



August 12, 1988

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HAZARDOUS MATERIALS/
WASTE PROGRAM

PROJECT REPORT

**UNDERGROUND STORAGE TANK REMOVAL ASSESSMENT
FOR THE CITY OF PIEDMONT, PIEDMONT, CA.**

Prepared for:

Michael Enright, Director of Public Works
CITY OF PIEDMONT
120 VISTA AVENUE
PIEDMONT, CA 94123

Submitted by:

Aqua Science Engineers
2500 Old Crow Canyon Rd. # 121
San Ramon, CA 94583

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DISTRIBUTION

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Mary Joe Myer, Alameda Hazardous Materials 1

1. INTRODUCTION

This report documents activities related to the removal of underground storage tanks at various sites for the City of Piedmont, Piedmont, Ca.

Our scope of work consisted of the following:

1. Remove and/or replace underground storage tanks at the following sites per the construction contract.

Site No. 1 - City Hall

Site No. 2 - Corporation Yard

Site No. 3 - Dracena Park Nursery

2. Submit a report to the client presenting results.

2. INVESTIGATIVE METHODS AND FIELD EXPLORATION

2.1 Site No. 1, City Hall

On May 27, 1988, Aqua Science Engineers removed three (3) underground storage tanks from the site located at 120 Vista Avenue, Piedmont, CA. The tanks were processed and triple rinsed on-site, with the rinsate being manifested as hazardous waste (Appendix A). Rinsate samples obtained from each tank were below 100 ppm (Appendix A, CC0176), subsequently, the tanks were disposed as scrap metal at Schnitzer Steel, Oakland, Ca. Immediately following excavation and removal, soil samples were collected from beneath each underground storage tank. During removal of the 285 and 550 gallon tanks, it was observed by the Alameda Hazardous Materials inspector that contamination was present. Upon the inspectors direction samples were taken below each tank and directed further, excavation and soil sampling, until all contaminated material was removed.

The initial samples were taken from native material approximately two (2) feet below bottom of tank level, approximately six (6) feet below grade.

The additional samples required, were taken approximately nine (9) feet below grade in native soil at the bottom of the pit.

The samples were collected from a backhoe scoop of soil by driving a 4-inch by 2-inch brass tube into the soil using a wooden mallet. The samples were secured using aluminum foil, teflon caps, and sealed with duct tape.

The native soil was classified as fractured sandstone and shale.

No groundwater was encountered during the excavation. *why are there water samples?*

The soil samples were refrigerated and shipped to Trace Analysis Laboratory, Inc. in Hayward, Ca. The samples were analyzed for Total Petroleum Hydrocarbons and BTX using EPA methods 3050/8020.

2.2 Site No. 2, Corporation Yard

On June 24, 1988 a 550 gallon underground storage tank was removed from the site located at 898 Redrock Road, Piedmont, CA. The tank was disposed as a hazardous waste to H & H Ship Service Company, San Francisco, CA. Certificates of Disposal are in Appendix B. Following excavation and removal of the tank, soil samples were collected two (2) feet below the bottom of the tank level. The samples were taken from a backhoe scoop of material as described previously.

The native material was classified as coarse grained sand and clay (backfill material from the original quarry).

No groundwater was encounter during excavation.

The soil samples were refrigerated and shipped to Trace Analysis Laboratory, Inc. in Hayward, CA. The samples were analyzed for Total Petroleum Hydrocarbons and BTX using EPA methods 3050/8020.

2.3 Site No. 3, Dracena Park Nursery

On June 30, 1988 the 550 gallon underground storage tank was removed from Dracena Park Nursery, located on Artuna Avenue, Piedmont, CA. The tank was disposed of as a hazardous waste to H & H Ship Service Company, San Francisco, Ca. Certificates of Disposal are in Appendix B. Following tank removal, soil samples were collected from each end of the pit, approximately two (2) feet below the bottom of the tank. The samples were collected from a backhoe scoop of soil as described previously.

Native material was classified as coarse grained sand and clay (backfill material from the original quarry).

No ground water was encountered during excavation.

The soil samples were refrigerated and shipped to Curtis & Tompkins, Ltd in San Francisco, CA. The samples were analyzed for Total Petroleum Hydrocarbons using EPA methods 3550/8020.

3. DISCUSSION AND CONCLUSIONS

3.1 City Hall

The results of laboratory analysis of soil samples taken indicate that contamination is present in the area where the two (2) tanks (A-1 and A-2) were removed and subsequently two (2) new tanks were installed. TPH concentrations were 120 parts per million (ppm) in samples taken directly under the tanks and 250 ppm from samples taken approximately nine (9) feet below grade at the bottom of the pit (Appendix C, CC0181). This showed that all material excavated for installation of the new tanks was contaminated. All material was stockpiled on-site pending direction from the City of Piedmont.

The results of soil samples from tank B show levels not requiring action.

Sample ID.	TANK BOTTOM <i>initial</i>			
	TANK A-1		TANK A-2	
Compound	Results (ppm)	Dct Lmt (ppm)	Results (ppm)	Dct Lmt (ppm)
TPH as Gasoline	120.0	0.5		
TPH as Diesel			<2.0	2.0
Benzene	2.5	0.01	0.3	0.01
Toluene	0.19	0.01	<0.01	0.01
Xylene	0.76	0.01	<0.01	0.01
Ethyl Benzene	<0.01	0.01	<0.01	0.01

Sample ID	PIT BOTTOM <i>final</i>					
	A-1 WEST		A-2 WEST		CENTER EAST	
Compound	Results (ppm)	Dct Lmt (ppm)	Results (ppm)	Dct Lmt (ppm)	Results (ppm)	Dct Lmt (ppm)
TPH as Gasoline	19.0	0.5			250.0	10.0
TPH as Diesel			17.0	3.0		
Benzene	0.35	0.01	0.04	0.01	3.0	0.3
Toluene	0.06	0.01	0.04	0.01	1.1	0.3
Xylene	0.17	0.01	0.16	0.01	4.9	0.5
Ethyl Benzene	<0.01	0.01	0.02	0.01	3.5	0.4

The Regional Water Quality Control Board will require notification that contamination was discovered at this site. The RWQCB will typically require the installation of groundwater monitoring wells if contamination above 100 ppm is encountered during the removal of underground storage tanks.

3.2 Corporation Yard

The results of soil sample analysis for this site show results below detection limits of 0.5 ppm (Appendix C, CC0195).

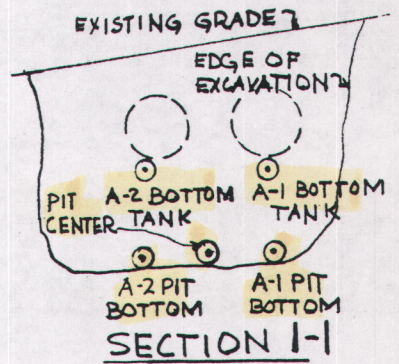
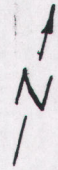
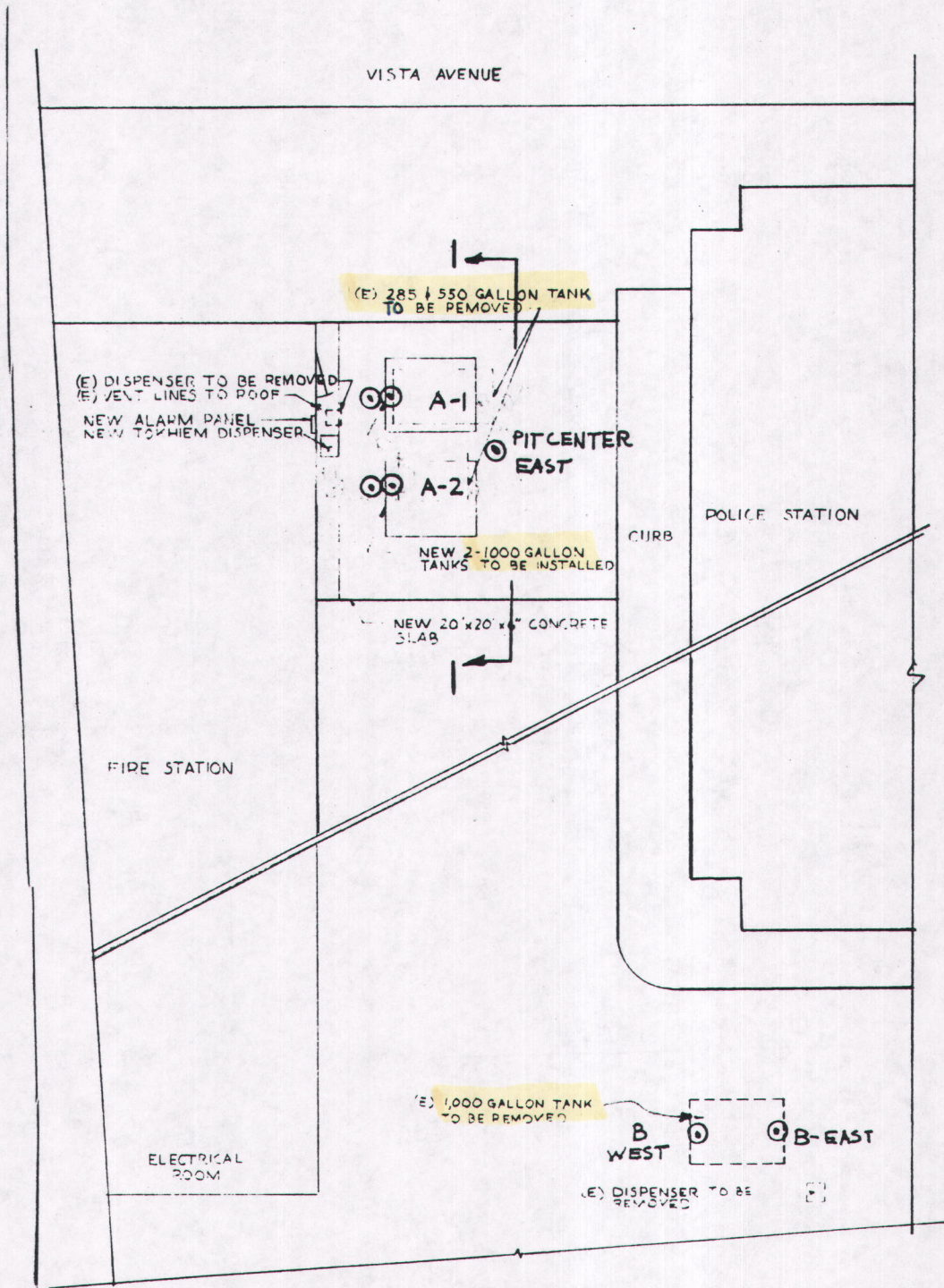
3.3 Dracena Park Nursery

The results of soil sample analysis for this site show results below detection limits of 10 ppm for TPH and 0.008 ppm for Benzene, 0.11 ppm for Toluene, 0.016 ppm for Ethyl Benzene, and 0.047 ppm for Total Xylenes (Appendix C, CC0198).

The results of this investigation represents conditions at the time and location at which samples were collected and for the parameters analyzed in the laboratory. It does not fully characterize the site for contamination resulting from other sources or parameters not analyzed.

4. SITE PLANS

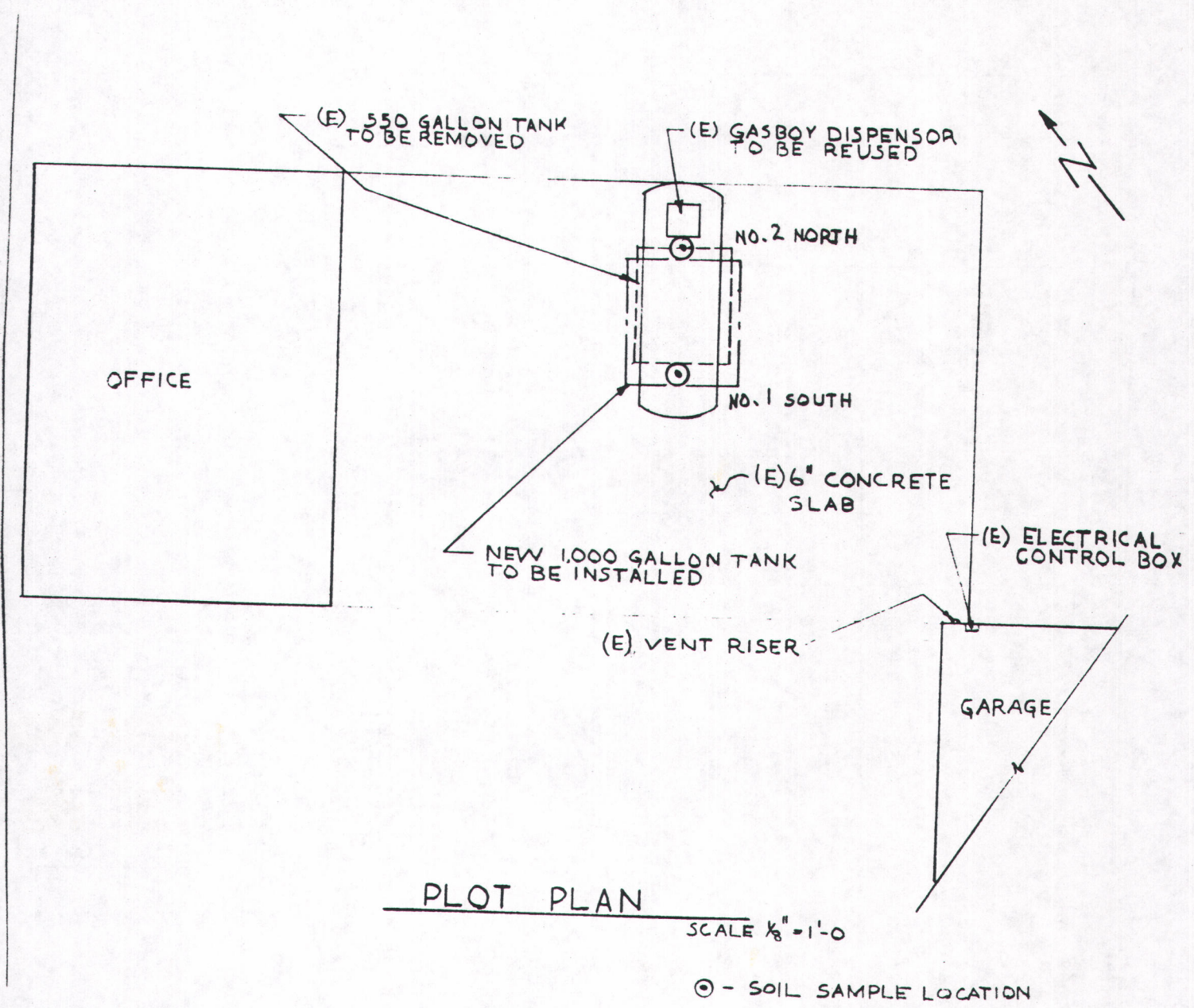
4.1 Site Plan at City Hall



⊙ SOIL SAMPLE LOCATION

PLOT PLAN

4.2 Site Plan at Corporation Yard

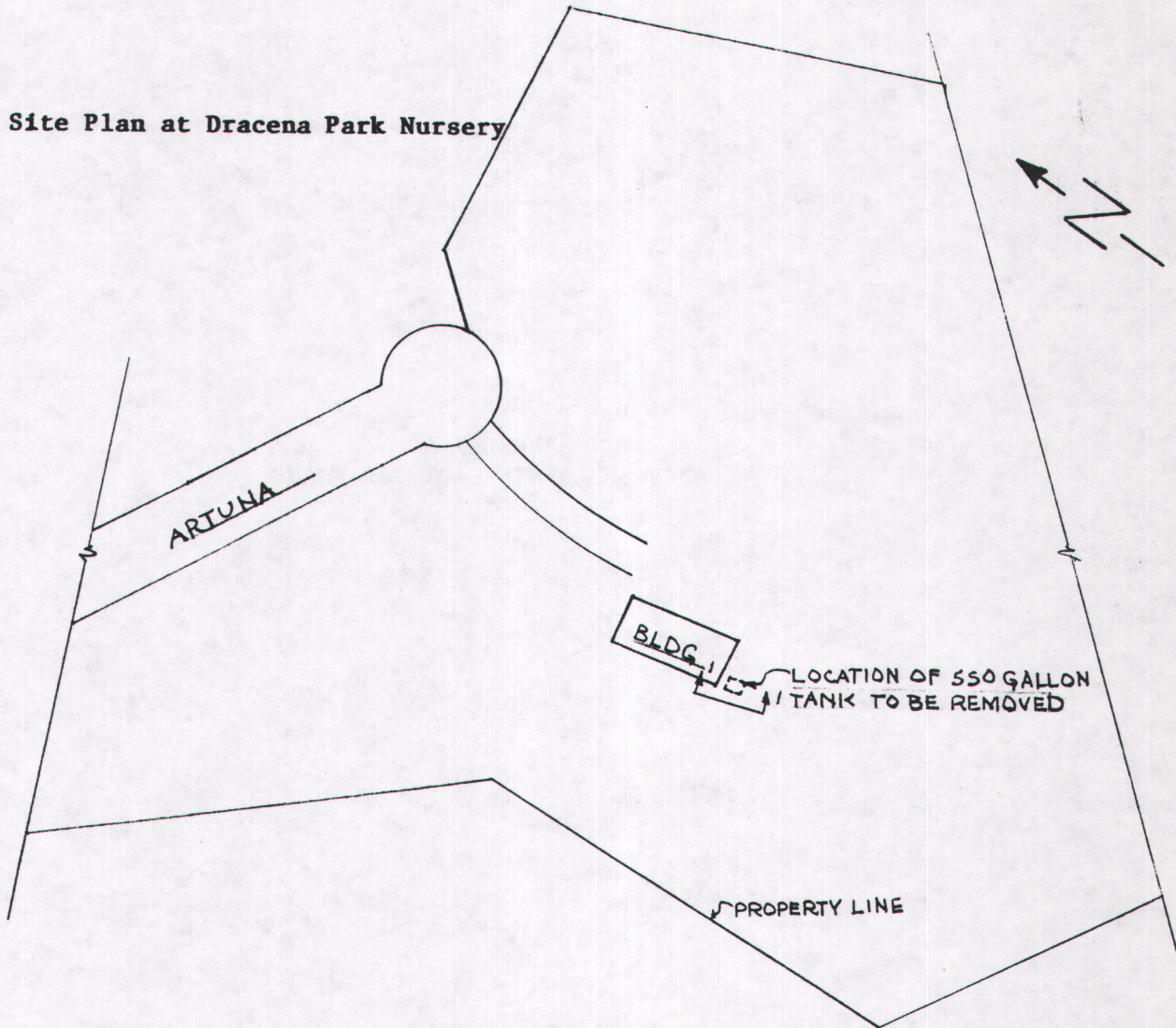


PLOT PLAN

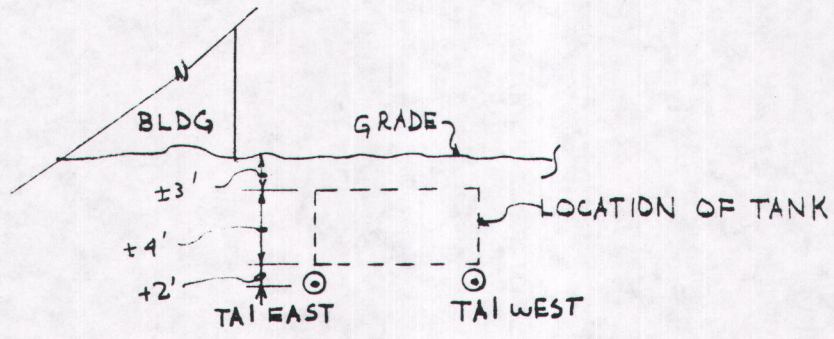
SCALE $\frac{1}{8}'' = 1'-0$

⊙ - SOIL SAMPLE LOCATION

4.3 Site Plan at Dracena Park Nursery



SITE PLAN
NO SCALE



SECTION 1-1

⊙ SOIL SAMPLE LOCATION

APPENDIX A
HAZARDOUS WASTE MANIFEST FORMS

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest ID No.

CA 1010101826161915702

State Generator's ID
7851022

3. Generator Name and Mailing Address

City of Piedmont
120 Vista Ave.

4. Generator's Phone (415) 420-3050

5. Transporter 1 Company Name
H H SHIP SERVICE

6. US EPA ID Number
CA10094771168

7. State Transporter's ID
702454

8. Transporter's Phone
415 543-4855

7. Transporter 2 Company Name

8. US EPA ID Number

9. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

H H SHIP SERVICE
220 CITRUS BASIN ST
SAN FRANCISCO CA 94107

10. US EPA ID Number

G. State Facility's ID

138-0011-178

H. Facility's Phone

543-4855

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers
No. Type

13. Total Quantity

14. Unit
Wt/Vol

15. Waste No.

a. **WASTE HAZARDOUS LIQUID NOS. NA 9189**
ORM-E

1 | U | IV | 900

State
134
EPA/Other

b.

State
EPA/Other

c.

State
EPA/Other

d.

State
EPA/Other

J. Additional Descriptions for Materials Listed Above

DIESEL 108
WATER 998

K. Handling Codes for Wastes Listed Above

a. **01**

b.

c.

d.

15. Special Handling Instructions and Additional Information

GLOVES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name for the City of Piedmont
MICHAEL W. ENRIGHT

Signature
Michael W. Enright

Month Day Year
05 25 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name
THOMAS MILANO

Signature
Thomas Milano

Month Day Year
05 25 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name
PETER YIMBO

Signature
Peter O. Yimbo

Month Day Year
05 25 88

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

HAZARDOUS WASTE MANIFEST **CA 0000 92659**

1. Generator's Name and Mailing Address
CITY OF PIEDMONT
120 VISTA AVE. PIEDMONT, CA. 94601

4. Generator's Phone **(415) 420-3050**

5. Transporter 1 Company Name **H&H SHIP SERVICE**

6. US EPA ID Number **CA D1004771168**

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
H&H SHIP SERVICE
220 CHINA BASIN ST
SAN FRANCISCO, CA 94107

10. US EPA ID Number **CA D1004771168**

11. State Transporter's ID **02-070**

12. Transporter's Phone **(415) 343-0906**

13. State Facility's ID **38-0001E-718**

14. Facility's Phone **(415) 343-0906**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit
	No.	Type		Wt/Vol
a. WASTE HAZARDOUS LIQUID N.O.S. N/A 9189 ORM-E 001/TIT09060G				
b.				
c.				
d.				

State	CA
EPA ID	CA 0000 92659
State	
EPA ID	
State	
EPA ID	

15. Additional Descriptions for Materials Listed Above
WASTE - 9970
CASE 730

K. Handling Codes for Wastes Listed Above
01

15. Special Handling Instructions and Additional Information
Gloves

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **RICHARD C. BROOKS SR** Signature *Richard C. Brooks Sr* Month Day Year **06/30/88**

17. Transporter 1 Acknowledgement of Receipt of Materials
 Printed/Typed Name **DANIEL GERSON** Signature *Daniel Gerson* Month Day Year **06/30/88**

18. Transporter 2 Acknowledgement of Receipt of Materials
 Printed/Typed Name _____ Signature _____ Month Day Year _____

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
 Printed/Typed Name **Roshan Sharkey** Signature *Roshan Sharkey* Month Day Year **06/30/88**

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7650

GENERATOR TRANSPORTER FACILITY

Use print or type. (Form designed for use on office typewriter)

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-962-7550

GENERATOR

TRANSPORTER

FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. **CACD000082685** Manifest Document No. **511311**

3. Generator's Name and Mailing Address
**CITY OF PIEDMONT
ROVISTA AVE
PIEDMONT CA 94411**
4. Generator's Phone **(415) 420-3050**
5. Designated Facility Name and Site Address
**H&H SHIP SERVICE
220 CHINA BASIN ST
SAN FRANCISCO 94107**

6. State Generator's ID
87851311

5. Transporter 1 Company Name
H&H SHIP SERVICE
6. US EPA ID Number
CAD0004771168

7. State Transporter's ID
902465

7. Transporter 2 Company Name
8. US EPA ID Number

D. Transporter's Phone
(415) 543-4835

9. Designated Facility Name and Site Address
**H&H SHIP SERVICE
220 CHINA BASIN ST
SAN FRANCISCO 94107**
10. US EPA ID Number
CAD0004771168

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID
138-1001-78
H. Facility's Phone
(415) 543-4835

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	No.	Type			
a. EMPTY GASOLINE TANK, WASTE FLAMMABLE Liquid UN 1203	0011	TIP	1	550 GAL	512 EPA/Other 0001
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
**EMPTY UNDERGROUND GASOLINE STORAGE
TANK WITH THAN 1 GALLON RESIDUAL
Liquid**

K. Handling Codes for Wastes Listed Above
a. **01**
b.
c.
d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **GREGORY FOR RICHARD B REORS DBURG** Signature: *Gregory P. B...* Month Day Year: **10 16 1988**

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: **JAMES FRANK** Signature: *James Frank* Month Day Year: **10 16 1988**

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: **Cleveland Valley** Signature: *Cleveland Valley* Month Day Year: **10 16 1988**

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **CA 010101018261619157026**

State Manifest Document Number **87851022**

State Generator's ID

State Transporter's ID **902454**

Transporter's Phone **415 543-4855**

State Transporter's ID

Transporter's Phone

State Facility's ID **138-0011-178**

Facility's Phone **543-4855**

3. Generator's Name and Mailing Address
**City of Piedmont
 120 Vista Ave.**

4. Generator's Phone (415) **420-3050**

5. Transporter 1 Company Name **H/H SHIP SERVICE**

6. US EPA ID Number **CA 004771168**

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
**H/H SHIP SERVICE
 220 CHINA BASKET ST
 SAN FRANCISCO CA 94107**

10. US EPA ID Number **CA 0014771168**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	No.	Type			
a. WASTE HAZARDOUS LIQUID NOS. NA 9189 ORM-E	11	11	1900	GM	State 134 EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
**DIESEL 10%
 WATER 99%**

K. Handling Codes for Wastes Listed Above
 a. **01**
 b.
 c.
 d.

15. Special Handling Instructions and Additional Information
GLOVES

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 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **for the City of Piedmont
MICHAEL W. ENRIGHT** Signature *Michael W. Enright* Month Day Year **05 25 88**

17. Transporter 1 Acknowledgement of Receipt of Materials
 Printed/Typed Name **THOMAS MILANO** Signature *Thomas Milano* Month Day Year **05 25 88**

18. Transporter 2 Acknowledgement of Receipt of Materials
 Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
 Printed/Typed Name **PETER YIMBO** Signature *Peter O. Yimbo* Month Day Year **05 25 88**

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

JOB

GENERATOR

TRANSPORTER

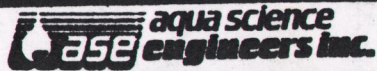
FACILITY

APPENDIX B
CERTIFICATES OF DISPOSAL

APPENDIX C
LABORATORY ANALYSIS AND CHAIN-OF-CUSTODY FORMS

CC01760

* P.O. Box 535, San Ramon, CA 94583-0535



(415) 820-9391

Project Name: CITY OF PIEDMONT Site: 120 VISTA AVE Date: 5-25-88 Laboratory: TRACE ANALYSIS

Sample ID	Sample/Container Type	Analyze/ Hold	Analyze For:	Method - Detection Limit	Notes/Remarks
<u>A-2</u>	<u>W/V</u>		<u>DIESEL</u>		<u>24 hr turnaround</u>
<u>A-2</u>	<u>W/LITER</u>		_____		<u>R</u>
<u>A-1</u>			<u>GASOLINE</u>		<u>"</u>
<u>B</u>			<u>GASOLINE</u>		<u>"</u>
			_____		_____

S = Soil M = Water O = Other
G = Glass BT = Brass Tube P = Plastic V = Vial 0 = Other

Chain of Custody

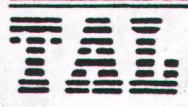
1. Sampled by: _____

2. Courier: _____

3. Received by Lab: Deborah M. Miller
TRACE ANALYSIS LABORATORY
 INVESTMENT BLVD., UNIT 8
 MAYNARD, CA 94545
 Date: 5/25/88

4. Received in Office: Date: _____ (415) 783-6960

- = Collate all samples for single analysis.
- = Collate and analyze two top samples and if clean, do not analyze other sample.
- = Call ASE for instructions.
- = See attached protocol.



DATE: 5/27/88
 LOG NO.: 5996
 DATE SAMPLED: 5/25/88
 DATE RECEIVED: 5/25/88

CUSTOMER: Aqua Science Engineers, Inc.
 REQUESTER: Greg Burg
 PROJECT: No. CC0176, City of Piedmont

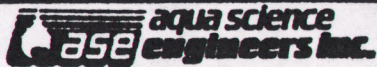
Sample Type: Water

Method and Constituent	Units	A-1		B		A-2	
		Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
DHS Method:							
Total Petroleum Hydrocarbons as Diesel	ug/l					43,000	150
Total Petroleum Hydrocarbons as Gasoline	ug/l	1,100	60	4,500	600		?

Hugh R. McLean
 Hugh R. McLean
 Supervisory Chemist

CC0181

* P.O. Box 535, San Ramon, CA 94583-0535



(415) 820-9391

Project Name: CITY OF PIEDMONT Site: 120 VISTA AVE Date: 5-27-88 Laboratory: TAL

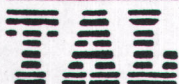
Sample ID	Sample/Container Type	Analyze/ Hold	Analyze For:	Method - Detection Limit	Notes/Remarks
A-1 TANK BOTTOM	S/BT	A	GAS/BTX/E		29 hrs turnaround
A-2 TANK BOTTOM	S		DIESEL/BTX/E		
PIT					
B-1 WEST			GAS/BTX/E		
PIT					
A-2 WEST			DIESEL/BTX/E		
PIT					
CENTR EAST			GAS/BTX/E		
A-2W TANK BOTTOM			DIESEL/BTX/E		
B EAST			GAS/BTX/E		
B-WEST	S/BT		GAS/BTX/E		
B-WATER	W/V	A	GAS	802	29 hrs turnaround

S = Soil M = Water O = Other
 G = Glass BT = Brass Tube P = Plastic V = Vial Q = Other

Chain of Custody

1. Sampled by: Greg Burg
 2. Courier: _____
 3. Received by Lab: TRACE ANALYSIS LABORATORY
3425 INVESTMENT BLVD., UNIT 8
 Date: 5/27/88
RAYWARD, CA 94545
 4. Received in Office: Date: (415) 783-6960

- = Collate all samples for single analysis.
- = Collate and analyze two top samples and if clean, do not analyze other sample.
- = Call ASE for instructions.
- = See attached protocol.



DATE: 5/31/88
 LOG NO.: 6010
 DATE SAMPLED: 5/27/88
 DATE RECEIVED: 5/27/88

CUSTOMER: Aqua Science Engineers, Inc.
 REQUESTER: Gregory Burg
 PROJECT: No. CC0181, City of Piedmont

Sample Type: Soil

Method and Constituent	Units	<i>final</i>		<i>initial</i>		<i>final</i>	
		A-1 Pit West Concentration	Pit West Detection Limit	A-1 Tank Bottom Concentration	Tank Bottom Detection Limit	A-2 Pit West Concentration	Pit West Detection Limit
DHS Method:							
Total Petroleum Hydrocarbons as Diesel	ug/kg					17,000	3,000
Total Petroleum Hydrocarbons as Gasoline	ug/kg	19,000	500	120,000	500		
Modified EPA Method 8020:							
Benzene	ug/kg	350	10	2,500	10	44	10
Toluene	ug/kg	64	10	190	10	38	10
Xylenes	ug/kg	170	10	760	10	160	10
Ethyl Benzene	ug/kg	< 10	10	970	10	22	10

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Sample Type: Soil

Method and Constituent	Units	<i>metcal</i> A-2 Tank Bottom		<i>metcal</i> B East		<i>initial</i> B West	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit	Concen- tration	Detection Limit
DHS Method:							
Total Petroleum Hydro- carbons as Diesel	ug/kg	< 2,000	2,000				
Total Petroleum Hydro- carbons as Gasoline	ug/kg			< 500	500	3,300	500
Modified EPA Method 8020:							
Benzene	ug/kg	320	10	< 10	10	80	10
Toluene	ug/kg	< 10	10	< 10	10	290	10
Xylenes	ug/kg	< 10	10	< 10	10	150	10
Ethyl Benzene	ug/kg	< 10	10	< 10	10	69	10

final
Pit Center East

DHS Method:

Total Petroleum Hydro-
carbons as Gasoline ug/kg 250,000 10,000

Modified EPA Method 8020:

Benzene ug/kg 3,000 300
 Toluene ug/kg 1,100 300
 Xylenes ug/kg 4,900 500
 Ethyl Benzene ug/kg 3,500 400

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Sample Type: Water

<u>Method and Constituent</u>	<u>Units</u>	<u>B Water</u>	
		<u>Concen- tration</u>	<u>Detection Limit</u>
DHS Method:			
Total Petroleum Hydro- carbons as Gasoline	ug/l	49,000	2,000

Hugh R. McLean
Hugh R. McLean
 Supervisory Chemist

HRM:vls