Joseph T. Ryerson & Son, Inc. 1465 - 65th Street, Emeryville, California 94608 Mail Address: Box 23070 Oakland, California 94623

ALCO HAZMAT

510 653 2933 FAX: 510 428 2985

94 JAH -4 PH 2: 02



STID 799

January 3, 1994

Ms. Susan L. Hugo Senior Hazardous Materials Specialist Alameda County Health Core Services Agency Department of Environmental Health 80 Swan Way, Room 200 Oakland, CA 94621

Dear Ms. Hugo:

Please find enclosed a copy of the quarterly report generated for the November, 1993, sampling event.

If you have any questions or comments, please do not hesitate to call.

Sincerely,

Don Mammini Service Manager

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DM:cg

enclosure(1)

HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.

QUARTERLY MONITORING REPORT

Ryerson Steel and Aluminum, Inc. 1465 65th Street Emeryville, California 94608

Prepared for:

JOSEPH T. RYERSON & SONS, INC. P.O. Box 23070 Emeryville, CA 94623

Prepared by:

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

2363 Mariner Square Drive, Suite 243 Alameda, California 94501 HETI Job No. 7-231

December 21, 1993

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FIGURES

Figure 1: Site Location Ma	Figure	1:	Site	Location	Map
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- Figure 2: Site Plan
- Figure 3: Ground Water Contour Map for 11/2/93
- Figure 4: Ground Water Contour Map for 11/24/93
- Figure 5: Hydrocarbon Distribution Map for 11/24/93

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APPENDIX A

Monitoring Well Purge/Sample Sheets

APPENDIX B

Official Laboratory Reports and Chain of Custody Records

1.0 INTRODUCTION

1.1 Purpose and Scope

Joseph T. Ryerson and Sons, Inc. retained Hydro-Environmental Technologies, Inc. (HETI) to conduct a limited subsurface investigation and quarterly ground water monitoring program at the Ryerson Steel and Aluminum plant located in Emeryville, California. The phase of the site investigation described in this report consists of monthly well gauging and quarterly ground water sampling performed to assess the extent and movement of petroleum hydrocarbons in the subsurface ground water in the vicinity of the former underground storage tank at the site.

1.2 Site Location, Description and Background

The subject facility is located on the corner of Hollis and 65th Street in Emeryville, California (Figure 1). It consists of a large warehouse/office building with an asphalted yard used for truck and car parking and for storage. Work was conducted in the yard behind the main facility building. A 5,000 gallon underground diesel storage tank was removed from the site on March 11, 1993 by Semco, Inc. The associated piping and fuel dispenser were also removed. Excavation sidewall soil samples and a groundwater grab sample were collected for laboratory analysis. The samples were analyzed for Total Petroleum hydrocarbons as diesel (TPHd) using EPA Method 8015 (DHS modified) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020. 850 parts per billion (ppb) of TPHd was detected in the ground water sample. Three soil borings were drilled and converted to monitoring wells (MW-1, MW-2 and MW-3) by Bayland Drilling of Menlo Park, California, on August 6, 1993. Analyses of ground water samples collected from these wells indicate the presence of benzene and xylenes in concentrations up to 1.3 MW-3 has contained between 0.01 and 0.02 feet of floating free-phase hydrocarbons at previous sampling events and has not been sampled. The wells at the site were most recently sampled on August 11, 1993. Results were presented in the HETI Phase 1 Subsurface Investigation Report dated September 14, 1993.

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2.0 FIELD ACTIVITIES

2.1 Monthly Well Gauging

Well gauging was conducted by HETI on November 2, 1993 using an electronic water sounder. MW-1, MW-2 and MW-3 were gauged for depth to water to the nearest hundredth of a foot from the top of the well casings. The tops of the casings had previously been surveyed with reference to mean sea level.

2.2 Ground Water Sampling and Analysis

HETI collected ground water samples from monitoring wells MW-1 and MW-2 on November 24, 1993. All sampling was performed according to HETI standard protocol using methods which are consistent with guidelines established by the lead regulatory agencies. A copy of HETI's Ground Water Sampling Protocol has previously been submitted to the Alameda County Department of Environmental Health (ACDEH).

Prior to purging, the depth to water in each of the wells was gauged. Before sampling, the wells were purged of at least three well casing volumes or purged dry while the parameters of temperature and pH were monitored for stabilization. The monitoring well purge/sample sheets are included as Appendix A.

Following recovery of the water level in the wells to at least 80 percent of their static level, ground water samples were collected with dedicated bailers. Sample containers were documented on a chain of custody, labeled and placed in a chilled cooler for transport to the analytical laboratory. Analytical results for ground water samples collected during the previous quarter indicated that no concentrations of TPHd exceeding method detection limits were present in samples collected from MW-1 or MW-2. Consequently, ground water samples were analyzed for Total Petroleum hydrocarbons as gasoline (TPHg) and BTEX. Sample analysis was performed by Pace, Inc. a DHS-certified laboratory located in Novato, California.

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3.0 RESULTS OF INVESTIGATION

3.1 Ground Water Gradient

Depth to water on November 2, 1993 ranged from 4.53 to 5.13 feet and on November 24 ranged from 4.35 to 5.07 feet. Monthly gauging results indicated that 0.04 feet of floating free-phase hydrocarbons was detected in MW-3 on November 2 and 0.02 feet was detected on November 24. These results are summarized on Table 1. The depth to water measurements collected and top-of-casing elevation data were used to calculate ground water elevation contours shown on Figures 3 and 4. Figure 3 and 4 show ground water flow to be northerly and north-northwesterly at a gradient of 2.6% to 2.8% respectively.

3.2 Results of Ground Water Sample Analysis

TPHg concentrations equalled or exceeded the method detection limit in the ground water samples collected from MW-1 and MW-2 on November 24, 1993. MW-3 was not sampled due to the presence of separate floating free-phase hydrocarbons. BTEX concentrations did not exceed the method detection limit in any of the ground water samples. These analytical results are summarized on Table 1 and shown on Figure 5. A copy of the ground water sample analytical laboratory report and chain of custody is attached as Appendix B.



4.0 CONCLUSIONS AND RECOMMENDATIONS

- Petroleum hydrocarbons have been identified in ground water samples collected from all of the three wells installed at the site. The location of the free-phase hydrocarbons is not consistent with the observed direction of ground water movement.
- The ground water gradient at the subject facility has remained consistent over the course of this site investigation. As this is the case, monthly water level measurement will be discontinued. This modification will be implemented in 1994. Data from additional quarterly events may be necessary to efficiently locate additional monitoring wells in order to define the extent of the petroleum hydrocarbon contamination. Consequently, further recommendations concerning additional well installation will be included in the second quarter 1994 monitoring report, at which time sufficient data will be available.

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5.0 CERTIFICATION

This report was prepared under the supervision of a registered professional engineer. All statements, conclusions and recommendations are based solely upon field observations and analytical analyses performed by a state-certified laboratory related to the work performed by Hydro-Environmental Technologies, Inc.

It is possible that variations in the soil or groundwater conditions exist beyond the points explored in this investigation. Also, site conditions are subject to change at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

The service performed by Hydro-Environmental Technologies, Inc. has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

Hydro-Environmental Technologies, Inc. includes in this report chemical analytical data from a state-certified laboratory. These analyses are performed according to procedures suggested by the U.S. EPA and the State of California. Hydro-Environmental Technologies, Inc. is not responsible for laboratory errors in procedure or result reporting.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

Prepared by:

Reviewed by:

Markus Niebanck, R.G. Western Regional Manager

Ruary Allan Staff Geologist

Table 1

SUMMARY OF GROUND WATER ELEVATIONS AND WATER SAMPLE ANALYTICAL RESULTS

Ryerson Steel and Aluminum, Inc. 1465 65th Street Emeryville, CA 94608

Sample I.D. #	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TPHd (ppb)
MW-1	8/11/93	5.24	4.87	0.37	NA	<0.5	<0.5	<0.5	<0.5	-50
14144-1	9/14/93	5.2 4 5.24	4.94	0.37	NA NA	NS	NS NS	NS	NS	<50 NS
l	11/2/93	5.24 5.24	5.13	0.30	NA NA					
						NS	NS	NS	NS	NS
I	11/24/93	5.24	5.07	0.17	57	<0.5	<0.5	<0.5	<0.5	NA
MW-2	8/11/93	5.06	4.64	0.42	NA	1.3	<0.5	<0.5	0.59	<50
	9/14/93	5.06	4.64	0.42	NA	NS	NS	NS	NS	NS
1	11/2/93	5.06	4.85	0.21	NA	NS	NS	NS	NS	NS
	11/24/93	5.06	4.84	0.22	50	<0.5	<0.5	<0.5	<0.5	NA
MW-3	8/11/93	5.48	4.19*	1.30		NA: Floati	ing free-ph	ase hydroc	arbons 0.01	feet
1	9/14/93	5.48	4.25*	1.25					arbons 0.02	
	11/2/93	5.48	4.53*	0.95					arbons 0.04	
•	• •					NA TOAU	ing nee-ph	ase nyuroci		i icet
1	11/24/93	5.48	4.35*	1.13		INA: Floati	ing iree-pn	ase nyaroca	arbons 0.02	reet

Notes:

TPHg: Total Petroleum Hydrocarbons as Gasoline by EPA Method 8015 (DHS modified)

TPHd: Total Petroleum Hydrocarbons as Diesel by EPA Method 8015 (DHS modified)

BTEX: Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA Method 8020

TOC: Top of Casing Elevation

DTW: Depth to Water

GWE: Ground Water Elevation

NA: Not Analyzed NS: Not Sampled ppb: Parts per Billion

Corrected for the presence of floating free-phase product by the formula:

DTW = measured depth to liquid + (0.89 x floating product thickness) where 0.89 is the specific gravity of diesel

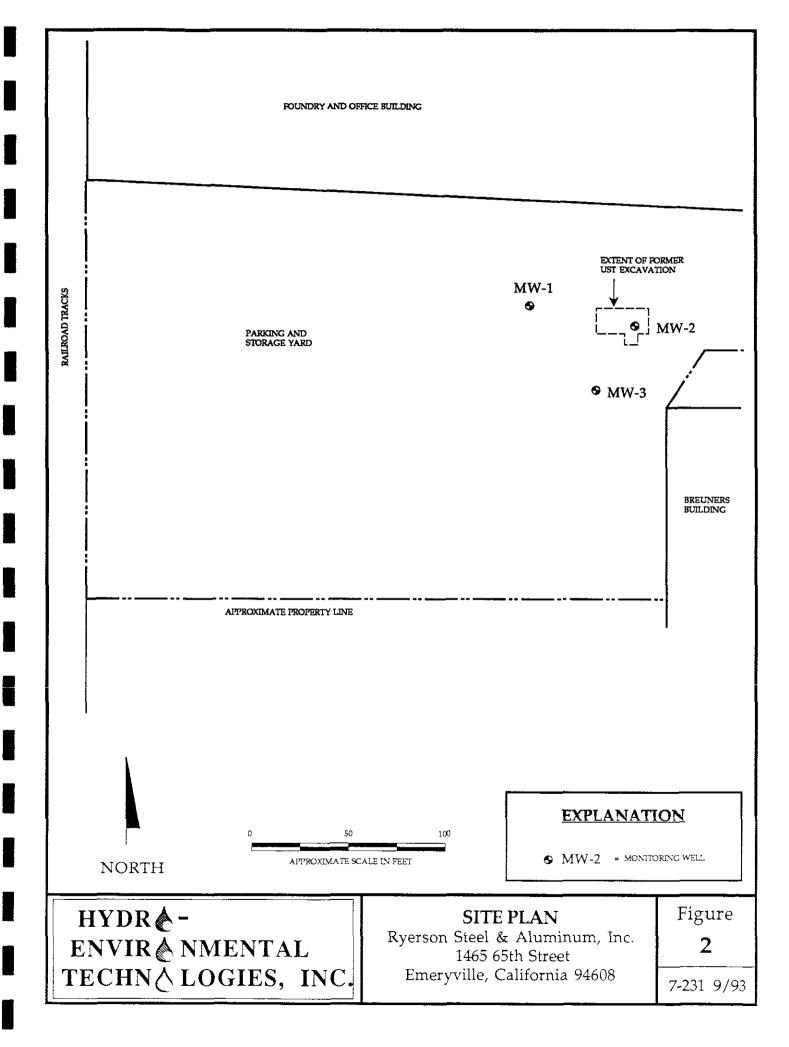


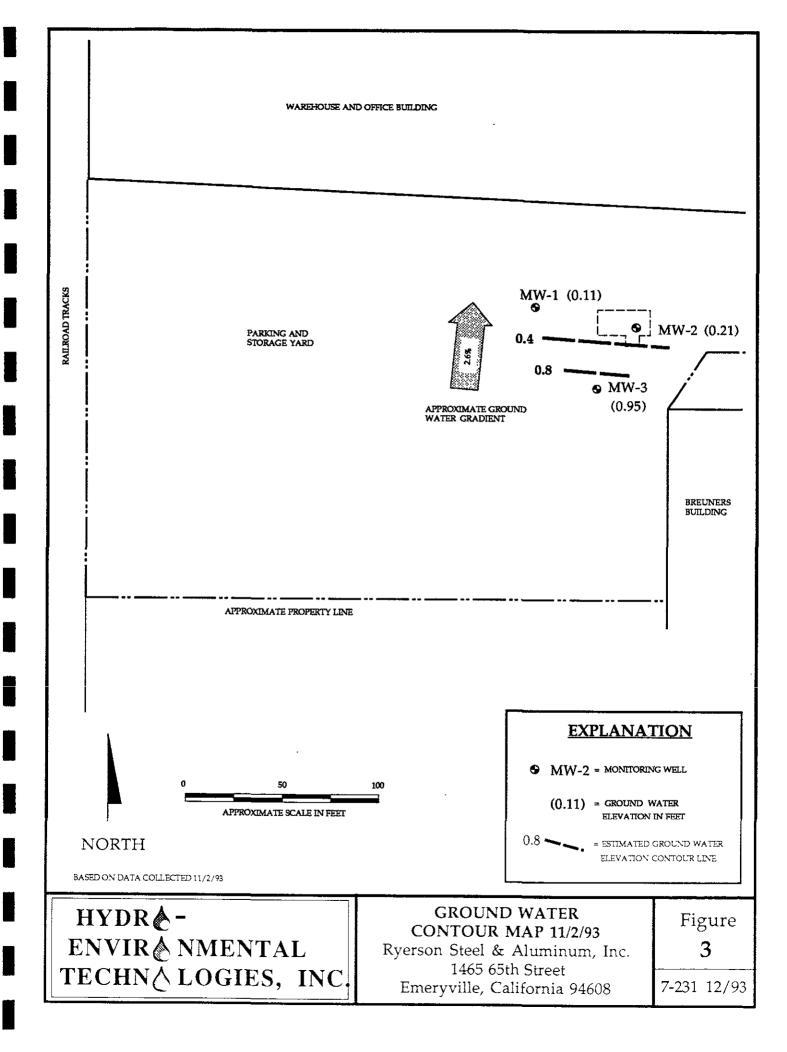
HYDR ♠ -ENVIR ♠ NMENTAL TECHN △ LOGIES, INC.

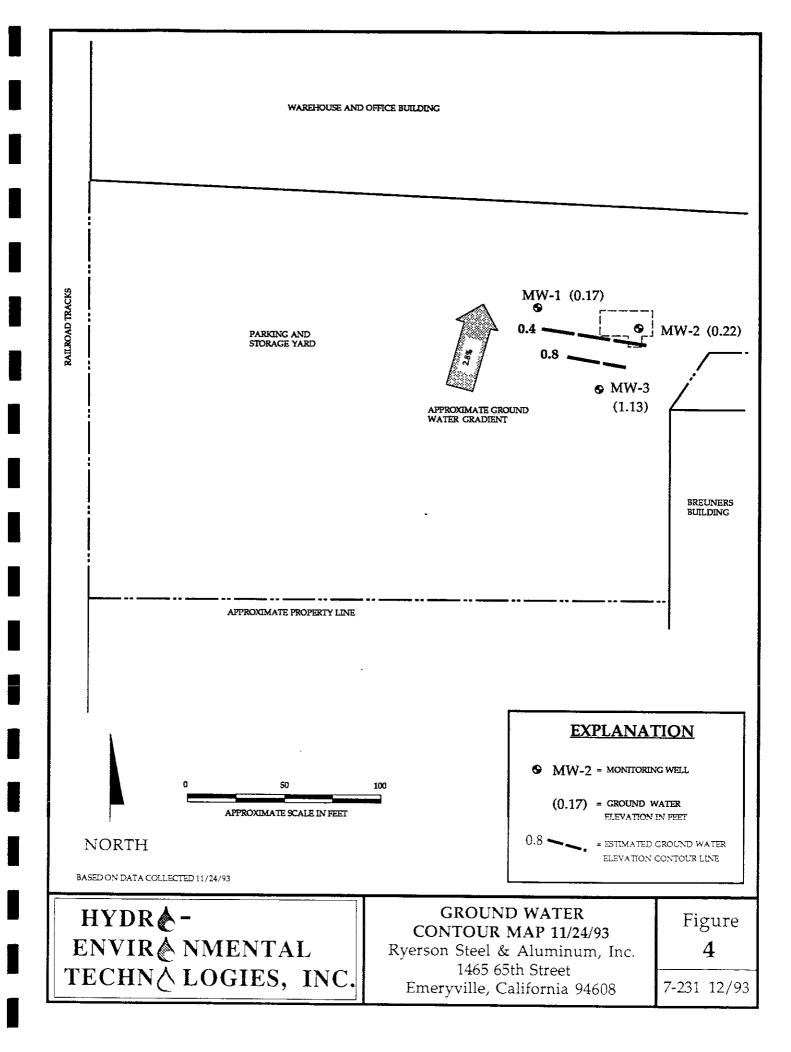
SITE LOCATION MAP

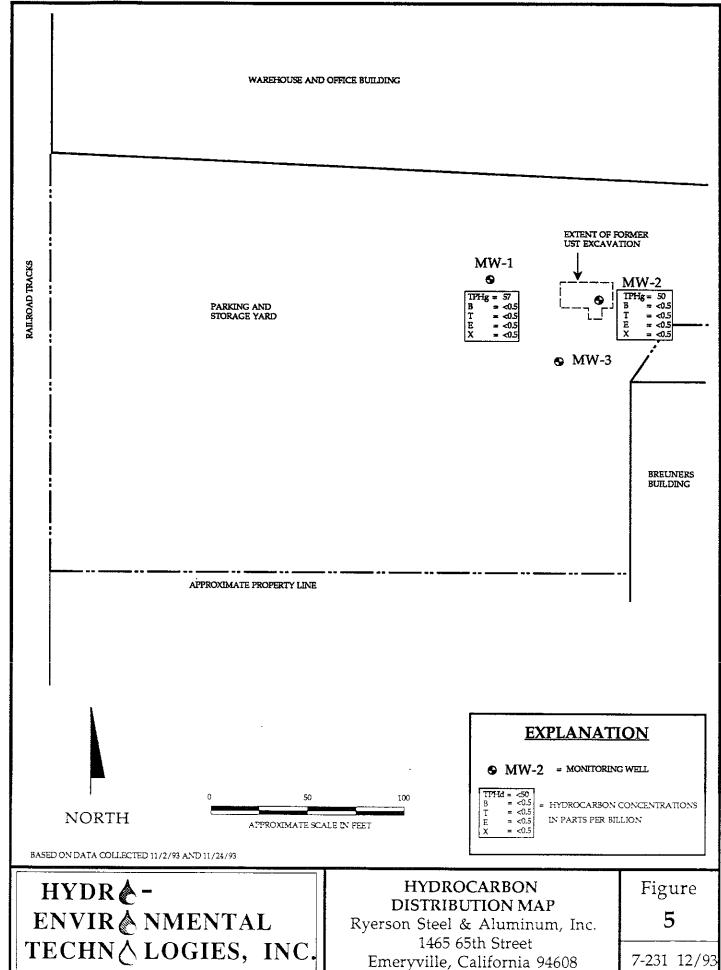
Ryerson Steel & Aluminum, Inc. 1465 65th Street Emeryville, California 94608 Figure 1

7-231 9/93









7-231 12/93

PURGED/S.	AMPLED BY:	Ruary	Allan	_ DATE:	11/22/93	2
-	ttom: <u>14.93</u> ter: <u>.5.07</u>	ft. diam. 2 in. 4 in.	× 0.16 × 0.65	Well casing volume # volumes to purg *Total volume to po * unless chemical para	e x <u>3</u>	_vols. _gallons
PURGING I Purge metho (circle one)	OATA:	Submersible pu	mp/ Suction lift	pump/		
	Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pН	
	1.38	2	65.6		7.44	
	1.43 4				7.47	
•						
·	Color:	broun	Turb	idity: <u>Mod</u>		<u>]</u>
	Recharge:	4	SPP_	Δ		ン :
SAMPLING Sampling	G DATA: method: Dedic	ated bailer /				723 740
	R∲- R∲NMEN NÅLOGIE	į 8		GWELL PURGESAN WEIL # MW- RYEVON STE EMENYUU		Job No. 7-23/ SHEET 1 of/

PURGED/S.	AMPLED BY:	Russy	Allan	_ DATE:	11/22/93	2		
Depth to bottom: 14.65 ft. Depth to water: 4.84 ft. Saturated Thickness: 9.81 ft. Conversion Gaucing Data: Weil casing volume 1.57 gallons Weil casing volume 1.57 gallons # volumes to purge x 3 vols. *Total volume to purge = 5 gallons * unless chemical parameters stabilize earlier								
PURGING D Purge metho (circle one)		Submersible pur	np/ Suction lift	: pump/		, ;		
	Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pН			
	11.51	2	63.1		7 / 0			
•	11.56	4	65.7		7.62			
	11.57 5		66.2		7.54			
	Color:	Bown	Turb	idity: <u>mod</u>		-1		
	Recharge:	good	SPP	<u></u>		, ·		
SAMPLIN	G DATA:			·	ple for: (circle)	10		
Sampling	method: Dedic	ated bailer/		TPHd TPH mo 601 Other:		223 240 250 8279		
i t	R∲- R∲NMEI NÓLOGII	1 4		GWELL PURGE/SA! WEIL # <u>MW-2</u> Ryevon Ste Emonwill	_	Job No. 7-23/ SHEET 1 of /		

	· · · · · · · · · · · · · · · · · · ·					,		
PURGED/S	AMPLED BY:	Russy	Allan	DATE:	11/22/9	<u> </u>		
GAUGINGDA	ATA:			-				
Depth to bottom:ft. Conversion Well casing volumegallons								
Depth to wa	ter: <u>4.33</u>	ft. Zin.		# volumes to purg	ge x <u>ح</u>	_vols.		
Saturated		<u> </u>	× 0.65	*Total volume to p	urge =	gallons		
Thickness:	f	t. 6 in.	× 1.44	* unless chemical par	ameters stabilize o	artier		
PURGING DATA: Purge method: PVC bailer Submersible pump / Suction lift pump /								
(CITCLE OTIE)		Volume	T	Can day stimites		7		
	Time	(gallons)	Temp.	Conductivity (mS/cm)	pН			
		0						
		0.02	ket	free prod	duct			
		No		1		1		
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<u> </u>				en e	1	1		
	Color:		Turb	idity:				
	Recharge:		SPP_	ft.		<u>٠</u> :		
Sample for: (circle) IPHg/8TEX METALS TOC 8010 IPHd 0-25 IEL 8020 IPH 200 Total P5 IED8 8240 601 601 Nitrates 5260 8270								
			<u>, , , , , , , , , , , , , , , , , , , </u>	Other	· · · · · · · · · · · · · · · · · · ·			
HYD	R ≜ -		MONITORIN	G WELL PURGE/SAI	MPLE SHEET	Job No.		
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1 1	-	1 8	LOCATION_	Ryeran Ste	el	SHEET of /		
TECH	NÓLOGIE	LO, LINC.		Emorroll	Q	/ 01/		



December 02, 1993

Mr. Markus Niebanck Hydro-Environmental Technologies, Inc. 2363 Mariner Square Drive, Suite 243 Alameda, CA 94501

RE: PACE Project No. 431129.504

Client Reference: 7-231 Ryerson Steel

Dear Mr. Niebanck:

Enclosed is the report of laboratory analyses for samples received November 29, 1993.

Please note that an unknown peak eluting between fluorobenzene and trifluorotoluene was detected in the following samples:

70 0199883/MW-2 70 0199875/MW-1

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely.

Jim J. Ovs

Project Manager

Enclosures



Hydro-Environmental Technologies, Inc. 2363 Mariner Square Drive, Suite 243 Alameda, CA 94501 December 02, 1993

PACE Project Number: 431129504

Attn: Mr. Markus Niebanck

Client Reference: 7-231 Ryerson Steel

PACE Sample Number:	70 0199875
Date Collected:	11/24/93
Date Received:	11/29/93
Client Sample ID:	MW-1

_	Client Sample ID: Parameter	Units	MDL	MW-1	DATE ANALYZED
•	ORGANIC ANALYSIS				
	PURGEABLE FUELS AND AROMATICS TOTAL FUEL HYDROCARBONS, (LIGHT): Purgeable Fuels, as Gasoline (EPA 8015M) PURGEABLE AROMATICS (BTXE BY EPA 8020M): Benzene Toluene Ethylbenzene	ug/L ug/L ug/L ug/L	50 0.5 0.5 0.5	57 ND ND ND	11/30/93 11/30/93 11/30/93 11/30/93 11/30/93
•	Xylenes, Total	ug/L	0.5	ND	11/30/93



Mr. Markus Niebanck

Page

December 02, 1993

PACE Project Number: 431129504

Client Reference: 7-231 Ryerson Steel

PACE Sample Number: Date Collected:

Date Received: Client Sample ID: 70 0199883 11/24/93 11/29/93

MW-2

DATE ANALYZED MDL Units Parameter

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS 11/30/93 TOTAL FUEL HYDROCARBONS, (LIGHT):
Purgeable Fuels, as Gasoline (EPA 8015M) ug/L 50 11/30/93 50 11/30/93 PURGEABLE AROMATICS (BTXE BY EPA 8020M): ND 11/30/93 0.5 ug/L Benzene 11/30/93 ND 0.5 uq/L Toluene 11/30/93 ND ug/L 0.5 Ethylbenzene 11/30/93 ND ug/L 0.5 Xylenes, Total

These data have been reviewed and are approved for release.

Com

Darrell C. Cain

Regional Director



Mr. Markus Niebanck

Page

FOOTNOTES for pages 1 through 2

December 02, 1993 PACE Project Number: 431129504

Client Reference: 7-231 Ryerson Steel

MDL

Method Detection Limit

Not detected at or above the MDL.



Methad

Mr. Markus Niebanck

QUALITY CONTROL DATA

December 02, 1993

PACE Project Number: 431129504

Page

Client Reference: 7-231 Ryerson Steel

PURGEABLE FUELS AND AROMATICS

Batch: 70 26703

Samples: 70 0199875, 70 0199883

METHOD BLANK:

Parameter	Units	MDL	Blank
TOTAL FUEL HYDROCARBONS, (LIGHT): Purgeable Fuels, as Gasoline (EPA 8015M PURGEABLE AROMATICS (BTXE BY EPA 8020M)	ug/L	50	ND -
Benzene Toluene Ethylbenzene	ug/L ug/L ug/L	0.5 0.5 0.5	ND ND ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

	LABORATORY CONTROL SAMPLE AND CONTROL S	-111 LL DO: L1	CONTE	Reference		Dupl	
_	Parameter	Units	MDL	Value	Recv	Recv	
ŀ	Purgeable Fuels, as Gasoline (EPA 8015M	ug/L	50	1000	86%	99%	14%
ļ	Benzene	ug/L	0.5	100	107%	111%	3%
	Toluene	ug/L	0.5	100	101%	106%	4%
ь	Ethylbenzene	ug/L	0.5	100	101%	102%	0%
Ì			0.5	300	103%	104%	0%
	Xylenes, Total	ug/L	0.5	500	10070	10 170	•



Mr. Markus Niebanck

Page

FOOTNOTES

4 for page

December 02, 1993 PACE Project Number: 431129504

Client Reference: 7-231 Ryerson Steel

MDL ND

RPD

Method Detection Limit

Not detected at or above the MDL.

Relative Percent Difference



THE	ASSURÂNCE OF QUALITY						ing \id	<i>i.</i>		Ana	lytical Request
Client	West T						Report To:	KKUS	WEIBANCK	Pace	e Client No.
Address	2363 MARINER SC	a.D	<i>R</i>				Bill To:	77		Pace	e Project Manager
=	#363 MARINER SC #243, ALAMEDA, G	W.	1450	2/			P.O. # / Billing Refe	rence		Pace	e Project No. 431129, 50L
Phone	(5/0) -521-2684			,			Project Name / No.	- Maria	231, Ryguson Ste	Req	uested Due Date: Day
Sampler :	By (PRINT) RUARY ALLA Signature Date Sampled Augustus August	/ 		1-24-93	O. OF CONTAINERS	UNPRESERVED	HNO3 VOA HCC ACC ACC ACC ACC ACC ACC ACC ACC AC	ANALYSES REQUEST		//	DEMARKS
NO.	SAMPLE DESCRIPTION	7	MATRIX		ON O	5	NOA HNOA ≠ 3 4	×.	/ / / / / / / /		/ REMARKS
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3									A		
4											
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