N00296.000991
MOFFETT FIELD
SSIC NO. 5090.3

INTERNATIONAL TECHNOLOGY CORPORATION

October 9, 1990

Ms. Paula Pritz
Martin Marietta Energy Systems, Inc.
HAZWRAP
Tri-County Mall, MS 7606
Post Office Box 2003
Oak Ridge, Tennessee 37831-7606

Dear Paula:

SUBJECT: June 1990 Split Sampling Results and Response to Canonie Interpretation, NAS Moffett Field; IT Project Number 409729 (A1T341).

Enclosed is a comparison of the results from the NAS Moffett Field split sampling performed in June 1990 and our comments on the August 2, 1990 letter from Canonie Environmental to Mr. Robert Bostic of Schlumberger. IT and Canonie data are generally in good agreement; however we have major differences in our interpretation of the data.

Analytical and Data Reporting Methods

There are two important differences in data reporting procedures used by IT and Canonie: 1) IT reports detections below quantitation limits and reports estimated concentrations for those detections with a "J" qualifier. Canonie's data did not include those detections. 2) IT reports detected contamination found in method blanks by use of a "B" qualifier. Canonie did not report method blank qualifiers.

Additionally, the Canonie data tables provided to IT contain a column labeled "Test Type". The test methods reportedly performed on these volatile samples include PCB/organochlorine pesticides (Method 8080), semi-volatile GC-MS (Method 8270), metals and GC-MS purge and trap (Methods 624 and 8240). CLP methods for volatiles are based on method 624. Some clarification should be provided regarding what methods were used on these samples.

A/A1 Aquifer Water Quality Results

In the Canonie letter of August 2, 1990 to Mr. Bostic it is stated that analytical results from ground water sampled in the A/A1 aquifer indicate that the vicinity of the Moffett dry cleaner (Site 18) is a source of TCE contamination. This

991

GEN 82

is based on the upgradient TCE concentration of 420 ppb (410 IT) in well W9-30A1 and higher downgradient well concentrations in proximity to the dry cleaners:

	Canonie	IT
W9-29A1	2500	1700
W9-18A1	2400	2700
W9-37A1	3800	3500
W9-35A1	6900	6000/7600(dup)

The concentration of TCE decreases at greater distances in the presumed downgradient direction.

Canonie has failed to also include in their analysis well W9-38A1 where TCE was detected at 7300 ppb (6600 IT). The area downgradient of the dry cleaner cannot also be the source for elevated concentrations in this well.

Historical data (HLA RI Report, 1987) indicates that elevated concentrations have been reported in wells upgradient of both the dry cleaners and W9-38A1:

82A	8500
65A	2300
63A	3000
62A	6500
67A	7500
60A	5000

To our knowledge these upgradient wells have not been sampled since this report.

Based upon our interpretation of the most recent data combined with the historical data, we cannot conclude that the dry cleaners is the source of elevated TCE concentrations in the A/A1 aquifer.

DCE is detected at most A/A1 wells both upgradient and downgradient of the dry cleaners. Historically, elevated concentrations have been detected in upgradient and off-site wells (HLA,1987). A clear source for this compound is not evident from the most recent data.

Similarly, the source of PCE cannot be determined at this time. Concentrations of 61ppb and 130 ppb were detected by IT in wells W9-18A1 and W9-35A1. The sample from W9-10A1 reported as 200ppb in the Canonie letter was not analyzed by IT. The analytical results from this sample also do not appear in the Canonie data package supplied to IT. Additional sampling of these wells and wells installed during Phase I may provide further information regarding the source of this compound in the groundwater.

B1/A2 Aquifer Water Quality Results

Similar to the above discussion of the A/A1 aquifer, the data from well W9-41A2 located upgradient of the dry cleaners has been overlooked in the Canonie analysis. The concentrations of TCE detected in this well (9,800 IT; 13,000 Canonie) combined with historical data from further upgradient wells do not necessarily lead to the conclusion drawn in the Canonie letter. Historical upgradient concentrations are as follows:

46B1	9,600
4B1	68,000
3B1	53,000
32B1	64,000

Further sampling of Phase I and Phase II wells and possibly other upgradient wells will be required to understand where potential sources may be located.

As stated before, 1,2-DCE is found in upgradient and downgradient wells. An identifiable source area is not evident at this time.

PCE was detected in wells W9-21A2 (360 ppb Canonie; 340 ppb IT) and also W9-20A2 (340ppb IT). A source for this contamination cannot be determined based upon the results from a single sampling round. More complete sampling of all wells in the vicinity will help define the source of PCE contamination in the aquifer.

If you have any questions please feel free to call me at (615) 690-3211.

Sincerely yours,

C. Keith Bradley
Project Manager

CKB/dav

Enclosures

cc: Steve Anschutz, NAS Moffett Field
Stephen Chao, WESTDIV

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

	FP9-1		W8-8(A1)		W9-16(A1)		W9-18(A1)	
Compound (ppb)	Canonie	IT (1066)	Canonie	IT (1084)	Canonie	IT (1050)	Canonie	IT (1041)
Benzene	1,300	1,300	5U	5U	10U	6U	250U	100U
Bromodichloromethane	50U	50U	5U	5U	10U	6U	250U	100U
Bromoform	50U	50U	5U	5U	10U	6U	250U	100U
Bromomethane	100U	100U	10U	10U	20U	12U	500U	200U
Carbon Tetrachloride	50U	50U	5U	5U	10U	6U	250U	100U
Chlorobenzene	50U	50U	5U	5U	10U	6U	250U	100U
Chloroethane	100U	100U	10U	10U	20U	12U	500U	200U
Chloroform	50U	50U	5U	5U	10U	6U	250U	100U
Chloromethane	100U	100U	10U	10U	20U	12U	500U	200U
Dibromochloromethane	50U	50U	5U	5U	10U	6U	250U	100U
1,1-Dichloroethane	50U	23J	5U	5U	14	11	250U	100U
1,2-Dichloroethane	50U	50U	5U	5U	10U	6U	250U	100U
1,1-Dichloroethene	50U	15J	5U	5U	10U	8	250U	27J
1,2-Dichloroethene (total)	650	630	5U	5U	14	12	250U	90J
1,2-Dichloropropane	50U	50U	5U	5U	10U	6U	250U	100U
cis-1,3-Dichloropropene	50U	50U	5U	5U	10U	6U	250U	100U
trans-1,3-Dichloropropene	50U	50U	5U	5U	10U	6U	250U	100U
Ethylbenzene	1,100	990	5U	5U	10U	6U	250U	100U
Methylene chloride	50U	160B	7	7B	10U	9B	250U	300B
1,1,2,2-Tetrachloroethane	50U	50U	5U	5U	10U	6U	250U	100U
Tetrachloroethene	50U	50U	5U	5U	10U	6U	250U	61J
Toluene	50U	12J	5U	5U	10U	6U	250U	100U
1,1,1-Trichloroethane	50U	50U	5	6	10U	2J	250U	100U
1,1,2-Trichloroethane	50U	50U	5U	5U	10U	6U	250U	100U
Trichloroethene	50U	50U	5U	7	240	190	2,400	2,700
Vinyl chloride	100U	100U	10U	10U	20U	12U	500U	200U
Xylenes (total)	570	630	5U	5U	10U	6U	250U	100U

SEMIVOLATILE ORGANICS ANALYSIS

	FP9-1		W8-8(A1)		W9-16(A1)		W9-18(A1)	
Compound (ppb)	Canonie	IT (1066)	Canonie	IT (1084)	Canonie	IT (1050)	Canonie	IT (1041)
1,2-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

B - The analyte is found in the associated blank and indicates possible/probable contamination.

J - Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-19(A1) Canonie	W9-19(A1) IT (1052)	W9-23(A1) Canonie	W9-23(A1) IT (1048)	W9-24(A1) Canonie	W9-24(A1) IT (1064)	W9-26(A1) Canonie	W9-26(A1) IT (1081)
Benzene	50U	25U	50U	50U	10U	12U	50U	50U
Bromodichloromethane	50U	25U	50U	50U	10U	12U	50U	50U
Bromoform	50U	25U	50U	50U	10U	12U	50U	50U
Bromomethane	100U	50U	100U	100U	20U	25U	100U	100U
Carbon Tetrachloride	50U	25U	50U	50U	10U	12U	50U	50U
Chlorobenzene	50U	25U	50U	50U	10U	12U	50U	50U
Chloroethane	100U	50U	100U	100U	20U	25U	100U	100U
Chloroform	50U	25U	50U	50U	10U	12U	50U	50U
Chloromethane	100U	50U	100U	100U	20U	25U	100U	100U
Dibromochloromethane	50U	25U	50U	50U	10U	12U	50U	50U
1,1-Dichloroethane	50U	25	50U	50	22	26	50U	50U
1,2-Dichloroethane	50U	25U	50U	50U	10U	12U	50U	50U
1,1-Dichloroethene	50U	16J	50U	38J	10U	6J	50U	50U
1,2-Dichloroethene (total)	50U	25U	180	220	330	480	1,200	1,200
1,[illegible]-Dichloropropane	50U	25U	50U	50U	10U	12U	50U	50U
cis-1,3-Dichloropropene	50U	25U	50U	50U	10U	12U	50U	50U
trans-1,3-Dichloropropene	50U	25U	50U	50U	10U	12U	50U	50U
Ethylbenzene	50U	25U	50U	50U	10U	12U	50U	50U
Methylene chloride	50U	8BJ	50U	25BJ	10U	21B	78	60B
1,1,2,2-Tetrachloroethane	50U	25U	50U	50U	10U	12U	50U	50U
Tetrachloroethene	50U	25U	50U	50U	10U	12U	50U	50U
Toluene	50U	25U	50U	50U	10U	12U	50U	50U
1,1,1-Trichloroethane	50U	25U	50U	16J	10U	12U	50U	50U
1,1,2-Trichloroethane	50U	25U	50U	50U	10U	12U	50U	50U
Trichloroethene	730	850	1,400	1,600	10U	12U	50U	50U
Vinyl chloride	100U	50U	100U	100U	20U	10J	100U	31J
Xylenes (total)	50U	25U	50U	50U	10U	12U	50U	50U

SEMIVOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-19(A1) Canonie	W9-19(A1) IT (1052)	W9-23(A1) Canonie	W9-23(A1) IT (1048)	W9-24(A1) Canonie	W9-24(A1) IT (1064)	W9-26(A1) Canonie	W9-26(A1) IT (1081)
1,2-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

B - The analyte is found in the associated blank and indicates possible/probable contamination.

J - Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-29(A1) Canonie	W9-29(A1) IT (1030)	W9-30(A1) Canonie	W9-30(A1) IT (1032)	W9-35(A1) Canonie	W9-35(A1) IT (1042)	W9-37(A1) Canonie	W9-37(A1) IT (1035)
Benzene	100U	50U	50U	50U	500U	250U	100U	120U
Bromodichloromethane	100U	50U	50U	50U	500U	250U	100U	120U
Bromoform	100U	50U	50U	50U	500U	250U	100U	120U
Bromomethane	200U	100U	100U	100U	1,000U	500U	200U	250U
Carbon Tetrachloride	100U	50U	50U	50U	500U	250U	100U	120U
Chlorobenzene	100U	50U	50U	50U	500U	250U	100U	120U
Chloroethane	200U	100U	100U	100U	1,000U	500U	200U	250U
Chloroform	100U	50U	50U	50U	500U	250U	100U	120U
Chloromethane	200U	100U	100U	100U	1,000U	500U	200U	250U
Dibromochloromethane	100U	50U	50U	50U	500U	250U	100U	120U
1,1-Dichloroethane	100U	50U	50U	76	500U	56J	100U	58J
1,2-Dichloroethane	100U	50U	50U	50U	500U	250U	100U	120U
1,1-Dichloroethene	100U	50U	50U	50	500U	94J	100U	62J
1,2-Dichloroethene (total)	520	370	1,200	1,000	500U	490	530U	500
1,2-Dichloropropane	100U	50U	50U	50U	500U	250U	100U	120U
cis-1,3-Dichloropropene	100U	50U	50U	50U	500U	250U	100U	120U
trans-1,3-Dichloropropene	100U	50U	50U	50U	500U	250U	100U	120U
Ethylbenzene	100U	50U	50U	50U	500U	250U	100U	120U
Methylene chloride	100U	81B	96	74B	500U	230BJ	160	68BJ
1,1,2,2-Tetrachloroethane	100U	50U	50U	50U	500U	250U	100U	120U
Tetrachloroethene	100U	50U	50U	50U	500U	130J	100U	120U
Toluene	100U	50U	50U	50U	500U	250U	100U	120U
1,1,1-Trichloroethane	100U	50U	50U	50U	500U	250U	100U	48J
1,1,2-Trichloroethane	100U	50U	50U	50U	500U	250U	100U	120U
Trichloroethene	2,500	1,700	420	410	6,900	6,000	3,800	3,500
Vinyl chloride	200U	100U	100U	100U	1,000U	500U	200U	250U
Xylenes (total)	100U	50U	50U	50U	500U	250U	100U	120U

SEMIVOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-29(A1) Canonie	W9-29(A1) IT (1030)	W9-30(A1) Canonie	W9-30(A1) IT (1032)	W9-35(A1) Canonie	W9-35(A1) IT (1042)	W9-37(A1) Canonie	W9-37(A1) IT (1035)
1,2-Dichlorobenzene	NT	10U	NT	10U	10U	10U	NT	10U
1,3-Dichlorobenzene	NT	10U	NT	10U	10U	10U	NT	10U
1,4-Dichlorobenzene	NT	10U	NT	10U	10U	10U	NT	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

The analyte is found in the associated blank and indicates possible/probable contamination.

Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

	W9-38(A1)		W8-12(A2)		W9-8(A2)		W9-9(A2)	
Compound (ppb)	Canonie	IT (1038)	Canonie	IT (1082)	Canonie	IT (1054)	Canonie	IT (1070)
Benzene	250U	250U	5U	5U	250U	120U	100U	100U
Bromodichloromethane	250U	250U	5U	5U	250U	120U	100U	100U
Bromoform	250U	250U	5U	5U	250U	120U	100U	100U
Bromomethane	500U	500U	10U	10U	500U	250U	200U	200U
Carbon Tetrachloride	250U	250U	5U	5U	250U	120U	100U	100U
Chlorobenzene	250U	250U	5U	5U	250U	120U	100U	100U
Chloroethane	500U	500U	10U	10U	500U	250U	200U	200U
Chloroform	250U	250U	5U	5U	250U	120U	100U	100U
Chloromethane	500U	500U	10U	10U	500U	250U	200U	200U
Dibromochloromethane	250U	250U	5U	5U	250U	120U	100U	100U
1,1-Dichloroethane	250U	95J	5U	5U	250U	48J	100U	24J
1,2-Dichloroethane	250U	250U	5U	5U	250U	120U	100U	100U
1,1-Dichloroethene	250U	120J	5U	5U	250U	84J	100U	37J
1,2-Dichloroethene (total)	570	540	5U	5U	250U	120U	100U	100U
1,2-Dichloropropane	250U	250U	5U	5U	250U	120U	100U	100U
cis-1,3-Dichloropropene	250U	250U	5U	5U	250U	120U	100U	100U
trans-1,3-Dichloropropene	250U	250U	5U	5U	250U	120U	100U	100U
Ethylbenzene	250U	250U	5U	5U	250U	120U	100U	100U
Methylene chloride	250U	280B	5	10B	250U	260B	140	70BJ
1,1,2,2-Tetrachloroethane	250U	250U	5U	5U	250U	120U	100U	100U
Tetrachloroethene	250U	250U	5U	5U	250U	120U	100U	100U
Toluene	250U	250U	5U	5U	250U	120U	100U	100U
1,1,1-Trichloroethane	250U	92J	31	33	250U	120U	100U	100U
1,1,2-Trichloroethane	250U	250U	5U	5U	250U	120U	100U	100U
Trichloroethene	7,300	6,600	5U	5U	4,500	4,400	2,800	2,500
Vinyl chloride	500U	500U	10U	10U	500U	250U	200U	200U
Xylenes (total)	250U	250U	5U	5U	250U	120U	100U	100U

SEMIVOLATILE ORGANICS ANALYSIS

	W9-38(A1)		W8-12(A2)		W9-8(A2)		W9-9(A2)	
Compound (ppb)	Canonie	IT (1038)	Canonie	IT (1082)	Canonie	IT (1054)	Canonie	IT (1070)
1,2-Dichlorobenzene	10U	4J	10U	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

B - The analyte is found in the associated blank and indicates possible/probable contamination.

J - Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

	W9-17(A2)		W9-20(A2)		W9-21(A2)		W9-25(A2)	
Compound (ppb)	Canonie	IT (1033)	Canonie	IT (1044)	Canonie	IT (1059)	Canonie	IT (1069)
Benzene	500U	250U	1,000U	620U	250U	120U	100U	50U
Bromodichloromethane	500U	250U	1,000U	620U	250U	120U	100U	50U
Bromoform	500U	250U	1,000U	620U	250U	120U	100U	20J
Bromomethane	1,000U	500U	2,000U	1,200U	500U	250U	200U	100U
Carbon Tetrachloride	500U	250U	1,000U	620U	250U	120U	100U	50U
Chlorobenzene	500U	250U	1,000U	620U	250U	120U	100U	50U
Chloroethane	1,000U	500U	2,000U	1,200U	500U	250U	200U	100U
Chloroform	500U	250U	1,000U	620U	250U	120U	100U	50U
Chloromethane	1,000U	500U	2,000U	1,200U	500U	250U	200U	100U
Dibromochloromethane	500U	250U	1,000U	620U	250U	120U	100U	50U
1,1-Dichloroethane	500U	56J	1,000U	620U	250U	120U	100U	20J
1,2-Dichloroethane	500U	250U	1,000U	620U	250U	120U	100U	50U
1,1-Dichloroethene	500U	130J	1,000U	150J	250U	84J	100U	30J
1,2-Dichloroethene (total)	600	560	1,000U	300J	250U	120U	100U	50U
1,[illegible]-Dichloropropane	500U	250U	1,000U	620U	250U	120U	100U	50U
cis-1,3-Dichloropropene	500U	250U	1,000U	620U	250U	120U	100U	50U
trans-1,3-Dichloropropene	500U	250U	1,000U	620U	250U	120U	100U	50U
Ethylbenzene	500U	250U	1,000U	620U	250U	120U	100U	50U
Methylene chloride	500U	140BJ	1,000U	450BJ	250U	190B	120	45BJ
1,1,2,2-Tetrachloroethane	500U	250U	1,000U	620U	250U	120U	100U	50U
Tetrachloroethene	500U	250U	1,000U	340J	360	340	100U	50U
Toluene	500U	250U	1,000U	620U	250U	120U	100U	50U
1,1,1-Trichloroethane	500U	250U	1,000U	620U	250U	28J	100U	24J
1,1,2-Trichloroethane	500U	250U	1,000U	620U	250U	120U	100U	50U
Trichloroethene	940	8,800	24,000	18,000	4,600	3,800	1,700	1,300
Vinyl chloride	1,000U	500U	2,000U	1,200U	500U	250U	200U	100U
Xylenes (total)	500U	250U	1,000U	620U	250U	120U	100U	50U

SEMIVOLATILE ORGANICS ANALYSIS

	W9-17(A2)		W9-20(A2)		W9-21(A2)		W9-25(A2)	
Compound (ppb)	Canonie	IT (1033)	Canonie	IT (1044)	Canonie	IT (1059)	Canonie	IT (1069)
1,2-Dichlorobenzene	NT	10U	10U	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	NT	10U	10U	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	NT	10U	10U	10U	10U	10U	10U	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

B - The analyte is found in the associated blank and indicates possible/probable contamination.

J - Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

	W9-28(A2)		W9-31(A2)		W9-33(A2)		W9-36(A2)	
Compound (ppb)	Canonie	IT (1047)	Canonie	IT (1062)	Canonie	IT (1057)	Canonie	IT (1053)
Benzene	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Bromodichloromethane	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Bromoform	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Bromomethane	2,000U	2,000U	100U	100U	500U	500U	500U	500U
Carbon Tetrachloride	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Chlorobenzene	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Chloroethane	2,000U	2,000U	100U	100U	500U	500U	500U	500U
Chloroform	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Chloromethane	2,000U	2,000U	100U	100U	500U	500U	500U	500U
Dibromochloromethane	1,000U	1,000U	50U	50U	250U	250U	250U	250U
1,1-Dichloroethane	1,000U	1,000U	50U	49J	250U	250U	250U	78J
1,2-Dichloroethane	1,000U	1,000U	50U	50U	250U	250U	250U	250U
1,1-Dichloroethene	1,000U	1,000U	50U	120	250U	92J	250U	98J
1,2-Dichloroethene (total)	1,000U	1,000U	470	750	440	450	520	250U
1,2-Dichloropropane	1,000U	1,000U	50U	50U	250U	250U	250U	250U
cis-1,3-Dichloropropene	1,000U	1,000U	50U	50U	250U	250U	250U	250U
trans-1,3-Dichloropropene	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Ethylbenzene	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Methylene chloride	1,000U	1,200B	50U	64B	280	670B	250U	370B
1,1,2,2-Tetrachloroethane	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Tetrachloroethene	1,000U	420J	50U	50U	250U	250U	250U	250U
Toluene	1,000U	1,000U	50U	50U	250U	250U	250U	250U
1,1,1-Trichloroethane	1,000U	1,000U	50U	50U	250U	250U	250U	250U
1,1,2-Trichloroethane	1,000U	1,000U	50U	50U	250U	250U	250U	250U
Trichloroethene	23,000	22,000	970	1,700	7,800	5,800	6,200	5,300
Vinyl chloride	2,000U	2,000U	100U	100U	500U	500U	500U	500U
Xylenes (total)	1,000U	1,000U	50U	50U	250U	250U	250U	250U

SEMIVOLATILE ORGANICS ANALYSIS

	W9-28(A2)		W9-31(A2)		W9-33(A2)		W9-36(A2)	
Compound (ppb)	Canonie	IT (1047)	Canonie	IT (1062)	Canonie	IT (1057)	Canonie	IT (1053)
1,2-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

B - The analyte is found in the associated blank and indicates possible/probable contamination.

J - Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

	W9-41(A2)		W9-42(A2)		W9-43(A2)		W9-11(B2)	
Compound (ppb)	Canonie	IT (1040)	Canonie	IT (1026)	Canonie	IT (1063)	Canonie	IT (1065)
Benzene	500U	420U	50U	50U	5U	5U	5U	5U
Bromodichloromethane	500U	420U	50U	50U	5U	5U	5U	5U
Bromoform	500U	420U	50U	50U	5U	5U	5U	5U
Bromomethane	1,000U	830U	100U	100U	10U	10U	10U	10U
Carbon Tetrachloride	500U	420U	50U	50U	5U	5U	5U	5U
Chlorobenzene	500U	420U	50U	50U	5U	5U	5U	5U
Chloroethane	1,000U	830U	100U	100U	10U	10U	10U	10U
Chloroform	500U	420U	50U	50U	5U	5U	5U	5U
Chloromethane	1,000U	830U	100U	100U	10U	10U	10U	10U
Dibromochloromethane	500U	420U	50U	50U	5U	5U	5U	5U
1,1-Dichloroethane	500U	420U	50U	50U	5U	5U	5U	5U
1,2-Dichloroethane	500U	420U	50U	50U	5U	5U	5U	5U
1,1-Dichloroethene	500U	97J	50U	50U	5U	5U	5U	5U
1,2-Dichloroethene (total)	9,300	700	560	460	5U	5U	5U	5U
1,2-Dichloropropane	500U	420U	50U	50U	5U	5U	5U	5U
cis-1,3-Dichloropropene	500U	420U	50U	50U	5U	5U	5U	5U
trans-1,3-Dichloropropene	500U	420U	50U	50U	5U	5U	5U	5U
Ethylbenzene	500U	420U	50U	50U	5U	5U	5U	5U
Methylene chloride	500U	700B	50U	25BJ	5U	4BJ	5	13B
1,1,2,2-Tetrachloroethane	500U	420U	50U	50U	5U	5U	5U	5U
Tetrachloroethene	500U	420U	50U	30J	5U	5U	5U	5U
Toluene	500U	420U	50U	50U	5U	5U	5U	5U
1,1,1-Trichloroethane	500U	420U	50U	50U	5U	5U	5U	5U
1,1,2-Trichloroethane	500U	420U	50U	50U	5U	5U	5U	5U
Trichloroethene	13,000	9,800	1,900	1,400	5U	5U	5U	5U
Vinyl chloride	1,000U	830U	100U	100U	10U	10U	10U	10U
Xylenes (total)	500U	420U	50U	50U	5U	5U	5U	5U

SEMIVOLATILE ORGANICS ANALYSIS

	W9-41(A2)		W9-42(A2)		W9-43(A2)		W9-11(B2)	
Compound (ppb)	Canonie	IT (1040)	Canonie	IT (1026)	Canonie	IT (1063)	Canonie	IT (1065)
1,2-Dichlorobenzene	10U	10U	NT	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	10U	10U	NT	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	10U	10U	NT	10U	10U	10U	10U	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

B - The analyte is found in the associated blank and indicates possible/probable contamination.

J - indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-12(B2) Canonie	W9-12(B2) IT (1037)	W9-39(B2) Canonie	W9-39(B2) IT (1068)	W9-40(B2) Canonie	W9-40(B2) IT (1056)	W9-35(A1)IT DUP. Canonie	W9-35(A1)IT DUP. IT (1043)
Benzene	5U	5U	5U	5U	5U	5U	500U	250U
Bromodichloromethane	5U	5U	5U	5U	5U	5U	500U	250U
Bromoform	5U	5U	5U	5U	5U	5U	500U	250U
Bromomethane	10U	10U	10U	10U	10U	10U	1,000U	500U
Carbon Tetrachloride	5U	5U	5U	5U	5U	5U	500U	250U
Chlorobenzene	5U	5U	5U	5U	5U	5U	500U	250U
Chloroethane	10U	10U	10U	10U	10U	10U	1,000U	500U
Chloroform	5U	5U	5U	5U	5U	5U	500U	250U
Chloromethane	10U	10U	10U	10U	10U	10U	1,000U	500U
Dibromochloromethane	5U	5U	5U	5U	5U	5U	500U	250U
1,1-Dichloroethane	5U	5U	5U	5U	5U	5U	500U	59J
1,2-Dichloroethane	5U	5U	5U	5U	5U	5U	500U	250U
1,1-Dichloroethene	5U	5U	5U	5U	5U	5U	500U	120J
1,2-Dichloroethene (total)	5U	5U	5U	5U	5U	5U	500U	570
1,2-Dichloropropane	5U	5U	5U	5U	5U	5U	500U	250U
cis-1,3-Dichloropropene	5U	5U	5U	5U	5U	5U	500U	250U
trans-1,3-Dichloropropene	5U	5U	5U	5U	5U	5U	500U	250U
Ethylbenzene	5U	5U	5U	5U	5U	5U	500U	250U
Methylene chloride	8.2	2BJ	5U	2BJ	5U	4BJ	500U	210BJ
1,1,2,2-Tetrachloroethane	5U	5U	5U	5U	5U	5U	500U	250U
Tetrachloroethene	5U	5U	5U	5U	5U	5U	500U	170J
Toluene	5U	5U	5U	5U	5U	5U	500U	250U
1,1,1-Trichloroethane	5U	5U	5U	5U	5U	5U	500U	250U
1,1,2-Trichloroethane	5U	5U	5U	5U	5U	5U	500U	250U
Trichloroethene	5U	2J	5U	5U	5U	5U	6,900	7,600
Vinyl chloride	10U	10U	10U	10U	10U	10U	1,000U	500U
Xylenes (total)	5U	5U	5U	5U	5U	5U	500U	250U

SEMIVOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-12(B2) Canonie	W9-12(B2) IT (1037)	W9-39(B2) Canonie	W9-39(B2) IT (1068)	W9-40(B2) Canonie	W9-40(B2) IT (1056)	W9-35(A1)IT DUP. Canonie	W9-35(A1)IT DUP. IT (1043)
1,2-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

B - The analyte is found in the associated blank and indicates possible/probable contamination.

J - Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.

SPLIT SAMPLING RESULTS
NAS MOFFETT FIELD
JUNE 1990

VOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-33(A2) Canonie	IT DUP. IT (1058)						
Benzene	250U	160U						
Bromodichloromethane	250U	160U						
Bromoform	250U	160U						
Bromomethane	500U	310U						
Carbon Tetrachloride	250U	160U						
Chlorobenzene	250U	160U						
Chloroethane	500U	310U						
Chloroform	250U	160U						
Chloromethane	500U	310U						
Dibromochloromethane	250U	160U						
1,1-Dichloroethane	250U	160U						
1,2-Dichloroethane	250U	160U						
1,1-Dichloroethene	250U	53J						
1,2-Dichloroethene (total)	440	360						
[illegible]-Dichloropropane	250U	160U						
[illegible]-1,3-Dichloropropene	250U	160U						
trans-1,3-Dichloropropene	250U	160U						
Ethylbenzene	250U	160U						
Methylene chloride	280	290B						
1,1,2,2-Tetrachloroethane	250U	160U						
Tetrachloroethene	250U	160U						
Toluene	250U	160U						
1,1,1-Trichloroethane	250U	160U						
1,1,2-Trichloroethane	250U	160U						
Trichloroethene	7,600	4,100						
Vinyl chloride	500U	310U						
Xylenes (total)	250U	160U						

SEMIVOLATILE ORGANICS ANALYSIS

Compound (ppb)	W9-33(A2) Canonie	IT DUP. IT (1058)						
1,2-Dichlorobenzene	10U	10U						
1,3-Dichlorobenzene	10U	10U						
1,4-Dichlorobenzene	10U	10U						

NOTES:

NT - Not Tested.

U - Not detected at or above the stated detection limit.

[illegible] The analyte is found in the associated blank and indicates possible/probable contamination.

J - Indicates an estimated value. The mass spectral data meets the identification criteria but the result is than the sample quantitation limit.