KAMUR INDUSTRIES INC.
2351 Shoreline Dr., Alameda, CA 94501 - (415) 523-7866

April 13, 1990

Mr. M. Hossain Kazemi
Regional Water Quality Control Board
San Francisco Region
1800 Harrison Street
Oakland, CA 94612

Mr. Gilbert Wistar
Alameda County
Health Care Services Agency
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94612

Subject: Plaza Car Wash
400 San Pablo Avenue
Albany, CA

Gentlemen:

The enclosed report prepared by International Technology Corporation shows the results through March of:

1. Monthly Sampling of the Monitoring Wells & Sump.

2. Rain fall Event Sampling of the El Cerrito Creek.

The monthly sampling of the Monitoring Wells & Sump was done again on Friday, April 6th. These results will be mailed to you when they become available.

If there are any questions, please let me know.

Sincerely,

Murray T. Stevens

MTS:khs

enclosure

90 APR 17 PM 1:29

cc: Ms. Vicky Dvorak - BAAQMD
Mr. Craig S. J. Johns - CHR&M
Ms. S. I. Mills - ITC

INTERNATIONAL TECHNOLOGY CORPORATION

06 April 1990

Mr. Murray Stevens
Kamur Industries
2351 Shoreline Drive
Alameda, California 94501

REFERENCE: MARCH MONTHLY SAMPLING OF MONITORING WELLS/SUMP
RAINFALL EVENT SAMPLING OF EL CERRITO CREEK
PLAZA CAR WASH
400 SAN PABLO AVENUE; SAN PABLO, CALIFORNIA

IT ENVIRONMENTAL SERVICES JOB #148031.1

Dear Mr. Stevens,

International Technology Environmental Services (ITES) was retained by Kamur Industries on 04 December 1989 to execute the monthly sampling activities on the monitoring wells, sump and El Cerrito Creek, and to obtain creek samples 48 hours following a significant rainfall greater than or equal to 0.25 inches.

The March monthly (also rainevent) sampling was completed on 03 March, with an additional rain event sampling being conducted 13 March 1990.

The groundwater gradient was to the northwest for both sampling events. This varied from the previous month where the gradient following a rain event was to the south - southeast. This variance may be due to the greater amount of rainfall in February which would cause the creek to swell, thus inundating the soils on its' perimeter and altering typical flow patterns. Groundwater flow to northwest follows the pattern for runoff flow expected when site contours are examined.

Laboratory analysis revealed contaminant concentrations in monitoring well MW-1 remained below detectable levels, with levels encountered in monitoring well MW-2 decreasing. Inspection of monitoring wells MW-3 and MW-4 revealed an immeasurable layer (sheen only) of free product, as noticed during previous sampling events (Table 1).

Analysis of sump waters reflected an increase in contaminant concentrations during the monthly sampling event however the rain event results were slightly decreased (Table 2).

Contaminant levels from Point PT-1 (upstream) rose during the monthly sampling event, however the rain event sampling results returned to below detection limits. Results from point PT-2 remained constant, with Analytical results from points PT-3 revealing a slight increase and PT-4 revealing a slight decrease in contaminant levels (Table 3).

All laboratory reports are contained in Appendix A. A full report containing sampling programs and methodology is contained in Appendix B.

ITES appreciates Kamur Industries business and will continue striving to meet your environmental needs in the future. If you have any comments or concerns, please do not hesitate to call ITES at: (415) 372-9100.

Sincerely,

S. I. Mills
Project Geoscientist

TABLE 1
KAMUR INDUSTRIES
MONTHLY GROUNDWATER SAMPLING
MONITORING WELLS
RESULTS IN PARTS PER BILLION (PPB)

MONITORING WELL MW-1

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
08/03/89	16,000	1,800	1,800	1,200	210
12/08/89	BDL	21	12	17	7.7
01/03/90	BDL	6,300	530	410	900
02/02/90	BDL	BDL	BDL	BDL	BDL
03/06/90	BDL	BDL	BDL	BDL	BDL

MONITORING WELL MW-2

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
08/03/89	80,000	9,100	12,000	7,100	460
12/08/89	13,000	13,000	8,400	750	2,500
01/03/90	5,500	NA	NA	NA	NA
02/02/90	7,200	3,500	80	240	270
03/06/90	4,100	1,900	160	140	250

MONITORING WELL MW-3

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
08/03/89	71,000	20,000	21,000	7,900	580
12/08/89*	NA	NA	NA	NA	NA
01/03/90*	NA	NA	NA	NA	NA
02/02/90*	NA	NA	NA	NA	NA
03/06/90*	NA	NA	NA	NA	NA

* Not sampled due to the presence of free product.

MONITORING WELL MW-4

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
08/03/89	14,000	2,000	1,500	1,000	BDL
12/08/89*	NA	NA	NA	NA	NA
01/03/90*	NA	NA	NA	NA	NA
02/02/90*	NA	NA	NA	NA	NA
03/06/90*	NA	NA	NA	NA	NA

* Not sampled due to the presence of free product.

NOTE:

BDL = below detection limit
NA = not analyzed

TABLE 2
KAMUR INDUSTRIES
MONTHLY GROUNDWATER SAMPLING
SUMP
RESULTS IN PARTS PER BILLION (PPB)

SUMP SP-1

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
12/08/89	55,000	26,000	25,000	2,100	13,000
01/03/90	72,000	22,000	25,000	2,400	13,000
02/02/90	38,000	20,000	17,000	1,400	8,000
02/08/90	76,000	7,900	7,400	1,700	8,300
02/19/90	90,000	1,100	750	2,600	5,600
03/06/90	130,000	24,000	18,000	1,900	14,000
03/13/90	80,000	22,000	18,000	1,900	19,000

NOTE: Results in parts per billion (ppb)

TABLE 3
KAMUR INDUSTRIES
STORM EVENT SAMPLING (PPT > 0.25 IN) AND MONTHLY SAMPLING
EL CERRITO CREEK
RESULTS IN PARTS PER BILLION (PPB)

POINT 1

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
08/03/89	BDL	BDL	BDL	BDL	BDL
12/08/89	BDL	NA	NA	NA	NA
01/03/90+	BDL	NA	NA	NA	NA
01/15/90*	BDL	NA	NA	NA	NA
01/17/90*	BDL	NA	NA	NA	NA
02/02/90+	BDL	NA	NA	NA	NA
02/08/90*	BDL	NA	NA	NA	NA
02/19/90*	BDL	NA	NA	NA	NA
03/06/90+	65	NA	NA	NA	NA
03/13/90*	BDL	NA	NA	NA	NA

POINT 2

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
08/03/89	470,000	16,000	29,000	4,200	29,000
12/08/89	33,000	NA	NA	NA	NA
01/03/90+	99,000	NA	NA	NA	NA
01/15/90*	16,000	NA	NA	NA	NA
01/17/90*	15,000	NA	NA	NA	NA
02/02/90+	16,000	NA	NA	NA	NA
02/08/90*	7,000	NA	NA	NA	NA
02/19/90*	26,000	NA	NA	NA	NA
03/06/90+	30,000	NA	NA	NA	NA
03/13/90*	30,000	NA	NA	NA	NA

POINT 3

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
12/08/89	BDL	NA	NA	NA	NA
01/03/89+	900	NA	NA	NA	NA
01/15/90*	840	NA	NA	NA	NA
01/17/90*	BDL	NA	NA	NA	NA
02/02/90+	60	NA	NA	NA	NA
02/08/90*	100	NA	NA	NA	NA
02/19/90*	30	NA	NA	NA	NA
03/06/90+	600	NA	NA	NA	NA
03/13/90*	360	NA	NA	NA	NA

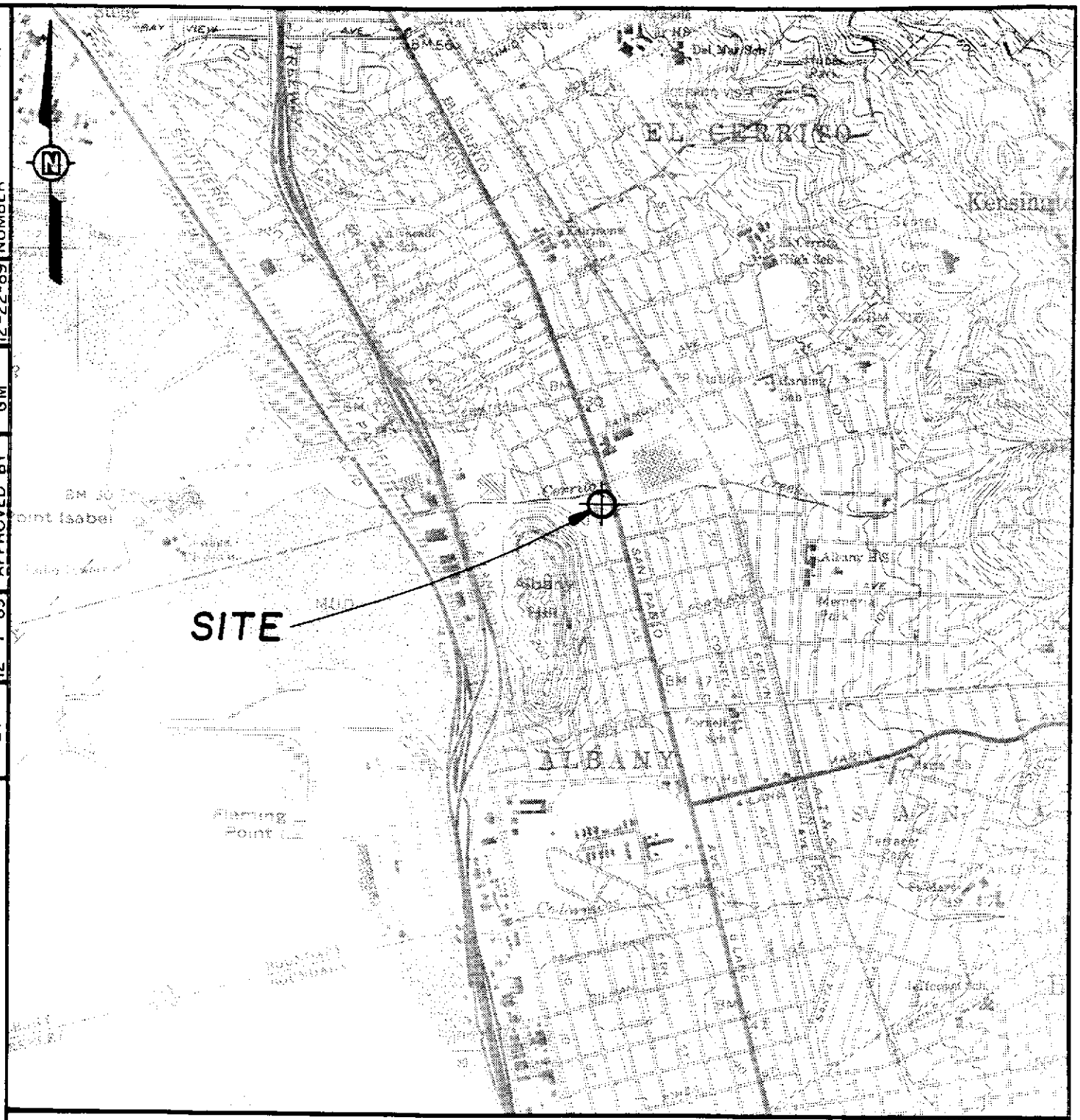
POINT 4

Date Sampled	TPH (Gas)	Benzene	Toluene	Ethyl Benzene	Xylene
08/03/89	2,700	88	8	BDL	210
12/08/89	BDL	NA	NA	NA	NA
12/22/89?	800	NA	NA	NA	NA
01/03/90+	800	NA	NA	NA	NA
01/15/90*	BDL	NA	NA	NA	NA
01/17/90*	160	NA	NA	NA	NA
02/02/90+	130	NA	NA	NA	NA
02/08/90*	140	NA	NA	NA	NA
02/19/90*	200	NA	NA	NA	NA
03/06/90+	120	NA	NA	NA	NA
03/13/90*	100	NA	NA	NA	NA

NOTE:

BDL = below detection limit
NA = not analyzed
* = storm event sampling
+ = monthly and storm event programs completed
? = one point sampling to test remediation method efficiency

DRAWN BY	T R S	CHECKED BY	DRAWING NUMBER
	12-7-89	GM 12-22-89	148031-A1
		APPROVED BY GM 12-22-89	



SCALE

0 2000 4000 FEET

FIGURE 1

SITE VICINITY MAP
PLAZA CAR WASH
400 SAN PABLO AVENUE
ALBANY, CALIFORNIA
PREPARED FOR

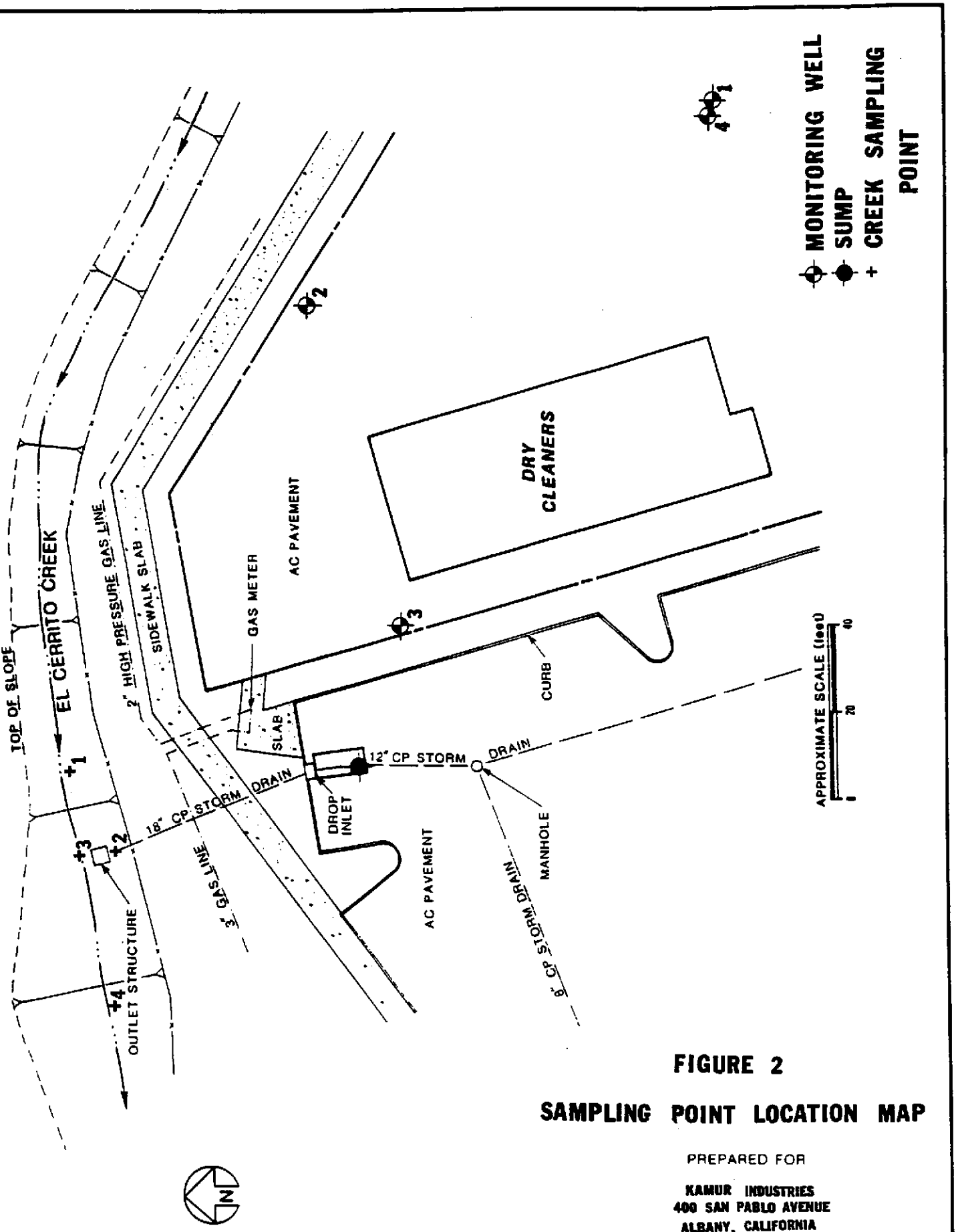
KAMUR INDUSTRIES, INC.
ALAMEDA, CALIFORNIA

REFERENCE:
U.S.G.S. 7.5' MIN. TOPOGRAPHY, RICHMOND, CA. QUADRANGLE, DATED 1959 PHOTOREVISED 1968 AND 1973, SCALE = 1:24000

INTERNATIONAL TECHNOLOGY CORPORATION

146494

Do Not Scale This Drawing



DRAWN BY | CHECKED BY | APPROVED BY | DRAWING NUMBER

FIGURE 2

SAMPLING POINT LOCATION MAP

PREPARED FOR

KAMUR INDUSTRIES
400 SAN PABLO AVENUE
ALBANY, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

Do Not Scale This Drawing

146494

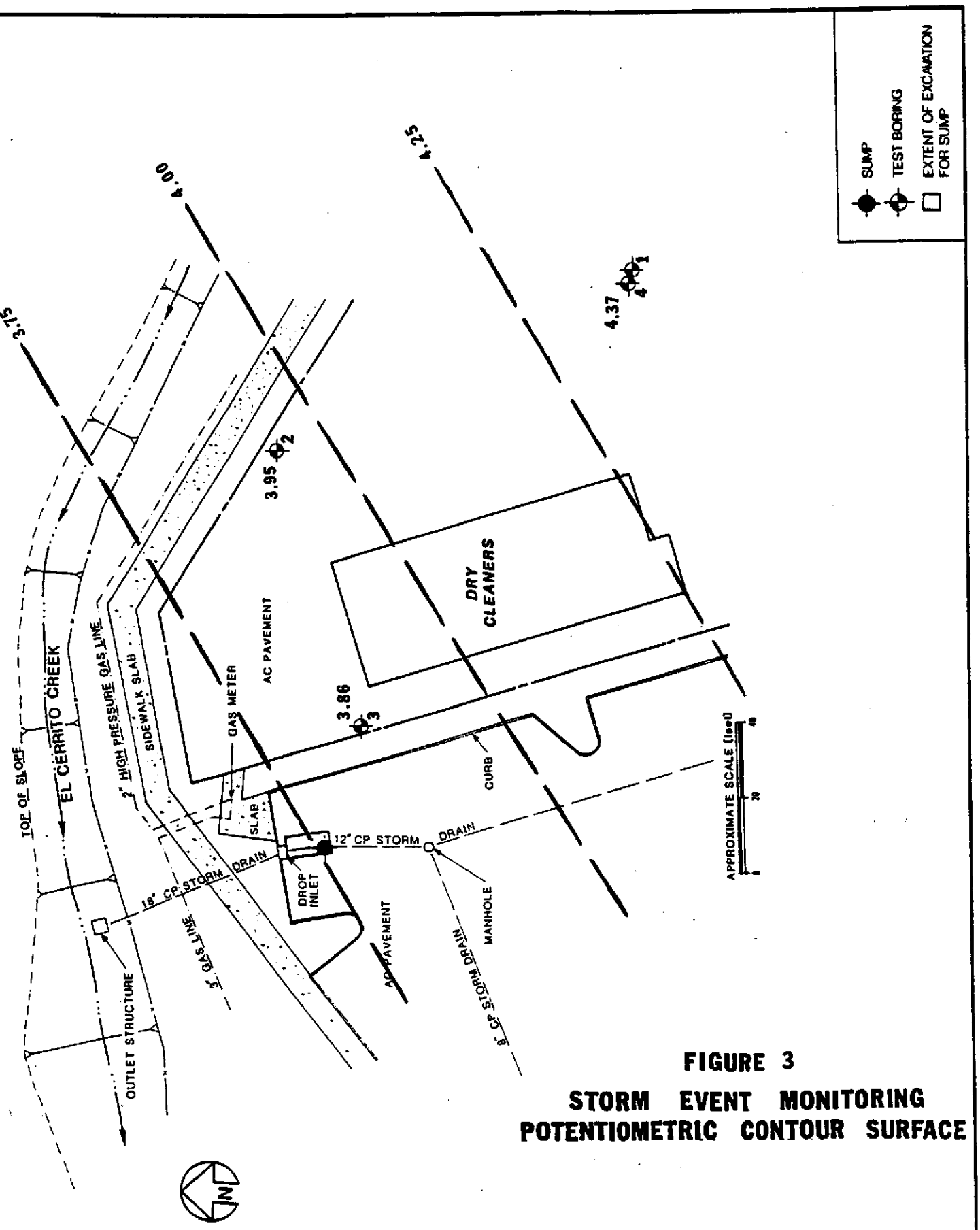


FIGURE 3

STORM EVENT MONITORING
POTENTIOMETRIC CONTOUR SURFACE

KAMUR INDUSTRIES
400 SAN PABLO AVENUE
ALBANY, CALIFORNIA

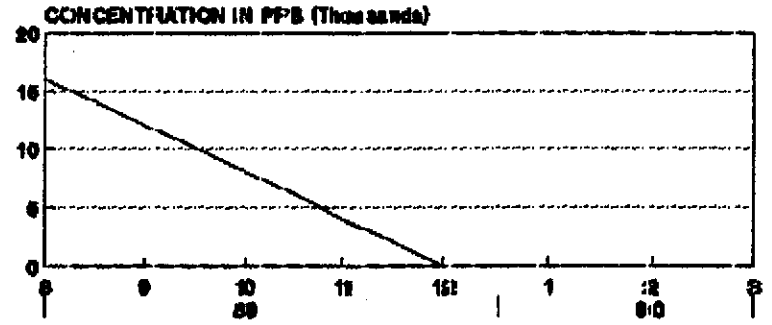
INTERNATIONAL TECHNOLOGY CORPORATION

Do Not Scale This Drawing

146494

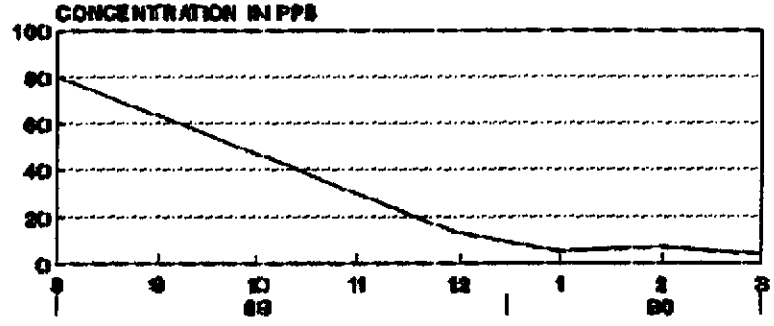
DRAWN BY | CHECKED BY | APPROVED BY | WIN NUMBER

KAMUR INDUSTRIES
MONITORING WELL MW-1



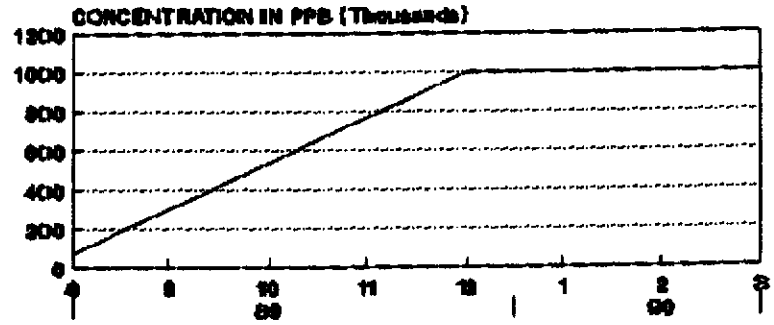
MONTHLY SAMPLING

KAMUR INDUSTRIES
MONITORING WELL MW-2



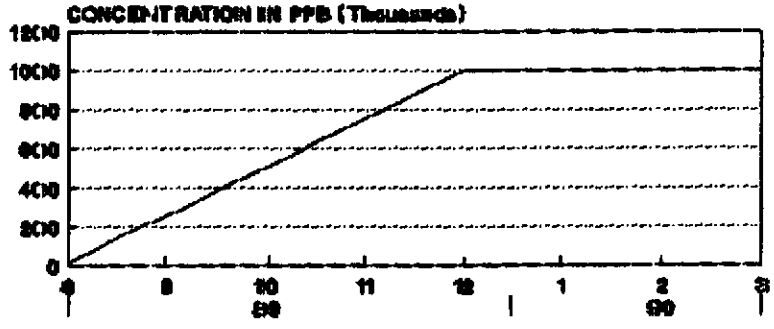
MONTHLY SAMPLING

KAMUR INDUSTRIES
MONITORING WELL MW-3

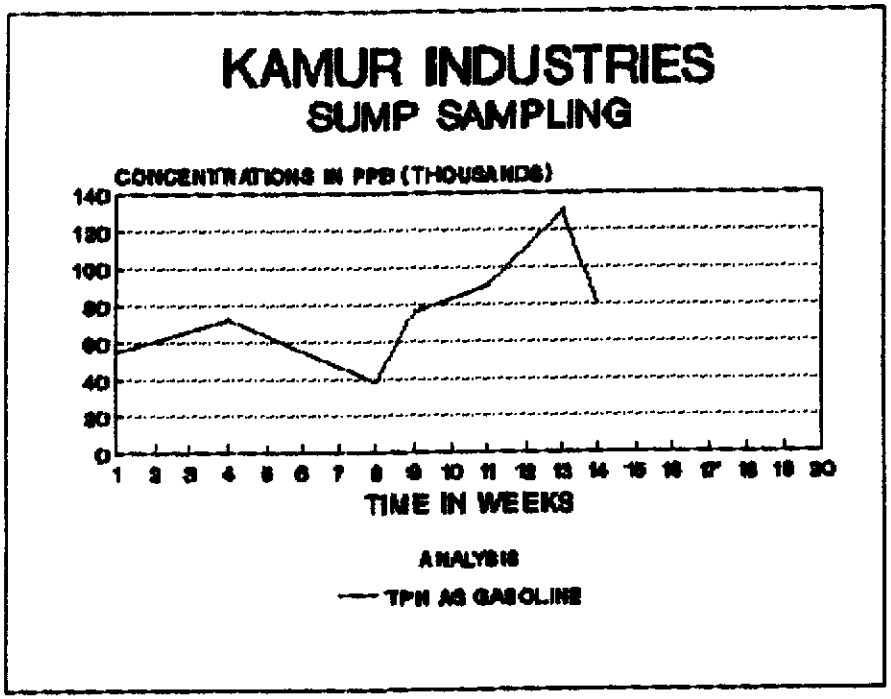


NOTE: FREE PRODUCT DISCOVERED DEC-MARCH

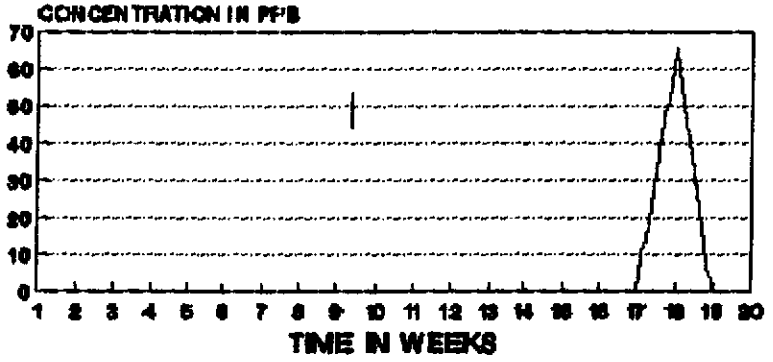
KAMUR INDUSTRIES
MONITORING WELL MW-4



NOTE: FREE PRODUCT DISCOVERED DEC-MARCH

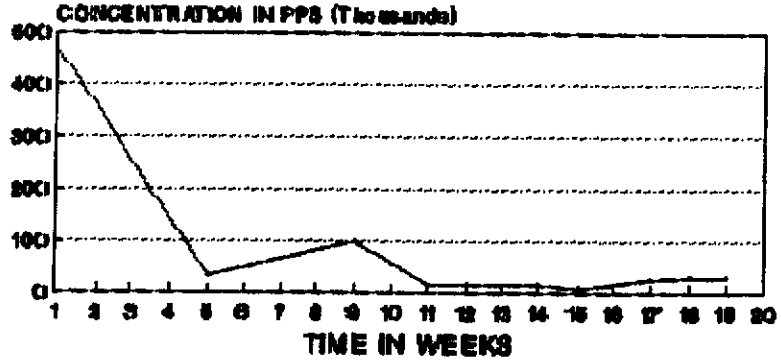

KAMUR INDUSTRIES
SUMP SAMPLING
CONCENTRATIONS IN PPB (THOUSANDS)
140
120
100
80
60
40
20
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
TIME IN WEEKS
ANALYSIS
TPH AS GASOLINE

KAMUR INDUSTRIES
EL CERRITO CREEK SAMPLING - PT1



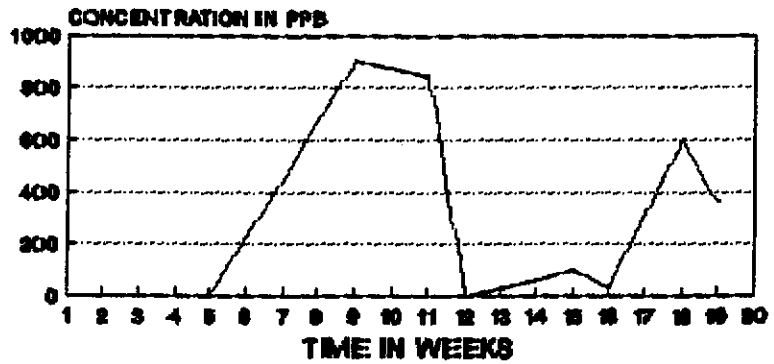
POINT 1 - 50' UPSTREAM

KAMUR INDUSTRIES
EL CERRITO CREEK SAMPLING - PT2



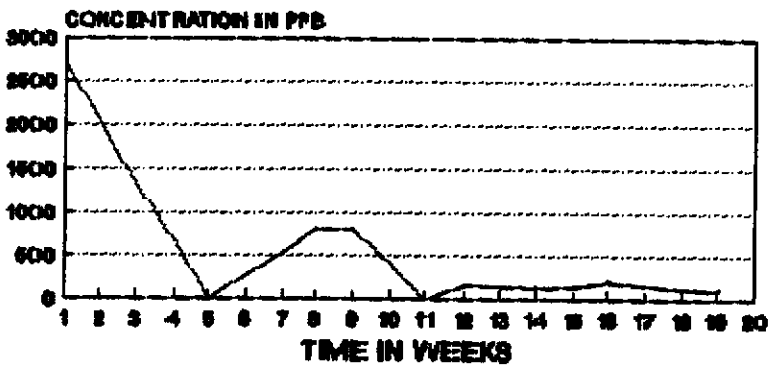
POINT 2 - MOUTH OF STORM DRAIN

KAMUR INDUSTRIES
EL CERRITO CREEK SAMPLING - PT3



POINT 3 - DRAINAGE FLOW/CREEK INTERFACE

KAMUR INDUSTRIES
EL CERRITO CREEK SAMPLING - PT4



POINT 4 - 50' DOWNSTREAM

Precision Analytical Laboratory, Inc.
4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (415) 222-3002 FAX (415) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 211

Received: 03/06/90
Reported: 03/20/90
Job No. #: 71386

Attn: Sydney Mills
International Technology
4585 Pacheco Blvd.
Martinez, CA. 94553

Project: Kamur Albany
Matrix: Groundwater

Total Petroleum Hydrocarbon Analysis
EPA 5030
ug/l

Lab ID	Client ID	Gasoline	MDL
71386-1	030690 MW1	ND<50	50
71386-2	030690 MW2	4100	50
71386-3	030690 SMFB	ND<50	50
71386-4	030690 SP1	130,000	50
71386-6	030690 PT1	65	50
71386-7	030690 PT2	30,000	50
71386-8	030690 PT3	600	50
71386-9	030690 PT4	120	50

QA/QC: Spike Recovery for Gasoline: 89%

MDL: Method detection limit: Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/dc

Precision Analytical Laboratory, Inc.
4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (415) 222-3002 FAX (415) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 211

Received: 03/06/90
Reported: 03/20/90
Job No. #: 71386

Attn: Sydney Mills
International Technology
4585 Pacheco Blvd.
Martinez, CA. 94553

Project: Kamur Albany
Matrix: Groundwater

Aromatic Volatile Organics Analysis
EPA Method 8020
ug/l

Lab ID	Client ID	Benzene	MDL	Toluene	MDL
71386-1	030690 MW1	ND<0.3	0.3	ND<0.3	0.3
71386-2	030690 MW2	1900	0.3	160	0.3
71386-3	030690 SMFB	ND<0.3	0.3	ND<0.3	0.3
71386-4	030690 SP1	24,000	0.3	18,000	0.3

Lab ID	Client ID	Ethyl-benzene	MDL	Xylene	MDL
71386-1	030690 MW1	ND<0.3	0.3	ND<0.6	0.6
71386-2	030690 MW2	140	0.3	250	0.6
71386-3	030690 SMFB	ND<0.3	0.3	ND<0.6	0.6
71386-4	030690 SP1	1900	0.3	14,000	0.3

QA/QC: Spike Recovery for Benzene: 108%
Spike Recovery for Toluene: 94%
Spike Recovery for O-Xylene: 83%

MDL: Method detection limit: Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/dc

Precision Analytical Laboratory, Inc.
4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (415) 222-3002 FAX (415) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 211

Received: 03/06/90
Reported: 03/20/90
Job No. #: 71386

Attn: Sydney Mills
International Technology
4585 Pacheco Blvd.
Martinez, CA. 94553

Project: Kamur Albany
Matrix: Groundwater

Total Petroleum Hydrocarbon Analysis
DHS Extraction Method (LUFT)
mg/l

Lab ID	Client ID	Diesel	MDL
71386-5	030690 SP1	ND<0.5	0.5

QA/QC: Spike Recovery for Diesel: 111%

MDL: Method detection limit: Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/dc

Precision Analytical Laboratory, Inc.
4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (415) 222-3002 FAX (415) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 211

Received: 03/13/90
Reported: 03/21/90
Job No. #: 71401

Attn: Sydney Mills
International Technology
4585 Pacheco Blvd.
Martinez, CA. 94553

Project: Kamur Industries
Matrix: Water

Total Petroleum Hydrocarbon Analysis
EPA 5030
mg/l

Lab ID	Client ID	Gasoline	MDL
71401-1	031390 PT1	ND<0.05	0.05
71401-2	031390 PT2	30	0.05
71401-3	031390 PT3	0.36	0.05
71401-4	031390 PT4	0.1	0.05
71401-5	031390 PT5	80	0.05

QA/QC: Spike Recovery for Gasoline: 87%

MDL: Method detection limit: Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/dc

Precision Analytical Laboratory, Inc.
4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (415) 222-3002 FAX (415) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 211

Received: 03/13/90
Reported: 03/21/90
Job No. #: 71401

Attn: Sydney Mills
International Technology
4585 Pacheco Blvd.
Martinez, CA. 94553

Project: Kamur Industries
Matrix: Water

Total Petroleum Hydrocarbon Analysis
DHS Extraction Method (LUFT)
mg/l

Lab ID	Client ID	Diesel	MDL
71401-6	031390 PT6	ND<0.5	0.5

QA/QC: Spike Recovery for Diesel: 106%

MDL: Method detection limit: Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/dc

Precision Analytical Laboratory, Inc.
4136 LAKESIDE DRIVE, RICHMOND, CA 94806 PHONE (415) 222-3002 FAX (415) 222-1251

CERTIFICATE OF ANALYSIS

STATE LICENSE NO. 211

Received: 03/13/90
Reported: 03/21/90
Job No. #: 71401

Attn: Sydney Mills
International Technology
4585 Pacheco Blvd.
Martinez, CA. 94553

Project: Kamur Industries
Matrix: Water

Aromatic Volatile Hydrocarbon Analysis:
EPA Method 8020
ug/l

Lab ID	Client ID	Benzene	MDL	Toluene	MDL
71401-5	031390 PT5	22,000	0.3	18,000	0.3

Lab ID	Client ID	Ethylbenzene	MDL	Xylene	MDL
71401-5	031390 PT5	1900	0.3	19,000	0.6

QA/QC: Spike Recovery for Benzene: 106%
Spike Recovery for Toluene: 82%
Spike Recovery for O-Xylene: 71%

MDL: Method detection limit: Compound below this level would not be detected.

Jaime Chow
Laboratory Director

JC/dc

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. 178748

C/C Control No. 171141

PROJECT NAME/NUMBER Komar 114803.1

LAB DESTINATION Precision Analytical

SAMPLE TEAM MEMBERS SM

CARRIER/WAYBILL NO. hand deliver

Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
030690MW1	MW #1	3-6-90 1045	groundwater	40 ml VOA		
030690MW2	MW #2	3-6-90 1140	groundwater	40 ml VOA		
030690FB	MW #FB	3-6-90 1040	groundwater	40 ml VOA		
030690SP1	Sump	3-6-90 1215	groundwater	40 ml VOA		
030690SP1	Sump	3-6-90 1215	groundwater	1L amber		
030690PT1	PT #1 creek	3-6-90 1200	surface water	40 ml VOA		
030690PT2	PT #2 creek	3-6-90 1150	surface water	40 ml VOA		
030690PT3	PT #3 creek	3-6-90 1155	surface water	40 ml VOA		
030690PT4	PT #4 creek	3-6-90 1205	surface water	40 ml VOA		

Special Instructions:

Possible Sample Hazards: possible petroleum hydrocarbons

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: Sydney Miller IT Corp 3-6-90 1230

   Received By: Harbinder Sidhu 3-6-90 12:30pm

2. Relinquished By:

   Received By: Harbinder Sidhu 3-6-90 1230pm

3. Relinquished By:

   Received by:

4. Relinquished By:

   Received By:

WHITE - To accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. 178748
C/C Control No. 171141

PROJECT NAME: Kamur Industries
PROJECT NUMBER: 148031.1
PROJECT MANAGER: Greg Millikan
BILL TO: ITES
4585 Pacheco Blvd.
Martinez, Ca. 94553

PURCHASE ORDER NO.: _____

DATE SAMPLES SHIPPED: 3.6.90
LAB DESTINATION: Precision Analytica
LABORATORY CONTACT: Jamie Chow
SEND LAB REPORT TO: Sydney Mills
4585 Pacheco Blvd
Martinez, Ca. 94553
DATE REPORT REQUIRED: 3.20.90
PROJECT CONTACT: Sydney Mills
PROJECT CONTACT PHONE NO.: (415) 372-9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
030690MW1	groundwater	3x40ml	HCL	TPH (G) BTEX	
030690MW2	groundwater	3x40ml	HCL	TPH (G) BTEX	
030690SMFB	groundwater	3x40ml	HCL	TPH (G) BTEX	
030690SP1	groundwater	3x40ml	HCL	TPH (G) BTEX	
030690SP1	groundwater	1x1L	SM [redacted] NONE	TPH as diesel	
030690PT1	surface water	3x40ml	HCL	TPH (G)	
030690PT2	surface water	3x40ml	HCL	TPH (G)	
030690PT3	surface water	3x40ml	HCL	TPH (G)	
030690PT4	surface water	3x40ml	HCL	TPH (G)	

TURNAROUND TIME REQUIRED: (Rush must be approved by the Project Manager.)

Normal ✓ Rush _____ (Subject to rush surcharge)

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances)

Nonhazard ✓ Flammable _____ Skin Irritant _____ Highly Toxic _____ Other _____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, and disposal.)

Return to Client _____ Disposal by Lab ✓

FOR LAB USE ONLY

Received By Mahwinder Sidhu Date/Time 3-6-90 1230 pm

WHITE - Original, to accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

14803.1

R/A Control No. 178430

C/C Control No. 171145

PROJECT NAME/NUMBER Kaiser Industries

LAB DESTINATION Precision Analytical

SAMPLE TEAM MEMBERS PD/[redacted] Dk

CARRIER/WAYBILL NO. hand deliver

Sample Number	Sample Location and Description	Date and Time Collected		Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
03139PT1	PT-1	3-13-90	0800	surface water	3X40ml/VOA		
03139PT2	PT-2	3-13-90	0805	surface water	3X40ml/VOA		
03139PT3	PT-3	3-13-90	0810	surface water	3X40ml/VOA		
03139PT4	PT-4	3-13-90	0815	surface water	3X40ml/VOA		
03139SP1	PT-SP1	3-13-90	0830	ground water	3X40ml/VOA		
03139SP1	PT-SP1	3-13-90	0830	ground water	1X1L amber		

Special Instructions:

Possible Sample Hazards: possible skin irritant

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: Paul DeAngelo IT 3/13/90

   Received By: Jim Law 3/13/90

2. Relinquished By:

   Received By:

3. Relinquished By:

   Received by:

4. Relinquished By:

   Received By:

WHITE - To accompany samples
YELLOW - Field copy

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. 178430
C/C Control No. 17145

PROJECT NAME: Kamur Industries
PROJECT NUMBER: 148031.1
PROJECT MANAGER: Sydney Mills
BILL TO: ITES
4585 Pacheco Blvd.
Martinez, Ca. 94553

PURCHASE ORDER NO.: _____

DATE SAMPLES SHIPPED: 3.13.90
LAB DESTINATION: Precision Analytical
LABORATORY CONTACT: Jamie Chow
SEND LAB REPORT TO: Sydney Mills
4585 Pacheco Blvd
Martinez, Ca. 94553
DATE REPORT REQUIRED: 3.27.90
PROJECT CONTACT: Sydney Mills
PROJECT CONTACT PHONE NO.: (415) 372-9100

Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
031390PT1	Surface water	3X40ml VOA	HCL	TPH as Gas	
031390PT2	Surface water	3X40ml VOA	HCL	TPH as Gas	
031390PT3	Surface water	3X40ml VOA	HCL	TPH as Gas	
031390PT4	Surface water	3X40ml VOA	HCL	TPH as Gas	
031390SP1	ground water	3X40ml VOA	HCL	TPH as Gas BTEX	
031390SP1	groundwater	1X L amber	HCL	TPH as Diesel	

TURNAROUND TIME REQUIRED: (Rush must be approved by the Project Manager.)

Normal X Rush _____ (Subject to rush surcharge)

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances)

Nonhazard _____ Flammable _____ Skin Irritant X Highly Toxic _____ Other _____ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, and disposal.)

Return to Client _____ Disposal by Lab X

FOR LAB USE ONLY

Received By: Jamie Chow

Date/Time: 3/13/90 1330 PM

WHITE - Original, to accompany samples
YELLOW - Field copy

1.0 INTRODUCTION

International Technology Environmental Services (ITES) was retained by Kamur Industries on 04 December 1990, to execute monthly and rainstorm event sampling programs. The following is a report of March sampling activities with all previous ITES sampling results included for reference.

2.0 SAMPLING PROGRAMS

2.1 MONTHLY SAMPLING

Monthly events include monitoring and sampling the four (4) existing monitoring wells, the sump and four (4) predetermined points along El Cerrito Creek.

The monitoring wells were installed by Subsurface Consultants Inc. on 01 August 1989. The initial soil and groundwater samples were collected by SCI on 01 and 03 August 1989. A monthly groundwater sampling program was installed by ITES on 04 December 1989, with the monthly sampling events conducted on 08 December 1989, 03 January, 02 February and 03 March, 1990.

The sump was installed on 10 and 11 October 1989 by Riedel Environmental Services, to abate the flow of contaminants into the creek. The sump was sampled in conjunction with the ITES monthly sampling programs in December 1989, January, February and March 1990.

In August 1989, SCI identified three (3) sampling locations along El Cerrito creek, which borders the site on the north. The three (3) original creek sampling points are as follows:

PT-1 = 20' upstream
PT-2 = storm drain outlet
PT-3 = 20' downstream

These points were sampled on 03 August 1989, and were modified by ITES in December 1989:

PT-1 = 20' upstream
PT-2 = mouth of the drainage pipe
PT-3 = drainage flow/creek interface
PT-4 = 60' downstream

Sampling point PT-1 was established 20 feet upstream of the drain outfall, in order to identify any background contamination. Point PT-2 was selected to define the contaminant concentrations prior to the initial remedial step (absorbent pads) positioned immediately beneath the storm drain. Point PT-3 is situated to reveal the effectiveness of the pads and determine the amount of dilution of outfall by creek mixing. Absorbent boom has been installed between points PT-3 and PT-4, to collect any remaining contaminants not removed by the absorbent pads. Point PT-4 is located approximately 40' beyond the boom to determine the

adequacy of the remedial measures. In March 1990, point PT-4 was relocated 25 feet downstream from its original position, in order to determine the influence of alternate stream inlets.

2.2 STORM EVENT SAMPLING

The creek is sampled 48 hours following the cessation of any significant rain storm event. A significant rain event was initially defined as rainfall greater than or equal to 0.5 inches, however on 16 January 1990 Hosain Kazemi (San Francisco Bay Regional Water Quality Control Board) requested that the significant rainfall accumulation figure be decreased to 0.25 inches. Mr. Kazemi's contention is that rain events frequently occur which measure below 0.5 inches in accumulation, and in view of the topography surrounding the site, a rainfall of 0.25 inches is sufficient to produce runoff. Rainfall samplings were executed on 03 March (in conjunction with the March monthly sampling run) and on 13 March 1990, following the rain events of 01 March and 11 March 1990.

3.0 METHODOLOGY

3.1 MONTHLY SAMPLING

Water levels and samples were obtained from each of the four (4) existing monitoring wells, the sump and four predetermined locations along El Cerrito Creek. Monthly sampling activities were executed on 08 December 1989, 03 January, 02 February and 03 March 1990, with an initial sampling run conducted on 01 and 03 August 1989. Monitoring was executed to aid in determining groundwater flow characteristics with sampling to facilitate contaminant plume delineation.

Sampling procedures conformed to the California Regional Water Quality Control Board - San Francisco Bay Region Guidelines for Addressing Fuel Leaks, September 1985; Tri-Regional Recommendations for Initial Evaluation and Investigation of Underground Tanks, 18 May 1989; and the LUFT Manual, March 1989.

One to three well volumes were evacuated from each well, to ensure the samples are representative of the surrounding aquifer. The wells were allowed to recharge and groundwater samples were collected from the wells with a Voss Industries decontaminated disposable teflon bailer. Sump and creek samples were obtained with the use of a decontaminated glass jar. Water samples were placed directly from the bailer or jar into the appropriate sample

containers. No headspace was left in the samples to be analyzed for volatile organic constituents. Each container was placed in a "zip-lock" bag, security taped, and placed in a refrigerated ice chest. until delivery to the licensed, contracted laboratory. Chain of custody forms accompanied the samples at all times.

3.2 STORM EVENT SAMPLING

Storm event sampling is conducted 48 hours following the cessation of any significant rain event, to determine storm runoff influence in El Cerrito Creek.

Sampling procedures were those delineated above in 3.1 Monthly Sampling.

4.0 LABORATORY ANALYSES

The water samples were analyzed by International Technology Analytical Services (ITAS) California License #137 for Total Petroleum Hydrocarbons (TPH) as gas, and Benzene, Toluene, Ethyl Benzene and Xylene (BTEX). Analyses were executed by EPA methods 5030 and 8020 respectively. The results of the analyses are summarized in Tables 1, 2 and 3, with copies of the laboratory reports and chain of custody forms following this report.

5.0 RESULTS

An initial baseline sampling run was conducted during well installation procedures in August 1989, with monthly sampling events being conducted in December 1989, January, February and March 1990. Contaminant concentrations encountered in monitoring well MW-1 increases slightly during the monthly sampling run, however levels returned to below detection limits on the storm event sampling. Contaminant levels encountered in monitoring well MW-2 decreased slightly, with free product (sheen) was encountered in wells MW-3 and MW-4 during the monthly sampling events of December 1989, January, February and March 1990, which was not present during the initial sampling run in August 1989.

Contaminants were encountered at point PT-1 in El Cerrito Creek (upstream) during the monthly sampling event, however they returned to below detection limits. Contaminant levels detected at point PT-2 remained fairly constant, with levels at point PT-3 exhibiting a slight increase and levels at point Pt-4 revealing a slight decrease.

Contaminant levels discovered in the sump have remained fairly consistent during the monthly samplings.

5.0 CONCLUSIONS

1. Groundwater flow, as calculated with well monitoring data is to the northwest.

2. Detectable background upstream contamination was discovered during the monthly sampling event, however was undetected upon the latter rain event sampling.

3. Contaminant levels at point PT-4 (downstream) have decreased, confirming the effectiveness of the remedial methods employed thus far.

4. Contaminant levels detected at point PT-3 are significantly lower than the levels detected at PT-2 (contaminant source), confirming the effectiveness of the initial remedial measure. Contaminant levels encountered at PT-2 have decreased approximately 16 fold since the initial sampling in August of 1989.

5. Contaminant levels in monitoring well MW-1 have decreased to below detectable levels, however this wells screened casing is installed ten feet lower than the screen in the other three wells. The groundwater samples obtained from monitoring well MW-1 are assumed to be from a different aquifer than the those from the remaining wells.

6. Contaminant levels in monitoring well MW-2 have decreased over time.

7. Free product has been discovered in monitoring wells MW-3 and MW-4, which was not present during the initial sampling run in August 1989. This fact supports the hypothesis that contaminants are traveling from the leak site to the north northwest, encountering the storm drain fill zone, and entering El Cerrito Creek.

8. Contaminant levels in the sump have remained relatively consistent as revealed by the sampling events of December 1989, January and February 1990.