'	Result 12'	RRS-1 Subsurface	MSC
SW6010	Arsenic	11	11	12	6 58	5
SW6010	Beryllium	<1 7	<1 6	<1 6	1 13	0.4
SW6010	Cadmium	0.83	1 1	0.99	0 59	0.5
SW6010	Copper	27	19	18	13 72	130
SW6010	Magnesium	2600			2420	NV
SW8240	Methylene Chloride	0 014	0.0099 JB	0 013	MQL (0 0021)	100

Method	Analyte	Result 10'	Result 12'	RRS-1 Subsurface	MSC
SW6010	Arsenic		10	6 58	5
SW6010	Beryllium	<1 6	<1 7	1 13	0 4
SW6010	Cadmium		1	0 59	0 5
SW6010	Copper		15	13.72	130
SW8240	Methylene Chloride	0.012	0.013	MQL (0 0021)	100

Method	Analyte	Result 1997 (mg/L)	Result 2000 (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Beryllium	0 00036 B	0 00018	0.0003	0 004
SW8260	cis-1,2-Dichloroethene	0 0084		MQL (0.0012)	0 07
SW8260	Methylene Chloride	0.0019 B		MQL (0.0003)	0.005
SW8260	Trichloroethene	0 058		MQL (0 001)	0 005

LEGEND

- BUILDING 1027 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP. SOIL BORING (1997)
- IT CORP PHASE 2 BORING (2000)
- IT CORP. MONITORING WELL
- IT CORP PHASE 3 BORING
- LAW ENGINEERING SOIL BORING (VOCs AND METALS)
- GW FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG.

MSC - MEDIUM-SPECIFIC CONCENTRATION

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

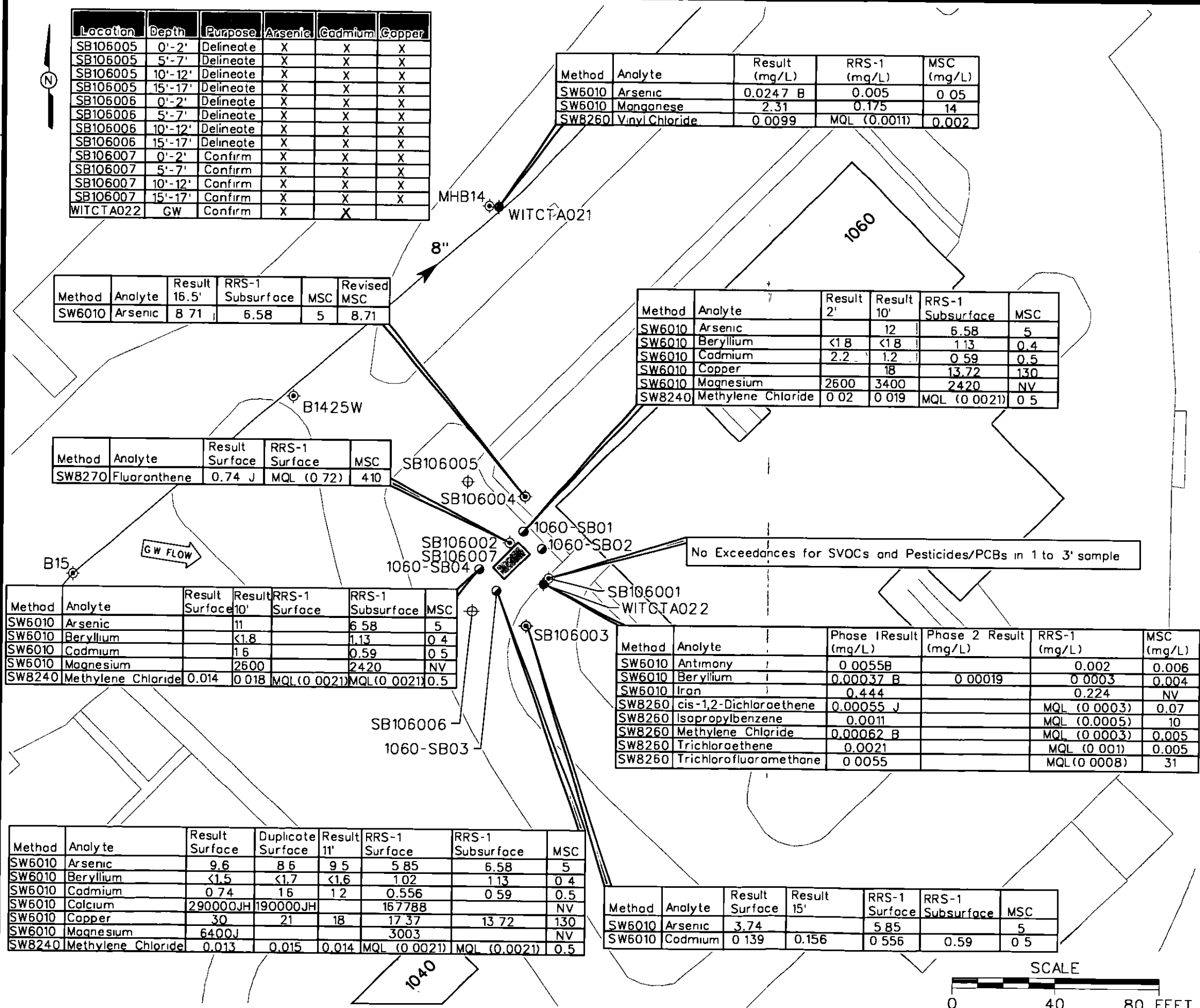
SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

FIGURE 3
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1027 OWS (SWMU 44)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 226 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/14/00 | REVISION NO 3
STARTING DATE 10/25/00 | DRAWN BY M CRAFT
09 57 28 11/20/00
mcraft c:\cadd\design\768579es 226



Location	Depth	Purpose	Arsenic	Cadmium	Copper
SB106005	0'-2'	Delineate	X	X	X
SB106005	5'-7'	Delineate	X	X	X
SB106005	10'-12'	Delineate	X	X	X
SB106005	15'-17'	Delineate	X	X	X
SB106006	0'-2'	Delineate	X	X	X
SB106006	5'-7'	Delineate	X	X	X
SB106006	10'-12'	Delineate	X	X	X
SB106006	15'-17'	Delineate	X	X	X
SB106007	0'-2'	Confirm	X	X	X
SB106007	5'-7'	Confirm	X	X	X
SB106007	10'-12'	Confirm	X	X	X
SB106007	15'-17'	Confirm	X	X	X
WITCTA022	GW	Confirm	X	X	

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Arsenic	0.0247 B	0.005	0 05
SW6010	Manganese	2.31	0.175	14
SW8260	Vinyl Chloride	0 0099	MQL (0.0011)	0.002

Method	Analyte	Result 16.5'	RRS-1 Subsurface	MSC	Revised MSC
SW6010	Arsenic	8 71	6.58	5	8.71

Method	Analyte	Result 2'	Result 10'	RRS-1 Subsurface	MSC
SW6010	Arsenic		12	6.58	5
SW6010	Beryllium	<1 8	<1 8	1 13	0.4
SW6010	Cadmium	2.2	1.2	0 59	0.5
SW6010	Copper		18	13.72	130
SW6010	Magnesium	2600	3400	2420	NV
SW8240	Methylene Chloride	0 02	0 019	MQL (0 0021)	0 5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW8270	Fluoranthene	0.74 J	MQL (0 72)	410

Method	Analyte	Result Surface	Result 10'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic		11		6 58	5
SW6010	Beryllium		<1.8		1.13	0 4
SW6010	Cadmium		1 6		0.59	0 5
SW6010	Magnesium		2600		2420	NV
SW8240	Methylene Chloride	0.014	0 018	MQL(0 0021)	MQL(0 0021)	0.5

Method	Analyte	Phase I Result (mg/L)	Phase 2 Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Antimony	0 0055B		0.002	0.006
SW6010	Beryllium	0.00037 B	0 00019	0 0003	0.004
SW6010	Iron	0.444		0.224	NV
SW8260	cis-1,2-Dichloroethene	0.00055 J		MQL (0 0003)	0.07
SW8260	Isopropylbenzene	0.0011		MQL (0.0005)	10
SW8260	Methylene Chloride	0.00062 B		MQL (0 0003)	0.005
SW8260	Trichloroethene	0.0021		MQL (0 001)	0.005
SW8260	Trichlorofluoromethane	0 0055		MQL(0 0008)	31

Method	Analyte	Result Surface	Duplicate Surface	Result 11'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	9.6	8 6	9 5	5 85	6.58	5
SW6010	Beryllium	<1.5	<1.7	<1.6	1.02	1 13	0 4
SW6010	Cadmium	0 74	1 6	1 2	0.556	0 59	0.5
SW6010	Calcium	290000JH	190000JH		167788		NV
SW6010	Copper	30	21	18	17 37	13 72	130
SW6010	Magnesium	6400J			3003		NV
SW8240	Methylene Chloride	0.013	0.015	0.014	MQL (0 0021)	MQL (0.0021)	0.5

Method	Analyte	Result Surface	Result 15'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	3.74		5 85		5
SW6010	Cadmium	0 139	0.156	0 556	0.59	0 5

LEGEND

- BUILDING 1060 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP. SOIL BORING (1997)
- IT CORP. PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP. PHASE 3 BORING
- LAW ENGINEERING SOIL BORING
- G.W. FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED
- ANALYTE DETECTED ABOVE MSC IN SOIL, BUT DETECTED BELOW MSC IN SPLP EXTRACT

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE

MSC - MEDIUM-SPECIFIC CONCENTRATION.

REVISED MSC - VALUE BASED ON SPLP RESULT.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL. FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION

FIGURE 4
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1060 OWS (AOC 11)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO 768579es 223 | PROJ NO 768579
INITIATOR K HURLEY | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/14/00 | REVISION NO 3
STARTING DATE 10/24/00 | DRAWN BY M CRAFT
09 58 20 11/20/00
mcraft c:\cadd\design\768579es 223

Location	Depth	Purpose	Arsenic	Cadmium	Copper	Manganese
SB106405	0'-2'	Delineate	X		X	X
SB106405	5'-7'	Delineate	X		X	X
SB106405	10'-12'	Delineate	X		X	X
SB106406	0'-2'	Delineate		X		
SB106406	5'-7'	Delineate		X		
SB106406	10'-12'	Delineate		X		
SB106407	0'-2'	Delineate	X	X	X	X
SB106407	5'-7'	Delineate	X	X	X	X
SB106407	10'-12'	Delineate	X	X	X	X
SB106408	2'-4'	Confirm	X	X	X	X
SB106408	5'-7'	Confirm	X	X	X	X
SB106408	10'-12'	Confirm	X	X	X	X
SB106409	0'-2'	Delineate		X		
SB106409	5'-7'	Delineate		X		
SB106409	10'-12'	Delineate		X		
WITCTA035	GW	Confirm				X

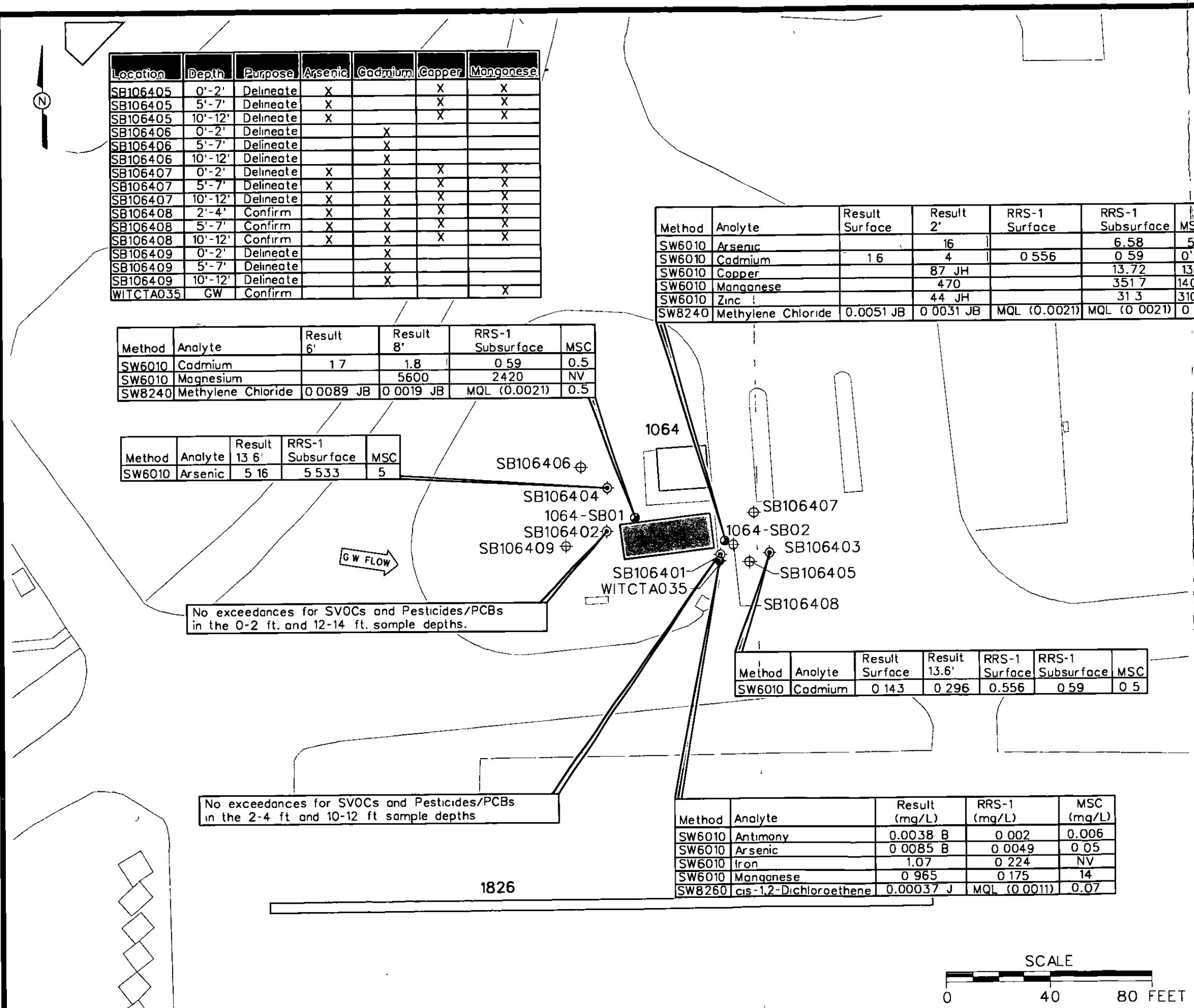
Method	Analyte	Result 6'	Result 8'	RRS-1 Subsurface	MSC
SW6010	Cadmium	1 7	1.8	0 59	0.5
SW6010	Magnesium		5600	2420	NV
SW8240	Methylene Chloride	0 0089 JB	0 0019 JB	MQL (0.0021)	0.5

Method	Analyte	Result 13 6'	RRS-1 Subsurface	MSC
SW6010	Arsenic	5 16	5 533	5

Method	Analyte	Result Surface	Result 2'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic		16		6.58	5
SW6010	Cadmium	1 6	4	0 556	0 59	0'5
SW6010	Copper		87 JH		13.72	130
SW6010	Manganese		470		351 7	1400
SW6010	Zinc		44 JH		31 3	3100
SW8240	Methylene Chloride	0.0051 JB	0 0031 JB	MQL (0.0021)	MQL (0 0021)	0 5

Method	Analyte	Result Surface	Result 13.6'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Cadmium	0 143	0 296	0.556	0 59	0 5

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Antimony	0.0038 B	0 002	0.006
SW6010	Arsenic	0 0085 B	0 0049	0 05
SW6010	Iron	1.07	0 224	NV
SW6010	Manganese	0 965	0 175	14
SW8260	cis-1,2-Dichloroethene	0.00037 J	MQL (0 0011)	0.07



LEGEND

- BUILDING 1064 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP SOIL BORING (1997) (SVOCs AND PESTICIDES/PCBs)
- IT CORP. PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP. PHASE 3 BORING
- LAW ENGINEERING SOIL BORING (VOCs & METALS)
- GW FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE.

MSC - MEDIUM-SPECIFIC CONCENTRATION.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

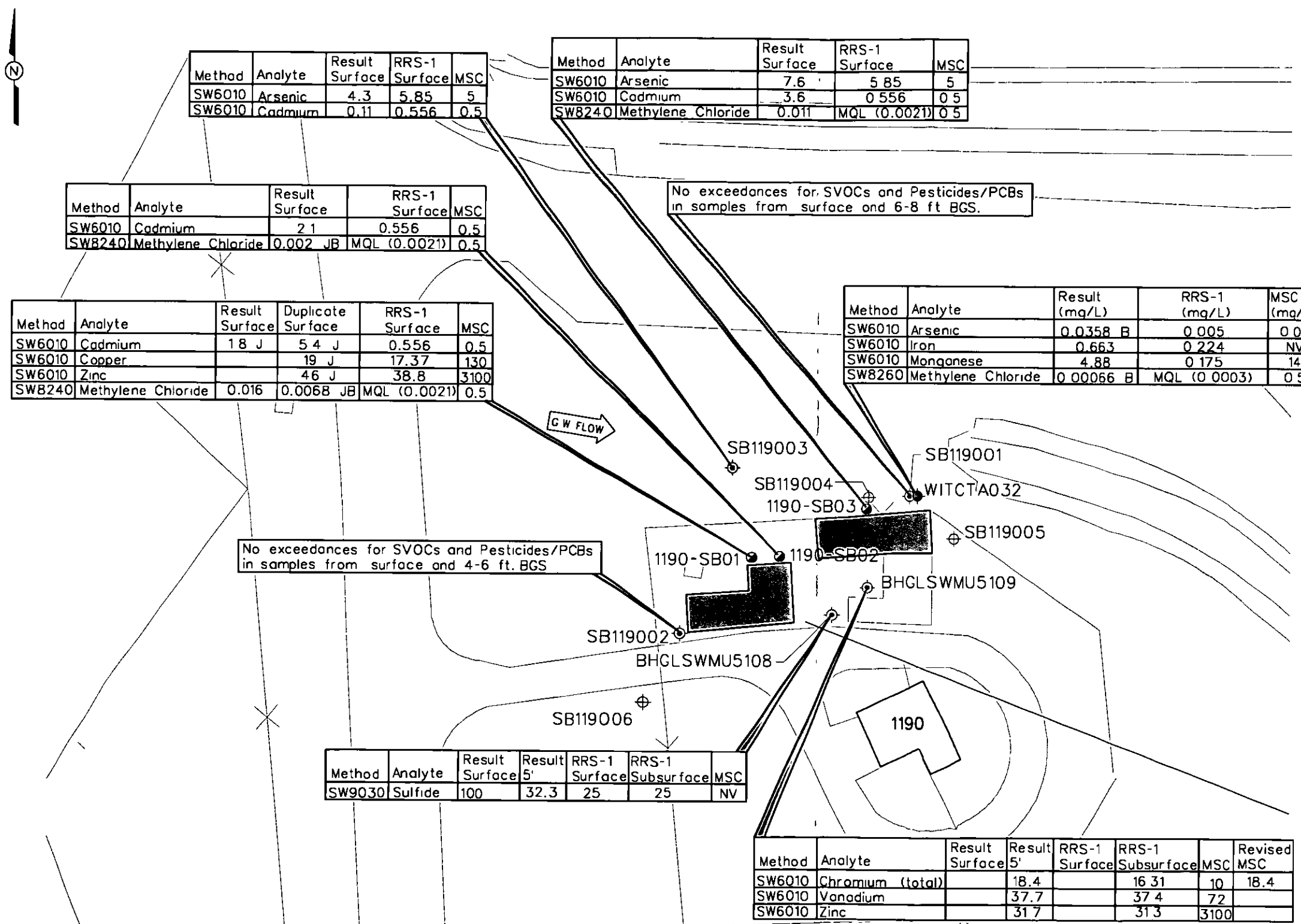
SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

FIGURE 5
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1064 OWS (AOC 10)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

STARTING DATE 10/23/00 | DATE LAST REV 11/14/00 | DRAFT CHCK BY D HALL | INITIATOR K HURLEY | DWG NO. \768579es 219
DRAWN BY M CRAFT | REVISION NO 3 | ENGR CHCK BY M MAKI | PROJ MGR W CARTER | PROJ NO 768579
11/20/00 09 59 17
mcraft c:\cadd\design\768579es 219



Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Arsenic	4.3	5.85	5
SW6010	Cadmium	0.11	0.556	0.5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Arsenic	7.6	5 85	5
SW6010	Cadmium	3.6	0 556	0 5
SW8240	Methylene Chloride	0.011	MQL (0.0021)	0 5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Cadmium	2 1	0.556	0.5
SW8240	Methylene Chloride	0.002 JB	MQL (0.0021)	0.5

Method	Analyte	Result Surface	Duplicate Surface	RRS-1 Surface	MSC
SW6010	Cadmium	1 8 J	5 4 J	0.556	0.5
SW6010	Copper		19 J	17.37	130
SW6010	Zinc		46 J	38.8	3100
SW8240	Methylene Chloride	0.016	0.0068 JB	MQL (0.0021)	0.5

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Arsenic	0.0358 B	0 005	0 05
SW6010	Iron	0.663	0 224	NV
SW6010	Manganese	4.88	0 175	14
SW8260	Methylene Chloride	0 00066 B	MQL (0 0003)	0 5

Method	Analyte	Result Surface	Result 5'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW9030	Sulfide	100	32.3	25	25	NV

Method	Analyte	Result Surface	Result 5'	RRS-1 Surface	RRS-1 Subsurface	MSC	Revised MSC
SW6010	Chromium (total)		18.4		16 31	10	18.4
SW6010	Vanadium		37.7		37 4	72	
SW6010	Zinc		31 7		31 3	3100	

Location	Depth	Purpose	Arsenic	Cadmium
SB119004	0'-2'	Confirm	X	X
SB119004	4'-6'	Confirm	X	X
SB119005	0'-2'	Delineate	X	X
SB119005	4'-6'	Delineate	X	X
SB119006	0'-2'	Delineate	X	X
SB119006	4'-6'	Delineate	X	X
WITCTA032	GW	Confirm	X	

LEGEND

- BUILDING 1190 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP. SOIL BORING (1997) (SVOCs AND PESITCIDES/PCBs)
- IT CORP PHASE 2 BORING (2000)
- IT CORP. MONITORING WELL
- IT CORP. PHASE 3 BORING
- HGL SOIL BORING
- LAW ENGINEERING SOIL BORING (VOCs & METALS)
- GW FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED
- ANALYTE DETECTED ABOVE MSC IN SOIL, BUT DETECTED BELOW MSC IN SPLP EXTRACT.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE.

MSC - MEDIUM-SPECIFIC CONCENTRATION

REVISED MSC - VALUE BASED ON SPLP RESULT

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION

FIGURE 6

ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1190 OWS (SWMU 52)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 230 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/14/00 | REVISION NO 2
STARTING DATE 10/26/00 | DRAWN BY V CRAFT
10 00 17 11/20/00
c:\cadd\design\768579es 230 micraft

Location	Depth	Purpose	Arsenic	Cadmium	Copper	Lead
SB119106	0'-4'	Delineate	X	X		
SB119107	0'-4'	Delineate	X	X		
SB119108	0'-4'	Confirm	X	X		

Method	Analyte	Result Surface	Result 3'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	13	6.6	5 85	6 58	5
SW6010	Cadmium		2.7		0.59	0 5
SW6010	Calcium	360000 JH		167788		NV
SW8240	Methylene Chloride	0.017	0.016	MQL (0 0021)	MQL (0.0021)	0.5

No exceedances for SVOCs and Pesticides/PCBs in samples from surface and 4-6 ft. BGS

Method	Analyte	Result 3'	RRS-1 Subsurface	MSC
SW6010	Arsenic	4.7	6.58	5
SW6010	Cadmium	0.55	0 59	0 5

No exceedances for SVOCs and Pesticides/PCBs in samples from surface and 6-8 ft. BGS

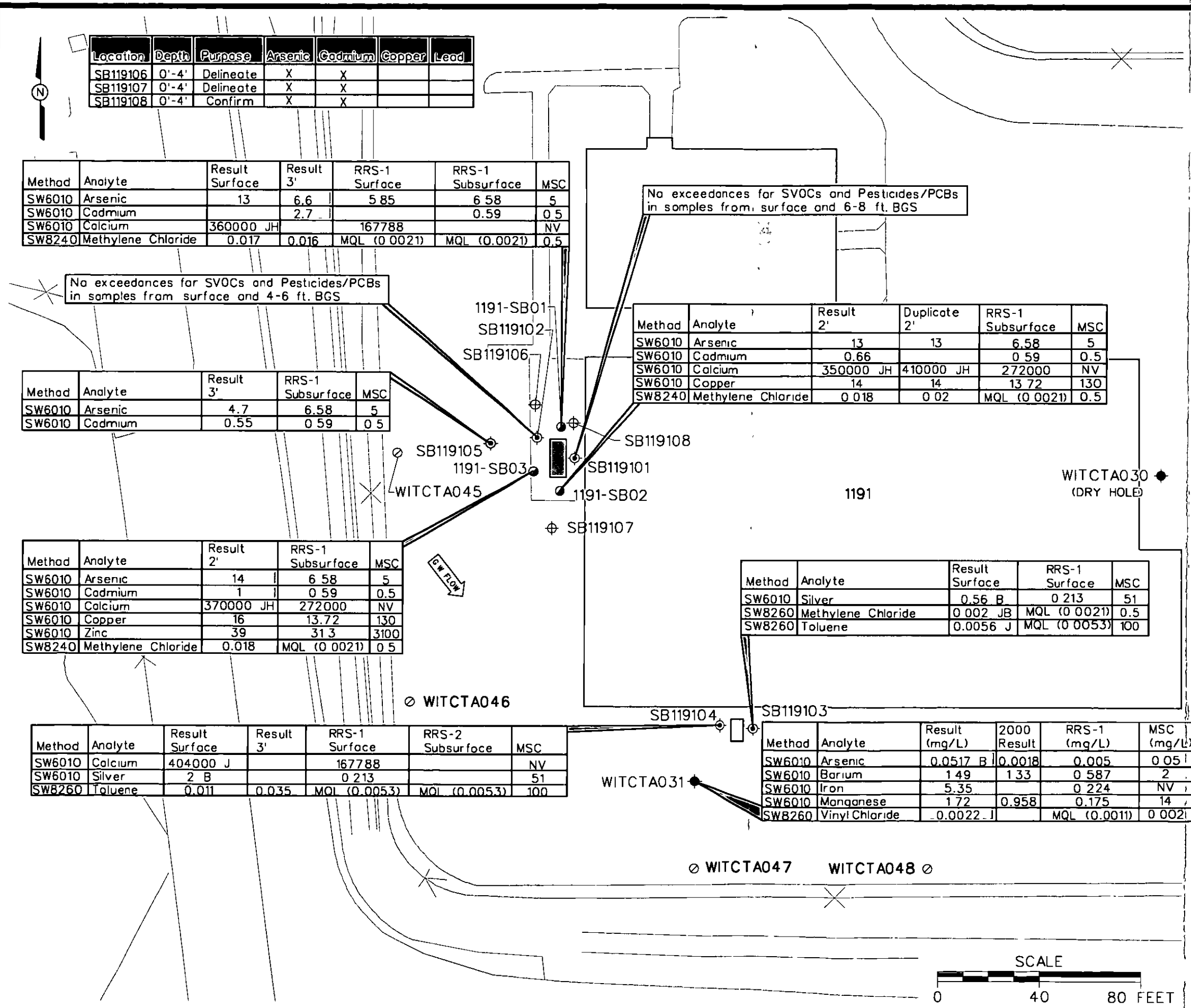
Method	Analyte	Result 2'	Duplicate 2'	RRS-1 Subsurface	MSC
SW6010	Arsenic	13	13	6.58	5
SW6010	Cadmium	0.66		0 59	0.5
SW6010	Calcium	350000 JH	410000 JH	272000	NV
SW6010	Copper	14	14	13 72	130
SW8240	Methylene Chloride	0 018	0 02	MQL (0 0021)	0.5

Method	Analyte	Result 2'	RRS-1 Subsurface	MSC
SW6010	Arsenic	14	6 58	5
SW6010	Cadmium	1	0 59	0.5
SW6010	Calcium	370000 JH	272000	NV
SW6010	Copper	16	13.72	130
SW6010	Zinc	39	31 3	3100
SW8240	Methylene Chloride	0.018	MQL (0 0021)	0 5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Silver	0.56 B	0 213	51
SW8260	Methylene Chloride	0 002 JB	MQL (0 0021)	0.5
SW8260	Toluene	0.0056 J	MQL (0 0053)	100

Method	Analyte	Result Surface	Result 3'	RRS-1 Surface	RRS-2 Subsurface	MSC
SW6010	Calcium	404000 J		167788		NV
SW6010	Silver	2 B		0 213		51
SW8260	Toluene	0.011	0.035	MQL (0.0053)	MQL (0.0053)	100

Method	Analyte	Result (mg/L)	2000 Result	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Arsenic	0.0517 B	0.0018	0.005	0 05
SW6010	Barium	1 49	1 33	0 587	2
SW6010	Iron	5.35		0 224	NV
SW6010	Manganese	1 72	0.958	0.175	14
SW8260	Vinyl Chloride	0.0022 J		MQL (0.0011)	0 002



LEGEND

- BUILDING 1191 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP SOIL BORING (1997)
- IT CORP PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP MONITORING WELL LOCATION-PHASE 2
- IT CORP PHASE 3 BORING
- LAW ENGINEERING SOIL BORING (VOCs & METALS)
- GW. FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE.

MSC - MEDIUM-SPECIFIC CONCENTRATION.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL. FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

FIGURE 7
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1191 OWS (SWMU 37)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 231 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/13/00 | REVISION NO 2
STARTING DATE 10/26/00 | DRAWN BY V CRAFT
10 01 07
11/20/00
mcraft
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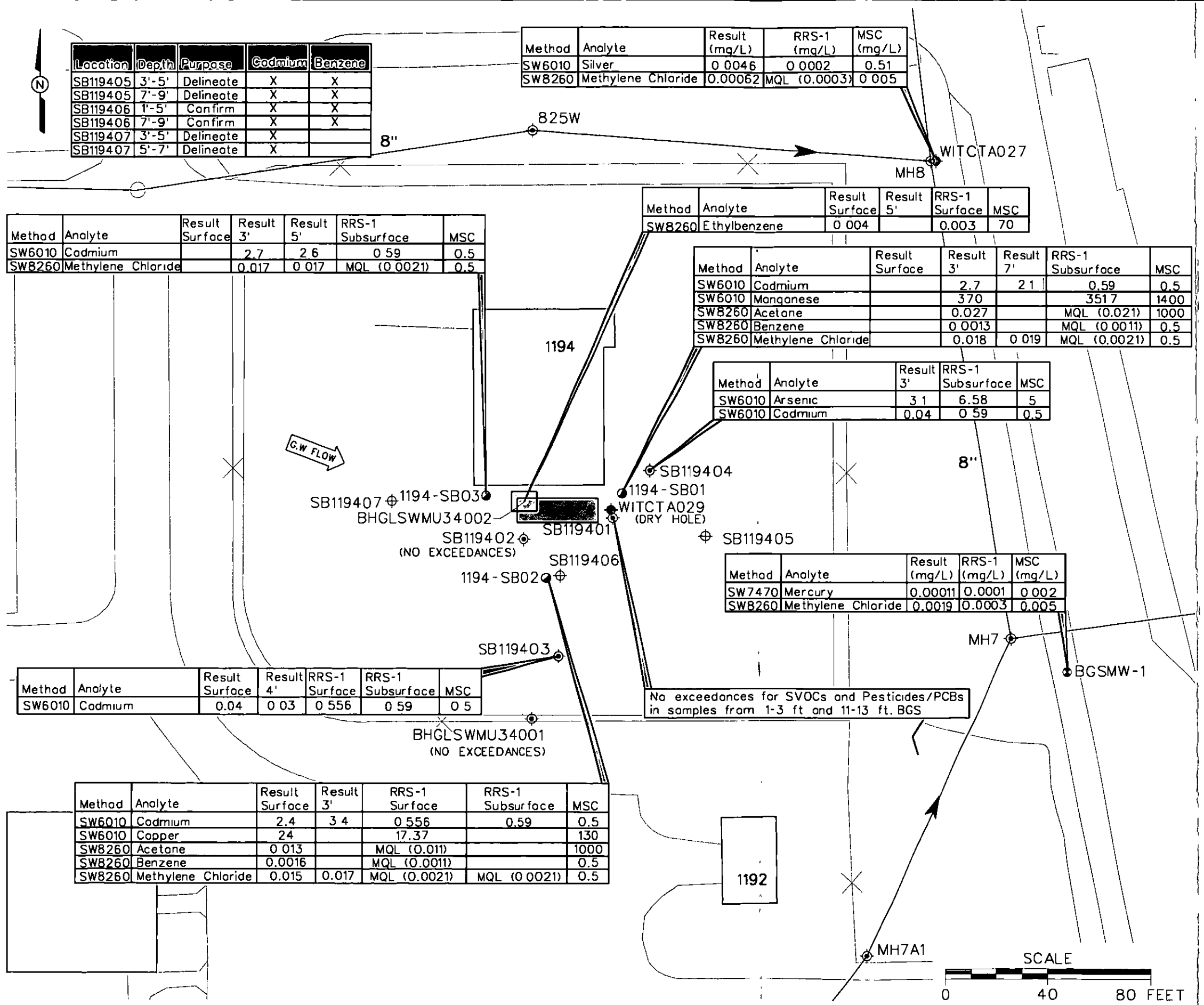


Location	Depth	Purpose	Cadmium	Benzene
SB119405	3'-5'	Delineate	X	X
SB119405	7'-9'	Delineate	X	X
SB119406	1'-5'	Confirm	X	X
SB119406	7'-9'	Confirm	X	X
SB119407	3'-5'	Delineate	X	
SB119407	5'-7'	Delineate	X	

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Silver	0 0046	0 0002	0.51
SW8260	Methylene Chloride	0.00062	MQL (0.0003)	0 005

Method	Analyte	Result Surface	Result 3'	Result 5'	RRS-1 Subsurface	MSC
SW6010	Cadmium		2.7	2 6	0 59	0.5
SW8260	Methylene Chloride		0.017	0 017	MQL (0 0021)	0.5

Method	Analyte	Result Surface	Result 5'	RRS-1 Surface	MSC
SW8260	Ethylbenzene	0 004		0.003	70

Method	Analyte	Result Surface	Result 3'	Result 7'	RRS-1 Subsurface	MSC
SW6010	Cadmium		2.7	2 1	0.59	0.5
SW6010	Manganese		370		3517	1400
SW8260	Acetone		0.027		MQL (0.021)	1000
SW8260	Benzene		0 0013		MQL (0 0011)	0.5
SW8260	Methylene Chloride		0.018	0 019	MQL (0.0021)	0.5

Method	Analyte	Result 3'	RRS-1 Subsurface	MSC
SW6010	Arsenic	3 1	6.58	5
SW6010	Cadmium	0.04	0 59	0.5

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW7470	Mercury	0.00011	0.0001	0 002
SW8260	Methylene Chloride	0.0019	0.0003	0.005

Method	Analyte	Result Surface	Result 4'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Cadmium	0.04	0 03	0 556	0 59	0 5

Method	Analyte	Result Surface	Result 3'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Cadmium	2.4	3 4	0 556	0.59	0.5
SW6010	Copper	24		17.37		130
SW8260	Acetone	0 013		MQL (0.011)		1000
SW8260	Benzene	0.0016		MQL (0.0011)		0.5
SW8260	Methylene Chloride	0.015	0.017	MQL (0.0021)	MQL (0 0021)	0.5

LEGEND

- BUILDING 1194 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- WASTE ACCULUMATION AREA (SWMU 34)
- IT CORP. SOIL BORING (1997) (SVOCs AND PESTICIDES/PCBs)
- IT CORP. PHASE 2 BORING (2000)
- IT CORP. MONITORING WELL
- IT CORP PHASE 3 BORING
- LAW ENGINEERING SOIL BORING (VOCs AND METALS)
- EXISTING MONITORING WELL
- HGL BORING LOCATION (SWMU 34)
- GW FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE.

MSC - MEDIUM-SPECIFIC CONCENTRATION

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL. FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

SOURCE: DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION

FIGURE 8

ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1194 OWS (SWMU 35)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 221 | PROJ NO 768579
INITIATOR K HURLEY | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/14/00 | REVISION NO 3
STARTING DATE 10/23/00 | DRAWN BY M CRAFT
10 02 11 11/20/00
mcraft c:\cadd\design\768579es 221

Location	Depth	Purpose	Arsenic	Cadmium	Copper	Lead
SB141405	5'-7'	Delineate	X	X	X	
SB141405	10'-12'	Delineate	X	X	X	
SB141406	1'-3'	Delineate		X		X
SB141406	5'-7'	Delineate	X	X	X	
SB141406	10'-12'	Delineate	X	X	X	
SB141407	0'-2'	Confirm	X	X		X
SB141407	5'-7'	Confirm		X		
SB141407	10'-12'	Confirm		X		

Method	Analyte	Result Surface	Result 7'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	8 7		5 85		5
SW6010	Barium		150		128 1	200
SW6010	Cadmium	2.2	1.3	0 556	0.59	0 5
SW6010	Cobalt	16		11.05		610
SW6010	Lead	51		30 97		1 5
SW6010	Nickel	16		14.6		200
SW8240	Methylene Chloride	0 019	0 021	MQL (0.0021)	MQL (0.0021)	0.5

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Iron	0.249	0.224	NV
SW8260	cis-1,2-Dichloroethene	0.072	MQL (0 0012)	0.07
SW8260	Methylene Chloride	0.0017	MQL (0.0003)	0.005
SW8260	Trichloroethene	0 029	MQL (0 001)	0.005

Method	Analyte	Result Surface	Result 17'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	4 36	5 46	5 85	6 58	5
SW6010	Lead	11 5		30 97		1 5

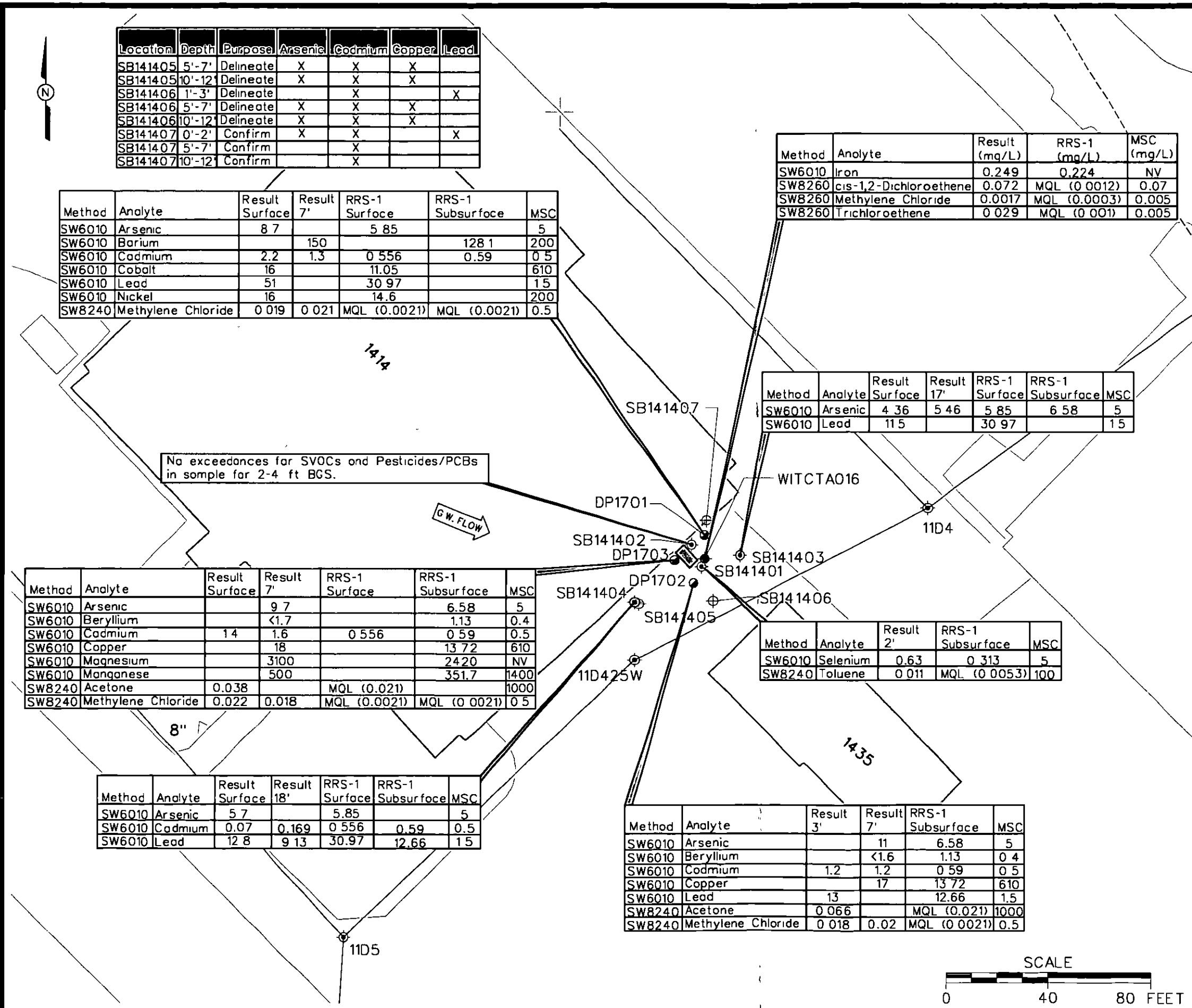
No exceedances for SVOCs and Pesticides/PCBs in sample for 2-4 ft BGS.

Method	Analyte	Result Surface	Result 7'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic		9 7		6.58	5
SW6010	Beryllium		<1.7		1.13	0.4
SW6010	Cadmium	1 4	1.6	0 556	0 59	0.5
SW6010	Copper		18		13 72	610
SW6010	Magnesium		3100		2420	NV
SW6010	Manganese		500		351.7	1400
SW8240	Acetone	0.038		MQL (0.021)		1000
SW8240	Methylene Chloride	0.022	0.018	MQL (0.0021)	MQL (0 0021)	0 5

Method	Analyte	Result Surface	Result 18'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	5 7		5.85		5
SW6010	Cadmium	0.07	0.169	0 556	0.59	0.5
SW6010	Lead	12 8	9 13	30.97	12.66	1 5

Method	Analyte	Result 3'	Result 7'	RRS-1 Subsurface	MSC
SW6010	Arsenic		11	6.58	5
SW6010	Beryllium		<1.6	1.13	0 4
SW6010	Cadmium	1.2	1.2	0 59	0 5
SW6010	Copper		17	13 72	610
SW6010	Lead	13		12.66	1.5
SW8240	Acetone	0 066		MQL (0.021)	1000
SW8240	Methylene Chloride	0 018	0.02	MQL (0 0021)	0.5

Method	Analyte	Result 2'	RRS-1 Subsurface	MSC
SW6010	Selenium	0.63	0 313	5
SW8240	Toluene	0 011	MQL (0 0053)	100



LEGEND

- BUILDING 1414 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP. SOIL BORING (1997)
- IT CORP PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP PHASE 3 BORING
- LAW ENGINEERING SOIL BORING (VOCs AND METALS)
- GW FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG

MSC - MEDIUM-SPECIFIC CONCENTRATION.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION

SOURCE: DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION

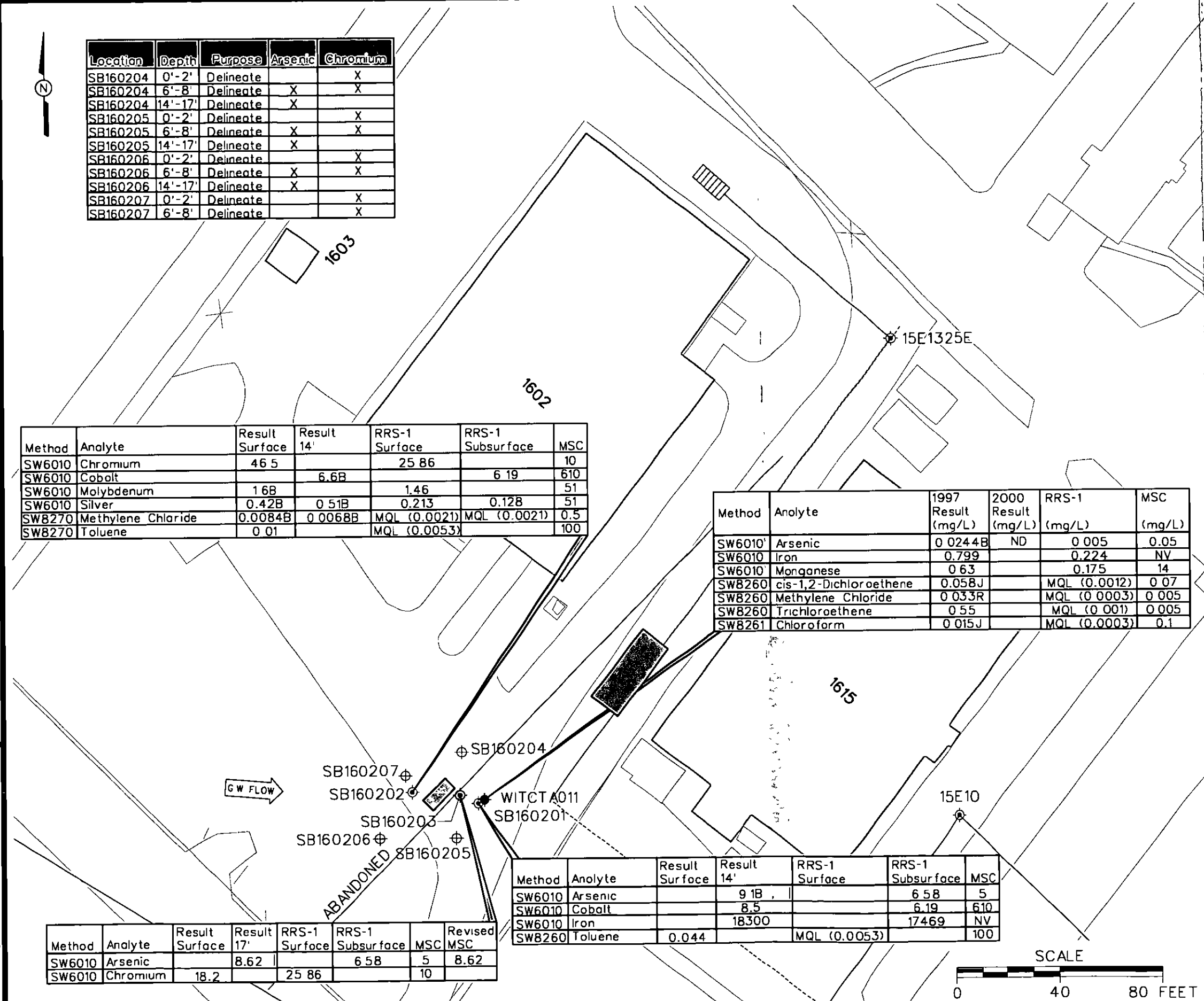
FIGURE 9

ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1414 OWS (SWMU 41)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 229 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/14/00 | REVISION NO 3
STARTING DATE 10/25/00 | DRAWN BY M CRAFT
10 03 01 11/20/00
mcraft c:\cadd\design\768579es 229



Location	Depth	Purpose	Arsenic	Chromium
SB160204	0'-2'	Delineate		X
SB160204	6'-8'	Delineate	X	X
SB160204	14'-17'	Delineate	X	
SB160205	0'-2'	Delineate		X
SB160205	6'-8'	Delineate	X	X
SB160205	14'-17'	Delineate	X	
SB160206	0'-2'	Delineate		X
SB160206	6'-8'	Delineate	X	X
SB160206	14'-17'	Delineate	X	
SB160207	0'-2'	Delineate		X
SB160207	6'-8'	Delineate		X

Method	Analyte	Result Surface	Result 14'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Chromium	46 5		25 86		10
SW6010	Cobalt		6.6B		6 19	610
SW6010	Molybdenum	1 6B		1.46		51
SW6010	Silver	0.42B	0 51B	0.213	0.128	51
SW8270	Methylene Chloride	0.0084B	0 0068B	MQL (0.0021)	MQL (0.0021)	0.5
SW8270	Toluene	0 01		MQL (0.0053)		100

Method	Analyte	1997 Result (mg/L)	2000 Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010'	Arsenic	0 0244B	ND	0 005	0.05
SW6010	Iron	0.799		0.224	NV
SW6010'	Manganese	0 63		0.175	14
SW8260	cis-1,2-Dichloroethene	0.058J		MQL (0.0012)	0 07
SW8260	Methylene Chloride	0 033R		MQL (0 0003)	0 005
SW8260	Trichloroethene	0 55		MQL (0 001)	0 005
SW8261	Chloroform	0 015J		MQL (0.0003)	0.1

Method	Analyte	Result Surface	Result 17'	RRS-1 Surface	RRS-1 Subsurface	MSC	Revised MSC
SW6010	Arsenic		8.62		6 58	5	8.62
SW6010	Chromium	18.2		25 86		10	

Method	Analyte	Result Surface	Result 14'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic		9 1B		6 58	5
SW6010	Cobalt		8.5		6.19	610
SW6010	Iron		18300		17469	NV
SW8260	Toluene	0.044		MQL (0.0053)		100

LEGEND

- BUILDING 1602 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP SOIL BORING (1997)
- IT CORP PHASE 2 BORING (2000)
- IT CORP. MONITORING WELL
- IT CORP. PHASE 3 BORING
- GW FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC SPLP NOT PERFORMED
- ANALYTE DETECTED ABOVE MSC IN SOIL, BUT DETECTED BELOW MSC IN SPLP EXTRACT.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE

MSC - MEDIUM-SPECIFIC CONCENTRATION.

REVISED MSC - VALUE BASED ON SPLP RESULT.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION

SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

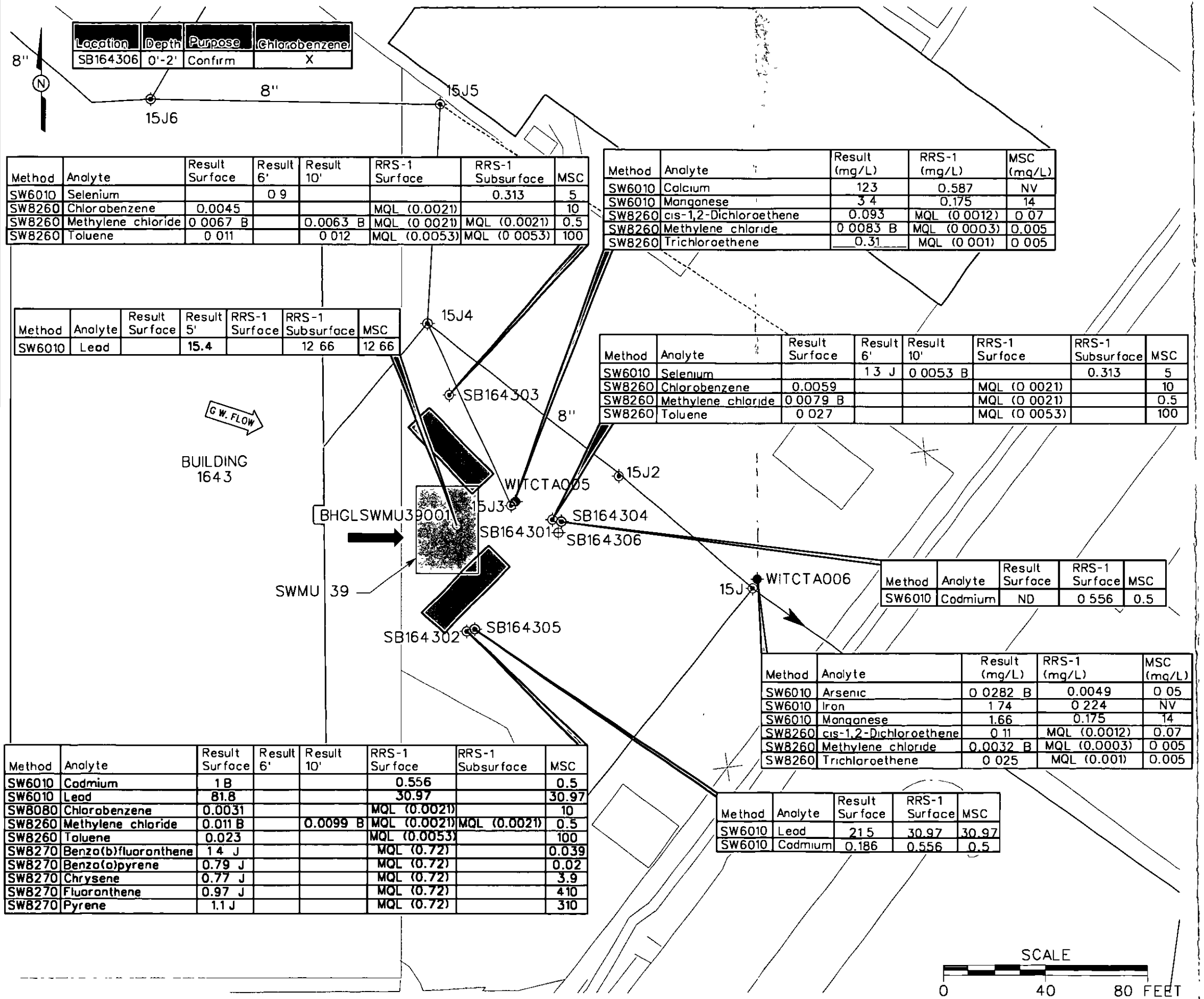
FIGURE 10
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1602 OWS

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

STARTING DATE 10/24/00	DATE LAST REV 11/15/00	DRAFT CHCK BY D HALL	INITIATOR K HURLEY	DWG NO. \768579es 222
DRAWN BY V CRAFT	REVISION NO 2	ENGR CHCK BY K HURLEY	PROJ MGR W CARTER	PROJ NO 768579

10 03 52
11/20/00
mcraft
c:\cadd\design\768579es 222



Location	Depth	Purpose	Chlorobenzene
SB164306	0'-2'	Confirm	X

Method	Analyte	Result Surface	Result 6'	Result 10'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Selenium		0 9			0.313	5
SW8260	Chlorobenzene	0.0045			MQL (0.0021)		10
SW8260	Methylene chloride	0 0067 B		0.0063 B	MQL (0 0021)	MQL (0.0021)	0.5
SW8260	Toluene	0 011		0 012	MQL (0.0053)	MQL (0 0053)	100

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Calcium	123	0.587	NV
SW6010	Manganese	3 4	0.175	14
SW8260	cis-1,2-Dichloroethene	0.093	MQL (0 0012)	0 07
SW8260	Methylene chloride	0 0083 B	MQL (0 0003)	0.005
SW8260	Trichloroethene	0.31	MQL (0 001)	0 005

Method	Analyte	Result Surface	Result 5'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Lead		15.4		12 66	12 66

Method	Analyte	Result Surface	Result 6'	Result 10'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Selenium		1 3 J	0 0053 B		0.313	5
SW8260	Chlorobenzene	0.0059			MQL (0 0021)		10
SW8260	Methylene chloride	0 0079 B			MQL (0 0021)		0.5
SW8260	Toluene	0 027			MQL (0 0053)		100

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Cadmium	ND	0 556	0.5

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Arsenic	0 0282 B	0.0049	0 05
SW6010	Iron	1 74	0 224	NV
SW6010	Manganese	1.66	0.175	14
SW8260	cis-1,2-Dichloroethene	0 11	MQL (0.0012)	0.07
SW8260	Methylene chloride	0.0032 B	MQL (0.0003)	0 005
SW8260	Trichloroethene	0 025	MQL (0.001)	0.005

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Lead	21.5	30.97	30.97
SW6010	Cadmium	0.186	0.556	0.5

Method	Analyte	Result Surface	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Codmium	1 B	0.556		0.5
SW6010	Lead	81.8	30.97		30.97
SW8080	Chlorobenzene	0.0031	MQL (0.0021)		10
SW8260	Methylene chloride	0.011 B	0.0099 B MQL (0.0021)	MQL (0.0021)	0.5
SW8260	Toluene	0.023	MQL (0.0053)		100
SW8270	Benzo(b)fluoranthene	14 J	MQL (0.72)		0.039
SW8270	Benzo(a)pyrene	0.79 J	MQL (0.72)		0.02
SW8270	Chrysene	0.77 J	MQL (0.72)		3.9
SW8270	Fluoranthene	0.97 J	MQL (0.72)		410
SW8270	Pyrene	1.1 J	MQL (0.72)		310

LEGEND

- BUILDING 1643 OWS (SWMU 40)
- WASTE ACCUMULATION AREA (SWMU 39)
- MONITORING WELL
- IT SOIL BORING LOCATION 1997 (SWMU 40)
- IT PHASE 2 SOIL BORING LOCATION - 1999 (SWMU 40)
- IT CORP PHASE 3 BORING
- HGL BORING LOCATION (SWMU 39)
- GW FLOW — GROUNDWATER FLOW DIRECTION
- SURFACE RUNOFF
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.
- ANALYTE DETECTED ABOVE MSC IN SOIL AND IN SPLP EXTRACT.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE

MSC - MEDIUM-SPECIFIC CONCENTRATION.

REVISED MSC - VALUE BASED ON SPLP RESULT.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL. FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

FIGURE 11

ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1643 OWS (SWMU 40)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

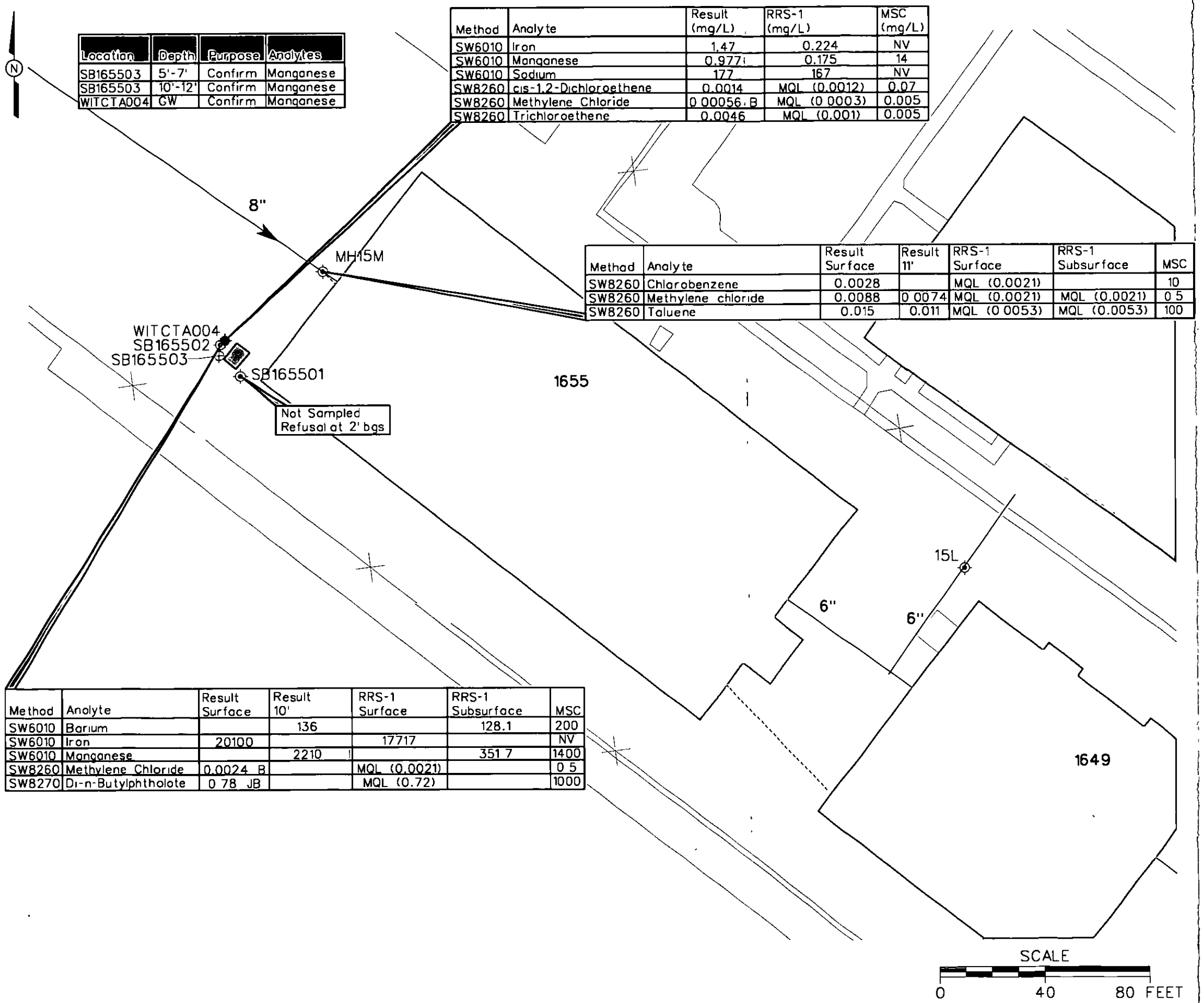
DWG NO. \768579es 213 | PROJ NO 768579
INITIATOR K HURLEY | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/10/00 | REVISION NO 1
STARTING DATE 10/20/00 | DRAWN BY M CRAFT
10 04 54 11/20/00
mcraft c:\cadd\design\768579es 213

Location	Depth	Purpose	Analytes
SB165503	5'-7'	Confirm	Manganese
SB165503	10'-12'	Confirm	Manganese
WITCTA004	GW	Confirm	Manganese

Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Iron	1.47	0.224	NV
SW6010	Manganese	0.9771	0.175	14
SW6010	Sodium	177	167	NV
SW8260	cis-1,2-Dichloroethene	0.0014	MQL (0.0012)	0.07
SW8260	Methylene Chloride	0.00056 B	MQL (0.0003)	0.005
SW8260	Trichloroethene	0.0046	MQL (0.001)	0.005

Method	Analyte	Result Surface	Result 11'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW8260	Chlorobenzene	0.0028		MQL (0.0021)		10
SW8260	Methylene chloride	0.0088	0.0074	MQL (0.0021)	MQL (0.0021)	0.5
SW8260	Toluene	0.015	0.011	MQL (0.0053)	MQL (0.0053)	100

Method	Analyte	Result Surface	Result 10'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Barium		136		128.1	200
SW6010	Iron	20100		17717		NV
SW6010	Manganese		2210		351.7	1400
SW8260	Methylene Chloride	0.0024 B		MQL (0.0021)		0.5
SW8270	Di-n-Butylphtholate	0.78 JB		MQL (0.72)		1000



LEGEND

- BUILDING 1655 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP SOIL BORING (1997)
- IT CORP MONITORING WELL
- IT CORP. PHASE 3 BORING
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE

MSC - MEDIUM-SPECIFIC CONCENTRATION

REVISED MSC - VALUE BASED ON SPLP RESULT

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL. FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

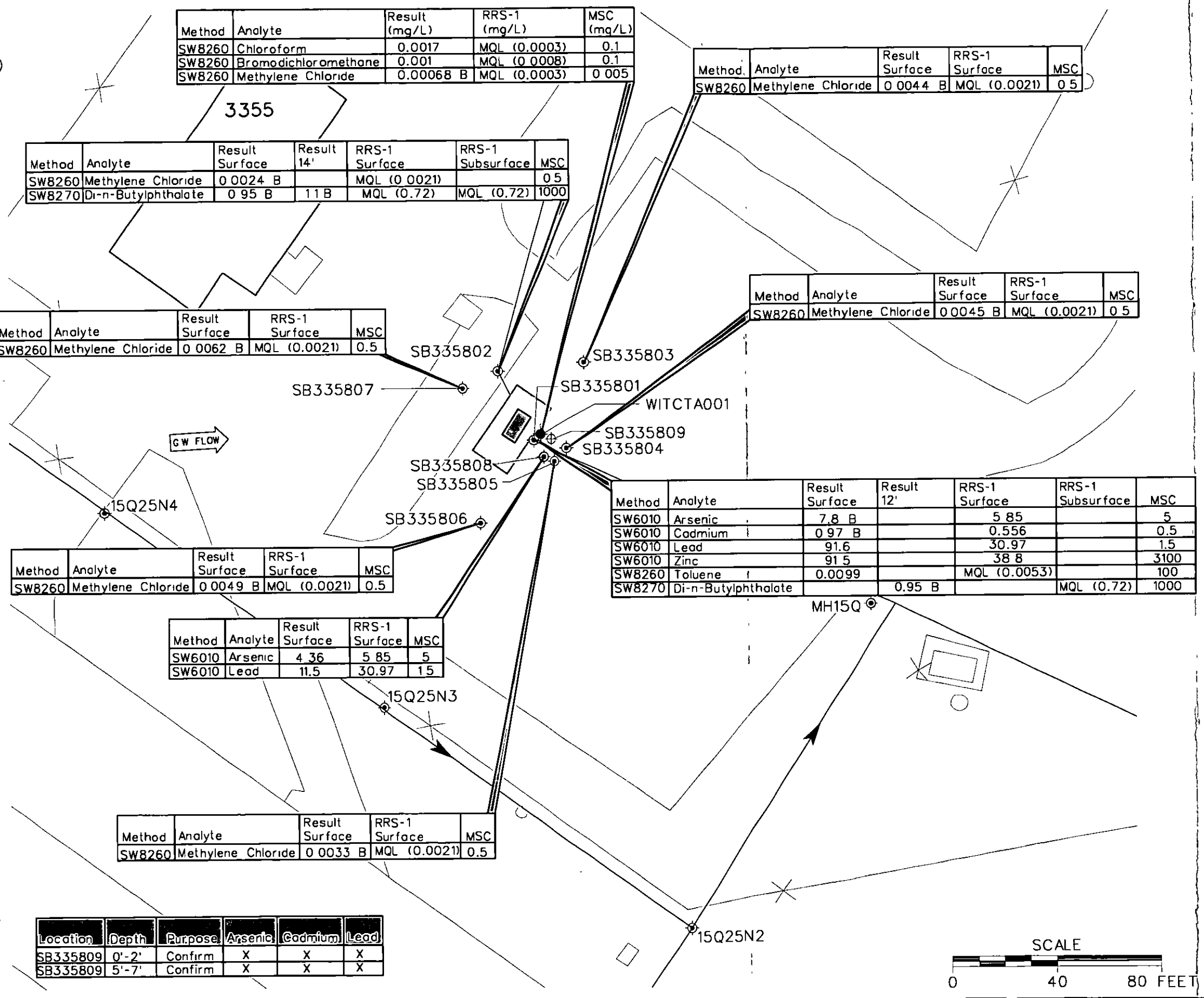
SOURCE: DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

FIGURE 12
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 1655 OWS

OWS RFI CLOSURE REPORT
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 225 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/15/00 | REVISION NO 3
STARTING DATE 10/24/00 | DRAWN BY M CRAFT
10 05 49 11/20/00
mcraft c:\cadd\design\768579es 225



Method	Analyte	Result (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW8260	Chloroform	0.0017	MQL (0.0003)	0.1
SW8260	Bromodichloromethane	0.001	MQL (0 0008)	0.1
SW8260	Methylene Chloride	0.00068 B	MQL (0.0003)	0 005

Method	Analyte	Result Surface	Result 14'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW8260	Methylene Chloride	0 0024 B		MQL (0 0021)		0 5
SW8270	Di-n-Butylphthalate	0 95 B	1 1 B	MQL (0.72)	MQL (0.72)	1000

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW8260	Methylene Chloride	0 0062 B	MQL (0.0021)	0.5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW8260	Methylene Chloride	0 0049 B	MQL (0.0021)	0.5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Arsenic	4 36	5 85	5
SW6010	Lead	11.5	30.97	1 5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW8260	Methylene Chloride	0 0033 B	MQL (0.0021)	0.5

Location	Depth	Purpose	Arsenic	Cadmium	Lead
SB335809	0'-2'	Confirm	X	X	X
SB335809	5'-7'	Confirm	X	X	X

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW8260	Methylene Chloride	0 0044 B	MQL (0.0021)	0 5

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW8260	Methylene Chloride	0 0045 B	MQL (0.0021)	0 5

Method	Analyte	Result Surface	Result 12'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Arsenic	7.8 B		5 85		5
SW6010	Cadmium	0 97 B		0.556		0.5
SW6010	Lead	91.6		30.97		1.5
SW6010	Zinc	91 5		38 8		3100
SW8260	Toluene	0.0099		MQL (0.0053)		100
SW8270	Di-n-Butylphthalate		0.95 B		MQL (0.72)	1000

LEGEND

- BUILDING 3358 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP. SOIL BORING (1997)
- IT CORP PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP PHASE 3 BORING
- G.W. FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC SPLP NOT PERFORMED

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE.

MSC - MEDIUM-SPECIFIC CONCENTRATION.

NV - NO VALUE

TENTATIVELY IDENTIFIED COMPOUNDS (TIC) ARE NOT SHOWN.

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION.

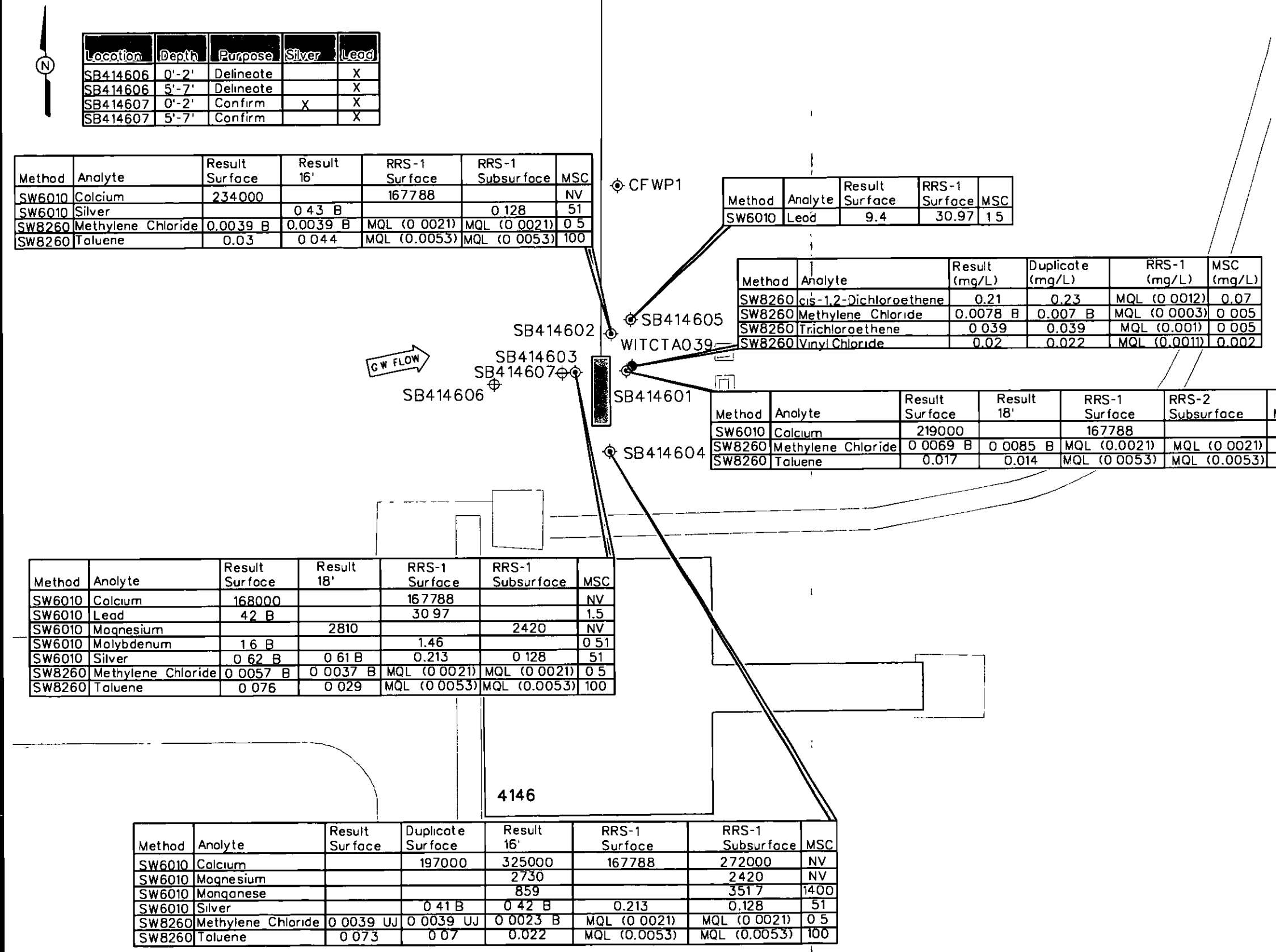
SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

FIGURE 13
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 3358 OWS

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO \768579es 227 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/20/00 | REVISION NO 2
STARTING DATE 10/25/00 | DRAWN BY M CRAFT
10 06 45 11/20/00
mcraft c:\cadd\design\768579es 227



Location	Depth	Purpose	Silver	Lead
SB414606	0'-2'	Delineate		X
SB414606	5'-7'	Delineate		X
SB414607	0'-2'	Confirm	X	X
SB414607	5'-7'	Confirm		X

Method	Analyte	Result Surface	Result 16'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Calcium	234000		167788		NV
SW6010	Silver		0 43 B		0 128	51
SW8260	Methylene Chloride	0.0039 B	0.0039 B	MQL (0 0021)	MQL (0 0021)	0 5
SW8260	Toluene	0.03	0 044	MQL (0.0053)	MQL (0 0053)	100

Method	Analyte	Result Surface	RRS-1 Surface	MSC
SW6010	Lead	9.4	30.97	1 5

Method	Analyte	Result (mg/L)	Duplicate (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW8260	cis-1,2-Dichloroethene	0.21	0.23	MQL (0 0012)	0.07
SW8260	Methylene Chloride	0.0078 B	0.007 B	MQL (0 0003)	0 005
SW8260	Trichloroethene	0 039	0.039	MQL (0.001)	0 005
SW8260	Vinyl Chloride	0.02	0.022	MQL (0.001)	0.002

Method	Analyte	Result Surface	Result 18'	RRS-1 Surface	RRS-2 Subsurface	MSC
SW6010	Calcium	219000		167788		NV
SW8260	Methylene Chloride	0 0069 B	0 0085 B	MQL (0.0021)	MQL (0 0021)	0.5
SW8260	Toluene	0.017	0.014	MQL (0 0053)	MQL (0.0053)	100

Method	Analyte	Result Surface	Result 18'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Calcium	168000		167788		NV
SW6010	Lead	42 B		30 97		1.5
SW6010	Magnesium		2810		2420	NV
SW6010	Molybdenum	1 6 B		1.46		0 51
SW6010	Silver	0 62 B	0 61 B	0.213	0 128	51
SW8260	Methylene Chloride	0 0057 B	0 0037 B	MQL (0 0021)	MQL (0 0021)	0 5
SW8260	Toluene	0 076	0 029	MQL (0 0053)	MQL (0.0053)	100

Method	Analyte	Result Surface	Duplicate Surface	Result 16'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW6010	Calcium		197000	325000	167788	272000	NV
SW6010	Magnesium			2730		2420	NV
SW6010	Manganese			859		351 7	1400
SW6010	Silver		0 41 B	0 42 B	0.213	0.128	51
SW8260	Methylene Chloride	0 0039 UJ	0 0039 UJ	0 0023 B	MQL (0 0021)	MQL (0 0021)	0 5
SW8260	Toluene	0 073	0 07	0.022	MQL (0.0053)	MQL (0.0053)	100

LEGEND

- BUILDING 4146 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP. SOIL BORING (1997)
- IT CORP PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP PHASE 3 BORING
- G.W. FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PHASE 2 ANALYSIS
- PROPOSED PHASE 3 SAMPLES
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG UNLESS NOTED OTHERWISE.

MSC - MEDIUM-SPECIFIC CONCENTRATION.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK.

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION

SOURCE: DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION.

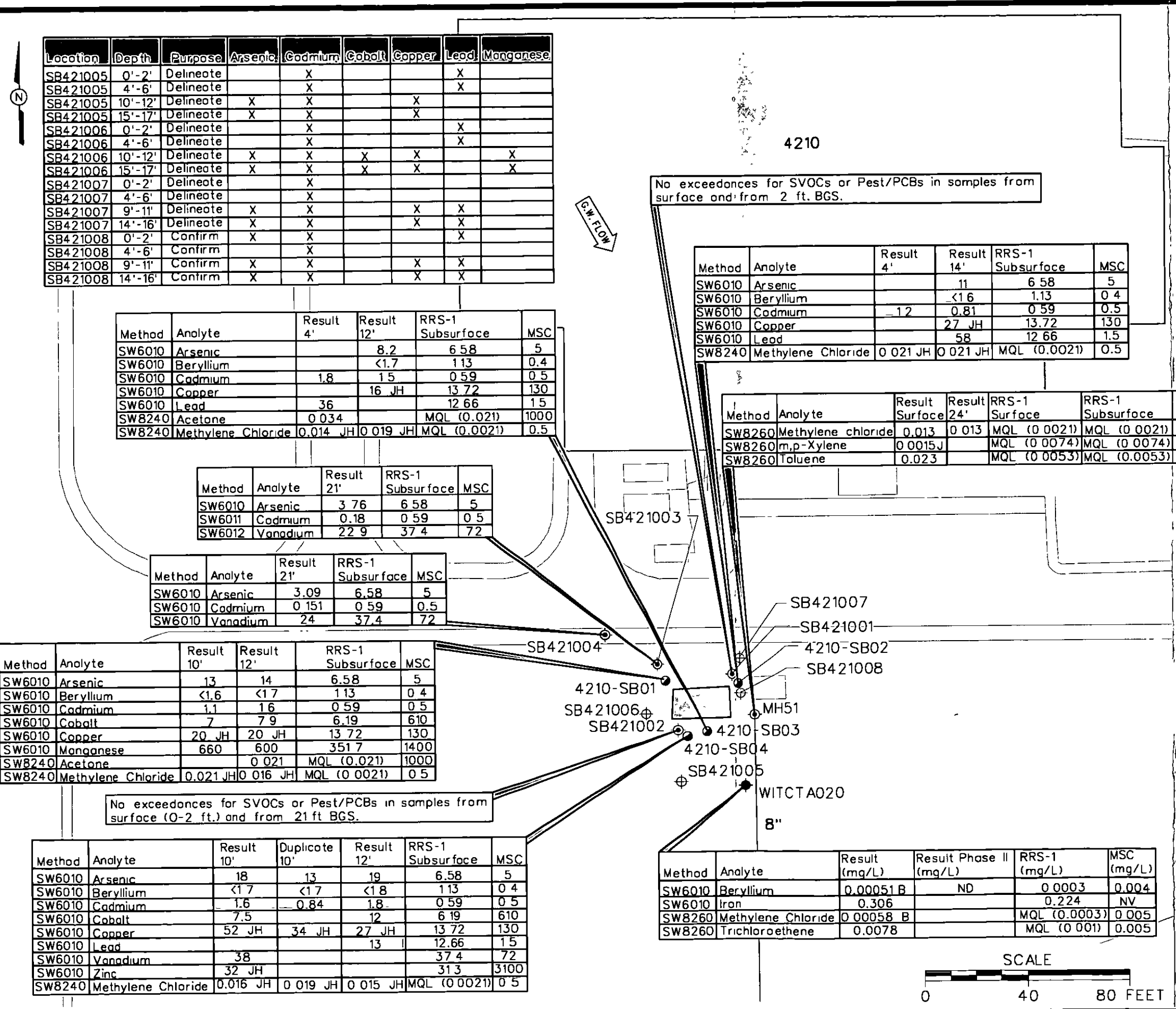
FIGURE 14
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 4146 OWS

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 224 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/15/00 | REVISION NO 2
STARTING DATE 10/24/00 | DRAWN BY M CRAFT
10 07 39 11/20/00
mcraft c \cad\design\768579es 224

Location	Depth	Purpose	Arsenic	Cadmium	Cobalt	Copper	Lead	Manganese
SB421005	0'-2'	Delineate		X			X	
SB421005	4'-6'	Delineate		X			X	
SB421005	10'-12'	Delineate	X	X		X		
SB421005	15'-17'	Delineate	X	X		X		
SB421006	0'-2'	Delineate		X			X	
SB421006	4'-6'	Delineate		X			X	
SB421006	10'-12'	Delineate	X	X	X	X		X
SB421006	15'-17'	Delineate	X	X	X	X		X
SB421007	0'-2'	Delineate		X				
SB421007	4'-6'	Delineate		X				
SB421007	9'-11'	Delineate	X	X		X	X	
SB421007	14'-16'	Delineate	X	X		X	X	
SB421008	0'-2'	Confirm	X	X			X	
SB421008	4'-6'	Confirm		X				
SB421008	9'-11'	Confirm	X	X		X	X	
SB421008	14'-16'	Confirm	X	X		X	X	



No exceedances for SVOCs or Pest/PCBs in samples from surface and from 2 ft. BGS.

Method	Analyte	Result 4'	Result 14'	RRS-1 Subsurface	MSC
SW6010	Arsenic		11	6 58	5
SW6010	Beryllium		<1 6	1.13	0 4
SW6010	Cadmium	1 2	0.81	0 59	0.5
SW6010	Copper		27 JH	13.72	130
SW6010	Lead		58	12 66	1.5
SW8240	Methylene Chloride	0 021 JH	0 021 JH	MQL (0.0021)	0.5

Method	Analyte	Result 4'	Result 12'	RRS-1 Subsurface	MSC
SW6010	Arsenic		8.2	6 58	5
SW6010	Beryllium		<1.7	1 13	0.4
SW6010	Cadmium	1.8	1 5	0 59	0 5
SW6010	Copper		16 JH	13 72	130
SW6010	Lead	36		12 66	1 5
SW8240	Acetone	0 034		MQL (0.021)	1000
SW8240	Methylene Chloride	0.014 JH	0 019 JH	MQL (0.0021)	0.5

Method	Analyte	Result Surface	Result 24'	RRS-1 Surface	RRS-1 Subsurface	MSC
SW8260	Methylene chloride	0.013	0 013	MQL (0 0021)	MQL (0 0021)	0 5
SW8260	m,p-Xylene	0 0015J		MQL (0 0074)	MQL (0 0074)	1000
SW8260	Toluene	0.023		MQL (0 0053)	MQL (0.0053)	100

Method	Analyte	Result 21'	RRS-1 Subsurface	MSC
SW6010	Arsenic	3 76	6 58	5
SW6011	Cadmium	0.18	0 59	0 5
SW6012	Vanadium	22 9	37 4	72

Method	Analyte	Result 21'	RRS-1 Subsurface	MSC
SW6010	Arsenic	3.09	6.58	5
SW6010	Cadmium	0 151	0 59	0.5
SW6010	Vanadium	24	37.4	72

Method	Analyte	Result 10'	Result 12'	RRS-1 Subsurface	MSC
SW6010	Arsenic	13	14	6.58	5
SW6010	Beryllium	<1.6	<1 7	1 13	0 4
SW6010	Cadmium	1.1	1 6	0 59	0 5
SW6010	Cobalt	7	7 9	6.19	610
SW6010	Copper	20 JH	20 JH	13 72	130
SW6010	Manganese	660	600	351 7	1400
SW8240	Acetone		0 021	MQL (0.021)	1000
SW8240	Methylene Chloride	0.021 JH	0 016 JH	MQL (0 0021)	0 5

No exceedances for SVOCs or Pest/PCBs in samples from surface (0-2 ft.) and from 21 ft BGS.

Method	Analyte	Result 10'	Duplicate 10'	Result 12'	RRS-1 Subsurface	MSC
SW6010	Arsenic	18	13	19	6.58	5
SW6010	Beryllium	<1 7	<1 7	<1 8	1 13	0 4
SW6010	Cadmium	1.6	0.84	1.8	0 59	0 5
SW6010	Cobalt	7.5		12	6 19	610
SW6010	Copper	52 JH	34 JH	27 JH	13 72	130
SW6010	Lead			13	12.66	1 5
SW6010	Vanadium	38			37 4	72
SW6010	Zinc	32 JH			31 3	3100
SW8240	Methylene Chloride	0.016 JH	0 019 JH	0 015 JH	MQL (0 0021)	0 5

Method	Analyte	Result (mg/L)	Result Phase II (mg/L)	RRS-1 (mg/L)	MSC (mg/L)
SW6010	Beryllium	0.00051 B	ND	0 0003	0.004
SW6010	Iron	0.306		0.224	NV
SW8260	Methylene Chloride	0 00058 B		MQL (0.0003)	0 005
SW8260	Trichloroethene	0.0078		MQL (0 001)	0.005

LEGEND

- BUILDING 4210 INDUSTRIAL WASTE OIL/WATER SEPARATOR UNIT
- IT CORP SOIL BORING (1997)
- IT CORP. PHASE 2 BORING (2000)
- IT CORP MONITORING WELL
- IT CORP. PHASE 3 BORING
- LAW ENGINEERING SOIL BORING (VOCs AND METALS)
- G W FLOW — GROUNDWATER FLOW DIRECTION
- SEWER LINE AND DIRECTIONAL FLOW
- FENCE
- PHASE 1 RESULTS
- PROPOSED PHASE 3 SAMPLES
- PHASE 2 ANALYSIS
- ANALYTE DETECTED ABOVE MSC. SPLP NOT PERFORMED.

NOTES:

CONCENTRATIONS REPORTED IN MG/KG

MSC - MEDIUM-SPECIFIC CONCENTRATION.

NV - NO VALUE

B - FOR INORGANICS, THE QUANTITATION IS AN ESTIMATED CONCENTRATION BETWEEN THE MDL AND PQL FOR ORGANICS, THE CONSTITUENT WAS ALSO DETECTED IN THE ASSOCIATED METHOD BLANK

J - THE ANALYTE WAS POSITIVELY IDENTIFIED, THE QUANTITATION IS AN ESTIMATION

SOURCE DRAFT RCRA FACILITES INVESTIGATION SANITARY SEWER SYSTEM, SEPTEMBER 1997, IT CORPORATION

FIGURE 15
ANALYTICAL CONCENTRATIONS ABOVE BACKGROUND BUILDING 4210 OWS (AOC 12)

OWS RFI PHASE 3 WORK PLAN
NAS FORT WORTH JRB
FORT WORTH, TEXAS

IT CORPORATION
A Member of The IT Group

DWG NO. \768579es 228 | PROJ NO 768579
INITIATOR J FISHER | PROJ MGR W CARTER
DRAFT CHCK BY D HALL | ENGR CHCK BY K HURLEY
DATE LAST REV 11/15/00 | REVISION NO 3
STARTING DATE 10/25/00 | DRAWN BY M CRAFT
10 08 29 11/20/00
mcraft c:\cadd\design\768579es 228

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE