DELPHI

FACILITY INVESTIGATIVE REPORT

APPENDIX A
SECTION 9

California—Environmental Protection Agency
Approved OMB No. 2050-0039 (Expires 9-30-99)
Print or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008323396 — Manifest Document No. 053166
2. Page 1 of 2
Information in the shaded areas is not required by Federal law.

Waste Manifest Document Number 97443618

3. Generator's Name and Mailing Address
DELPHI
1201 N. MAGNOLIA AVE. ANAHEIM, CA 92801
4. Generator's Phone (714) 220-6098

5. Transporter 1 Company Name
UNION PACIFIC RAILROAD
6. US EPA ID Number
NED001792910

7. Transporter 2 Company Name
BNSF
8. US EPA ID Number
MND048314178

9. Designated Facility Name and Site Address
SKLONE MOUNTAIN FACILITY, ROUTE 2, BOX 17
SWAYNOKA, OK 73860 5 MILES EAST, 1 MILE
NORTH OF JUNCTION HWY
10. US EPA ID Number
OKD065438376

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. RQ, HAZARDOUS WASTE, SOLID, N.O.S., 9, NA3077, PG III (D008) (LEAD CONTAMINATED SOIL) 17.9	001	CM	00090	T
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information
LOAD MUST BE COVERED WEAR P.P.E. WHEN HANDLING MATERIAL
24 HR. EMERGENCY # 1-800-535-5053

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: ERIC WENG — Signature — Month 11 Day 18 Year 98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JOHN S. LINDSE, FOR UPRR — Signature — Month 11 Day 18 Year 98

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

FACILITY

19. Discrepancy Indication Space
98-6127

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Joe Mitchell — Signature — Month 12 Day 16 Year 98

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS. (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

GENERATOR

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

DTSC 8022A (4/97)
EPA 8700-22

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-99

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator's US EPA ID No. CAD008312339 Manifest Document No. 015316166

22. Page 2

Information in the shaded areas is not required by Federal law.

L. State Manifest Document Number

M. State Generator's ID

23. Generator's Name Delphi

1201 N Magnolia Ave Anaheim CA

24. Transporter 3 Company Name Triad

25. US EPA ID Number CAD981389879

26. Transporter ____ Company Name

27. US EPA ID Number

N. State Transporter's ID

O. Transporter's Phone 800 637 8001

P. State Transporter's ID 800 324 1138

Q. Transporter's Phone

	28. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a.							
b.							
c.							
d.							
e.							
f.							
g.							
h.							
i.							

S. Additional Descriptions for Materials Listed Above

T. Handling Codes for Wastes Listed Above

32. Special Handing Instructions and Additional Information

GENERATOR

TRANSPORTER

33. Transporter ____ Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date Month Day Year

34. Transporter ____ Acknowledgement of Receipt of Materials

Printed/Typed Name DEAN ASHFORD

Signature Dean Ashford

Date Month Day Year 12 16 98

FACILITY

35. Discrepancy Indication Space

EPA Form 8700-22A (Rev. 10-93) Previous Edition Is Obsolete

ORIGINAL — RETURN TO GENERATOR

PRINTED WITH SOY INK

California Environmental Protection Agency
Approved OMB No. 2050-0039 (Expires 9-30-99)
Please print or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008323396
Manifest Document No. 05367
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Dalphi
1201 N. Magnolia Avenue, Anaheim, CA. 92801
Ontario, CA 91764
4. Generator's Phone ( ) (714) 220-6027

A. State Manifest Document Number 9846036
B. State Generator's ID
C. State Transporter's ID
D. Transporter's Phone
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone

5. Transporter 1 Company Name: Union Pacific Railroad
6. US EPA ID Number: NED017929190

7. Transporter 2 Company Name: BNSF
8. US EPA ID Number: MND014834117818

9. Designated Facility Name and Site Address
Lone Mountain Facility, Route 2, Box 170
Waynoka, OK 73860, 5 miles East, 1 mile
North of Junction Hwy. 281 & 412
10. US EPA ID Number: OKD065338276

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. RQ Hazardous Waste Solid, N.O.S. 9, NA 3077 Pg III (D008') (Lead Contaminated Soil)	001	CM	Est. 00085	T
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above
Profile # XM 98-0654
Lead Contaminated Soil
Car # MP642882
DP 10/6/98

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

15. Special Handling Instructions and Additional Information
Load must be covered, wear P.P.E. when handling material.
24 hr. emergency # 1-800-535-5053
SW 44620

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.

GENERATOR — Printed/Typed Name: Ronald J. Burk Sr. Signature: Ronald J. Burk Sr. Month 12 Day 02 Year 98

TRANSPORTER — 17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: John S. Lindsey for UPRR Signature: [signature] Month 12 Day 02 Year 98

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

FACILITY — 19. Discrepancy Indication Space
99-92

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lori Mitchell Signature: Lori Mitchell Month 01 Day 06 Year 99

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS. (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

DTSC 8022A (4/97)
EPA 8700—22

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

9846036

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-99

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator's US EPA ID No. CAD008323916 Manifest Document No. 053617

22. Page 2/2

Information in the shaded areas is not required by Federal law.

23. Generator's Name
Delphi
1201 N Magnolia Ave, Anaheim, CA 92801

L. State Manifest Document Number

M. State Generator's ID

24. Transporter 3 Company Name
MP Environmental

25. US EPA ID Number CAT000622427

N. State Transporter's ID

O. Transporter's Phone 888-637-8009

26. Transporter ____ Company Name

27. US EPA ID Number

P. State Transporter's ID

Q. Transporter's Phone

28. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a.						
b.						
c.						
d.						
e.						
f.						
g.						
h.						
i.						

GENERATOR

S. Additional Descriptions for Materials Listed Above

T. Handling Codes for Wastes Listed Above

32. Special Handing Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgement of Receipt of Materials

Printed/Typed Name: Elzie Ray Flick

Signature: Elzie Ray Flick

Date: Month 01 Day 05 Year 99

34. Transporter ____ Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

35. Discrepancy Indication Space

nia—Environmental Protection Agency
d OMB No. 2050-0039 (Expires 9-30-99)
or type. Form designed for use on elite (12-pitch) typewriter.

See instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008323396

Manifest Document No. 053618

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number 98460365

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

3. Generator's Name and Mailing Address
Delphi
1201 N. Magnolia Avenue, Anaheim, CA. 92801
Ontario, CA 91764

4. Generator's Phone ( ) (714) 220-6027

5. Transporter 1 Company Name
Union Pacific Railroad

6. US EPA ID Number NEB061792910

7. Transporter 2 Company Name
BNSF

8. US EPA ID Number MND041834171818

9. Designated Facility Name and Site Address
Lone Mountain Facility, Route 2, Box 170
Waynoka, OK 73860, 5 miles East, 1 mile
North of Junction Hwy. 281 & 412

10. US EPA ID Number OKD065428376

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. RQ Hazardous Waste Solid, N.O.S. 9, NA 3077 Pg III (D008') (Lead Contaminated Soil)	001	CM	00085	T
b.				
c.				
d.				

Est 25

51,820

J. Additional Descriptions for Materials Listed Above
Profile # IM 98-0656
Lead Contaminated Soil
MP6419H6

15. Special Handling Instructions and Additional Information
Load must be covered, wear P.P.E. when handling material.
24 hr. emergency # 1-800-535-5053

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: Ronald J. Burke Sr. Signature: Ronald J. Burke Sr. Month 12 Day 02 Year 98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: John S. Lindsey for UPRR Signature: John S. Lindsey Month 12 Day 02 Year 98

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

FACILITY

19. Discrepancy Indication Space
99-100

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Mari Mitchell Signature: Mari Mitchell Month 01 Day 07 Year 99

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS. (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

GENERATOR

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

DTSC 8022A (4/97)
EPA 8700—22

int or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-99

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator's US EPA ID No. CAD008323396 Manifest Document No. 053168

22. Page 2/2

Information in the shaded areas is not required by Federal law.

23. Generator's Name
Delphi
1201 W Magnolia Ave Anaheim, CA 92801

L. State Manifest Document Number

M. State Generator's ID

24. Transporter 3 Company Name
MP Environmental

25. US EPA ID Number CAT000612447

N. State Transporter's ID

O. Transporter's Phone 888-637-8009

26. Transporter ____ Company Name

27. US EPA ID Number

P. State Transporter's ID

Q. Transporter's Phone

28. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a.						
b.						
c.						
d.						
e.						
f.						
g.						
h.						
i.						

S. Additional Descriptions for Materials Listed Above

T. Handling Codes for Wastes Listed Above

32. Special Handing Instructions and Additional Information

GENERATOR

TRANSPORTER

33. Transporter 3 Acknowledgement of Receipt of Materials

Printed/Typed Name on behalf of MP Joe Clyburn

Signature Joe Clyburn

Date: Month 01 Day 07 Year 99

34. Transporter ____ Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

35. Discrepancy Indication Space

EPA Form 8700-22A (Rev. 10-92) Previous editions

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD009329396

Manifest Document No. 053169

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Delphi
1201 N. Magnolia Avenue, Anaheim, CA. 92801
Ontario, CA 91764

4. Generator's Phone ( ) (714) 220-6027

A. State Manifest Document Number 98460364

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone (800) 576-0646

E. State Transporter's ID

F. Transporter's Phone (800) 729-9273

G. State Facility's ID

H. Facility's Phone (580) 657-3520

5. Transporter 1 Company Name: Union Pacific Railroad

6. US EPA ID Number: NPD001792916

7. Transporter 2 Company Name: BNSF

8. US EPA ID Number: MND014834178 8

9. Designated Facility Name and Site Address
Lone Mountain Facility, Route 2, Box 170
Waynoka, OK 73860, 5 miles East, 1 mile
North of Junction Hwy. 281 & 412

10. US EPA ID Number: OKD065438376

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. RQ Hazardous Waste Solid, N.O.S. 9, NA 3077 Pg III (D008') (Lead Contaminated Soil)	001	CM	Est. 20 00085	T	State 181; EPA/Other D008
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above
Profile # LM 98-0654
Lead Contaminated Soil
D.P.# 96281
Car # FRDN 41268

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

15. Special Handling Instructions and Additional Information
Load must be covered, wear P.P.E. when handling material.
24 hr. emergency # 1-800-535-5053

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: Ronald J. Burk SR | Signature: Ronald J. Burk | Month 12 Day 02 Year 98

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: John S. Lindsey for UPRR | Signature: John S. Lindsey | Month 12 Day 02 Year 98

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

19. Discrepancy Indication Space
99-107

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Keri Mitchell | Signature: Keri Mitchell | Month 01 Day 07 Year 99

GENERATOR

TRANSPORTER

FACILITY

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS. (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

DTSC 8022A (4/97)
EPA 8700—22

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

(Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-99

HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator's US EPA ID No. CAD008323316 Manifest Document No. 953619

22. Page 2/2

Information in the shaded areas is not required by Federal law.

Generator's Name: Delphi
1201 W Magnolia Ave, Anaheim, CA 92801

L. State Manifest Document Number

M. State Generator's ID

24. Transporter 3 Company Name: MP Environmental

25. US EPA ID Number: CAT000624247

N. State Transporter's ID

O. Transporter's Phone 888-637-8009

26. Transporter ____ Company Name

27. US EPA ID Number

P. State Transporter's ID

Q. Transporter's Phone

	28. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a.							
b.							
c.							
d.							
e.							
f.							
g.							
h.							
i.							

GENERATOR

S. Additional Descriptions for Materials Listed Above

T. Handling Codes for Wastes Listed Above

32. Special Handing Instructions and Additional Information

TRANSPORTER

33. Transporter ____ Acknowledgement of Receipt of Materials

Printed/Typed Name: Rinnie Stanley

Signature: Rinn Stan

Date: Month 10 Day 7 Year 99

34. Transporter ____ Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

35. Discrepancy Indication Space

EPA Form 8700-22A (Rev. 10-92) Previous editions are obsolete.

ORIGINAL - RETURN TO GENERATOR

ia—Environmental Protection Agency
d OMB No. 2050-0039 (Expires 9-30-99)
or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008323396 — Manifest Document No. 05370
2. Page 1 of 2

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Dalphi
1201 N. Magnolia Avenue, Anaheim, CA. 92801
Ontario, CA 91764
4. Generator's Phone ( ) (714) 220-6027

A. State Manifest Document Number: 98460363
B. State Generator's ID: CAR000000054
C. State Transporter's ID:
D. Transporter's Phone:
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone:

5. Transporter 1 Company Name: Union Pacific Railroad
6. US EPA ID Number: NPD000179290

7. Transporter 2 Company Name: BNSF
8. US EPA ID Number: MND048341788

9. Designated Facility Name and Site Address: Lone Mountain Facility, Route 2, Box 170
Waynoka, OK 73860, 5 miles East, 1 mile North of Junction Hwy. 281 & 412
10. US EPA ID Number: OKD065438376

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Numbers
a. RQ Hazardous Waste Solid, N.O.S. 9, NA 3077 Pg III (D008') (Lead Contaminated Soil)	001	CM	EST. 00085	T	State: EPA/Other: 0000
b.	51140				State: EPA/Other:
c.					State: EPA/Other:
d.					State: EPA/Other:

J. Additional Descriptions for Materials Listed Above
Profile # IM 98-0654
Lead Contaminated Soil
DP-96281
Car # CNW 130239

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

15. Special Handling Instructions and Additional Information
Load must be covered, wear P.P.E. when handling material.
24 hr. emergency # 1-800-535-5053

SW 51140

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.

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Printed/Typed Name	Signature	Month	Day	Year
Ronald J. Burk SW	Ronald J. Burk SW	12	02	98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
John S. Lindse, for UPRR	John S. Lindse	12	02	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space
99-114

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

Printed/Typed Name	Signature	Month	Day	Year
Mari Mitchell	Mari Mitchell	01	07	99

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS. (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

GENERATOR — TRANSPORTER — FACILITY

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

DTSC 8022A (4/97)
EPA 8700—22

Form Approved. OMB No. 2050-0039. Expires 9-30-99

(Form designed for use on elite (12-pitch) typewriter.)

HAZARDOUS MANIFEST (uation Sheet)

21. Generator's US EPA ID No. CAD008323396 — Manifest Document No. 053710

22. Page 2/2

Information in the shaded areas is not required by Federal law.

L. State Manifest Document Number

M. State Generator's ID

r's Name phi
1 W Magnolia, Ave Anaheim, CA 92801

ansporter 3 Company Name MP Environmental

25. US EPA ID Number CAT000624247

N. State Transporter's ID

O. Transporter's Phone 888-637-8009

. Transporter _____ Company Name

27. US EPA ID Number

P. State Transporter's ID

Q. Transporter's Phone

GENERATOR

	28. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a.							
b.							
c.							
d.							
e.							
f.							
g.							
h.							
i.							

S. Additional Descriptions for Materials Listed Above

T. Handling Codes for Wastes Listed Above

32. Special Handing Instructions and Additional Information

TRANSPORTER

33. Transporter _____ Acknowledgement of Receipt of Materials

Printed/Typed Name: Rinnic Stanley

Signature: Rinn Sta

Date: Month 1 Day 7 Year 97

34. Transporter _____ Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date: Month Day Year

FACILITY

35. Discrepancy Indication Space

HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator's US EPA ID No. CAD008323396 Manifest Document No. 0153

Generator's Name
Delphi
1201 W Magnolia Ave, Anaheim, CA 92801

M. State Generator's ID

24. Transporter 3 Company Name: M P Environmental
25. US EPA ID Number: CAT000627242 47
N. State Transporter's ID
O. Transporter's Phone 888-237-3007

26. Transporter ____ Company Name
27. US EPA ID Number
P. State Transporter's ID
Q. Transporter's Phone

	28. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	29. Containers No.	Type	30. Total Quantity	31. Unit Wt/Vol	R. Waste No.
a.							
b.							
c.							
d.							
e.							
f.							
g.							
h.							
i.							

S. Additional Descriptions for Materials Listed Above

T. Handling Codes for Wastes Listed Above

32. Special Handing Instructions and Additional Information

GENERATOR

TRANSPORTER

33. Transporter ____ Acknowledgement of Receipt of Materials
Printed/Typed Name: Jerry Pollock
Signature: Jerry Pollock
Date: Month Day Year 01 07 89

34. Transporter ____ Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

FACILITY

35. Discrepancy Indication Space

EPA Form 8700-22A (Rev. 10-92) Previous editions are obsolete.

REVISED REPORT
EVALUATION OF REMEDIAL ACTION ALTERNATIVES
AND SELECTION OF AN APPROPRIATE ALTERNATIVE
DELCO REMY SITE
NORTHWEST FIELD AREA
FOR DELCO REMY

JOB NO. 14197-009-128
OCTOBER 10, 1989

DAMES & MOORE

SANTA ANA, CALIFORNIA

DAMES & MOORE A PROFESSIONAL LIMITED PARTNERSHIP
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October 12, 19889

Delco Remy
Anaheim Battery Plant
1201 North Magnolia
Anaheim, CA 92803

Attention: Mr. Ken Rayle
Project Engineer

Subject: Revised Report
Evaluation of Remedial Action Alternatives
and Selection of an Appropriate Alternative
Delco Remy Site
Northwest Field Area
Anaheim, California
For Delco Remy

Dear Ken:

Transmitted with this letter are five copies of the subject document.

Please do not hesitate to call me if there are any questions regarding this document.

Sincerely,

DAMES & MOORE

Essi Esmaili, Ph.D.
Associate/Senior Hydrogeologist
RG #4469

EE:mdm
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REVISED REPORT
EVALUATION OF REMEDIAL ACTION ALTERNATIVES
AND SELECTION OF AN APPROPRIATE ALTERNATIVE
DELCO REMY SITE
NORTHWEST FIELD AREA
ANAHEIM, CALIFORNIA

1.0 INTRODUCTION

This document presents an evaluation of remedial action alternatives and proposes an appropriate alternative for the northwest field of the Delco Remy site (site). The site is located at 1201 North Magnolia Avenue, Anaheim, California (Figures 1 and 2). Specifically, this document contains:

- Analytical results of soil samplings at the northwest field;
- Discussion of geology and hydrogeology of the site;
- Site remediation objectives;
- Evaluation of appropriate remedial alternatives for lead-affected soil; and
- Selection of and recommendation for an appropriate remedial action alternative.

1.1 BACKGROUND

Delco Remy manufactures lead-acid batteries for motor vehicles and marine vessels at the site. The facilities at the site consist of a main manufacturing building, several smaller buildings, and related support operations (Figure 2).

The natural precipitation (storm water) that falls on the site collects in a series of drainage ditches at the site. An unlined drainage ditch at the northwestern boundary of the site (Figure 2) was used to transfer the collected storm water at the site and discharge it directly to the Magnolia Storm Drain Channel under a National Pollution Discharge Elimination

System (NPDES) permit (number CA0107093). The Magnolia Storm Drain Channel is a tributary of the San Gabriel River.

In September 1988, Delco Remy constructed a retention basin to collect storm water runoff at the site (Figure 3). The purposes of the basin were to reduce the potential of discharging storm water with excessive suspended solid and/or lead content and to comply with a mandate by the Regional Water Quality Control Board (RWQCB)-Santa Ana Region. This basin is used to temporarily collect the storm water during incidental heavy rains. The collected storm water would subsequently be filtered and discharged to the Magnolia Storm Drain Channel. As part of the construction, Delco Remy also backfilled the unlined ditch and installed an underground pipe system to transfer the storm water to the Magnolia storm drain channel.

Prior to the excavation associated with construction of the retention basin and underground pipe system, Delco Remy retained Dames & Moore to test the soil in the unlined storm drain ditch and the proposed retention basin area for lead content. The initial soil sampling and testing revealed elevated levels of lead in the soil in the above areas. The vertical and horizontal extents of elevated lead concentrations were assessed by conducting a series of additional soil sampling and testing. Section 2.0 presents the sampling and analytical methodology and the results of these tasks.

The preliminary results of the soil lead analyses were submitted to the Orange County Health Care Agency (OCHCA) and the South Coast Air Quality Management District (SCAQMD). Separate followup meetings were arranged with the OCHCA and the SCAQMD to discuss the preliminary results of lead concentrations in soil, the construction of a retention basin, and the installation of an underground pipe system at the northwest field area. Both the OCHCA and the SCAQMD were informed that as part of the construction activities, lead-affected

soil will be excavated and stockpiled at the site for future remediation. In the meetings, Dames & Moore presented a work plan outline and a Health and Safety Plan to be implemented during the excavation of lead-affected soil. As a result of these meetings, permission from the OCHCA and a variance from the SCAQMD were obtained to commence and complete the excavation at the northwest field area. As part of the construction activities, about 3,000 cubic yards of soil with elevated lead concentrations were excavated and stockpiled onsite at the location shown on Figure 3.

In December 1988, Dames & Moore prepared a Remedial Action Plan (RAP) for Delco Remy regarding remediation of the soil stockpiled at the site. The RAP was submitted to OCHCA for review and approval. By concurrence of OCHCA, the RAP was implemented during May through August, 1989. As part of the RAP, the stockpiled soil was treated onsite and disposed of at Santiago Canyon Class III landfill, which is located in Orange County.

This present document discusses remedial alternatives for the rest of the northwest field and proposes the most appropriate alternatives to be implemented at the site.

1.2 ORGANIZATION

The remaining portions of this document are organized as follows:

Section 2.0 - Soil Analytical Results

Section 3.0 - Geologic and Hydrogeologic Setting

Section 4.0 - Evaluation of Remedial Action Alternatives

Section 5.0 - Selection of and Recommendation for a Remedial Action Alternative

2.0 SOIL ANALYTICAL RESULTS

This section presents the analytical results of the soil samples collected from several areas, including an off-site area north of the site (background samples), the on-site northwest field, and the on-site storm drain ditch area. The field and laboratory methodologies are discussed in Sections 2.1 and 2.2 and the results are presented in Sub-sections 2.3.1 through 2.3.3.

In September 1989, 14 background surface soil samples (depths of 0 to 0.5 feet) were collected in an off-site area north of the site along Interstate 5 Freeway. Locations of thesse samples, designated as NF-1 through 14, are shown on Figure 3. The background samples were analyzed for total and soluble lead concentrations (see Subsection 2.2). The purpose for sampling and analyzing of these samples were to obtain baseline data on the background lead concentrations in the general vicinity of the site. The analytical results of the background samples are discussed in Subsection 2.3.1.

In June and August of 1988, samples of surface and near-surface soils were collected along the unlined storm drain ditch area and the northwest field and analyzed for lead. These samples, referred to as investigative samples, were collected to assess the vertical and lateral extent of lead concentrations in soil. The results of the investigative samples are discussed in Subsection 2.3.2.

In September 1988, after excavation of the lead-affected soil from the unlined drainage ditch and the retention basin, confirmatory soil samples were collected from the bottom of excavations and analyzed for soluble lead. The results of the confirmatory samples are discussed in Subsection 2.3.3.

2.1 SAMPLING METHODOLOGY

As noted above, disturbed soil samples were collected from various depth intervals (Tables 1 and 2) below ground surface (bgs) at locations shown on Figures 3 and 4. For near-surface samples (0 to 0.5 ft), a stainless steel trowel was used to collect the samples. For deeper samples, a hand auger was used to bore to the desired depth. When the appropriate depth was reached with the auger, the sample was removed from the boring. Soil was removed from the trowel or the barrel of the auger and packed firmly into glass jars. The jars were then capped with Teflon lined lids, and affixed with custody seals and vinyl tape. Labels were affixed to the lid of each jar and contained the following information: date, sample location, sampler's signature, sample number, depth, time, and name of the site. The soil samples were then placed in an ice chest containing ice for transport to a California Department of Health Services (DHS)-certified analytical laboratory for analysis. Chain-of-custody forms were completed in the field and transported with the samples to the laboratory.

Between each sample, sampling equipment was cleaned with a dilute solution of trisodium phosphate (TSP) or equivalent detergent in water, then rinsed with fresh water, and rinsed again with deionized water.

2.2 ANALYTICAL METHODS

The soil samples were analyzed for total lead and/or soluble lead concentrations (Tables 1 and 2) using EPA Methods 7421, 7420, 200.7 or 239.1 for lead analysis (see laboratory reports for details). Soluble lead was extracted using the Waste Extraction Test (WET) procedure in the California Code of Regulations, Title 22, Division 4, Section 66700. Some of the samples were also analyzed for pH by EPA Method 9040, as specified in Table 2.

2.3 DISCUSSION OF ANALYTICAL RESULTS

2.3.1 BACKGROUND SAMPLES

This section discusses the analytical results of the background soil samples (NF-1 through 14). The sampling locations are shown in Figure 3. The analytical results of the background soil samples are summarized in Table 1. The laboratory reports are included in Appendix A.

As noted in Table 1, the total lead concentrations of the background soils range from 25 mg/kg (Sample NF-6) to 690 mg/kg (Sample NF-3). The soluble lead concentrations ranged from 2.3 mg/l (NF-6) to 72 mg/l (NF-3). The percentage of the extractable lead (extracted by WET procedure) are given in Table 1. About 70 to 100 percent of the total lead in the background samples was extracted during WET extraction.

The majority of the background samples (8 samples out of 14 samples) had soluble lead concentrations exceeding the Soluble Threshold Limit Concentration (STLC) level (Table 1). Presence of such relatively high soluble lead levels and total lead concentration (up to 690 mg/kg) are believed to be due to the close proximity of the background sampling area to the Freeway I-5. It is believed that the lead content in leaded gasoline, after combustion in the car engine, is released into the air through the exhaust pipes of the car. The released lead in the air, which is expected to be in an oxidized state due to combustion in the car engine, should precipitate and be accumulated in the soil in the proximity of the freeway. Since the Delco Remy site is in the close proximity of the I-5 Freeway (Figures 1, 2, and 3), it is justified to conclude that the lead concentrations in the background soil samples reflect the background concentrations expected in the area of the site as well.

2.3.2 INVESTIGATIVE SAMPLES

This section includes a summary of the June and August 1988 soil sampling and analytical results. The sampling locations are shown in Figure 4. The analytical results of the soil samples are summarized in Table 2, and the laboratory reports are included in Appendix A.

The soil samples collected from the unlined ditch area in June and August of 1988 were designated as DD, followed by a number to designate location (Figure 4) and a letter to designate depth (Table 2). Soluble lead concentrations in the ditch samples ranged from a low of 0.11 mg/l in Sample DD2-D to a high of 225 mg/l in Sample DD3-A (Table 3). The soil with elevated lead concentrations in the ditch area were excavated during September 1988 construction and later treated on site and disposed of in Santiago Canyon landfill, as discussed in Subsection 1.2

The soil samples collected from the northwest field in June and August, 1988 were designated as NW, followed by a number to designate location (Figure 4), and a letter to designate depth (Table 2). Concentrations of total lead (Table 2) in surface samples (0 to 0.5 foot bgs) in the northwest field ranged from a low of 54 mg/kg in the field's northwest corner (Sample NW8-A), to a high of 9,850 mg/kg in the southeast corner (Sample NW1-A) (Table 2 and Figure 4). Similarly, the low and high soluble lead values of 3.6 mg/l and 1,130 mg/l occurred at the same respective samples. Except for NW-1 and NW-4 locations, the total and soluble lead concentrations in samples collected from other locations in the northwest field (Figure 4) were within the concentration range observed in the background samples (compare concentrations in Tables 1 and 2).

The pH values for the surface soils in the northwest field ranged from 7.05 to 8.75 along the drainage ditch and from 8.15 to 8.85 in the northwest field (Table 2).

2.3.2 CONFIRMATORY SAMPLES

As mentioned previously, in September 1988, during the installation of the underground pipe system and the construction of the retention basin, the soil with suspected lead concentration values above the STLC level was excavated and stockpiled at the site. Samples TD1 through 3 and A1 through A4 were collected from the bottom of the excavations, at locations shown on Figure 4. The samples were analyzed for soluble lead content to check whether the soil with soluble lead concentration above the STLC remains in the ground. Only TD2, TD3, and A2 showed soluble lead concentrations above STLC level (Table 2). Additional excavation at these locations was performed, and the excavated soil was stockpiled at the site.

On September 23, 1988, confirmatory Samples A8 through A22 (Figure 4) were collected at the bottom of the excavations with Mr. David Dixon from the OCHCA present during the sampling. The soluble lead concentration values of these samples (Table 3) ranged from non-detectable (<0.1 mg/l) to 32.1 mg/l, with a majority of the samples well below the STLC level. Soluble lead concentrations of only two samples (A8 and A11) (Table 2), exceeded the STLC level of 5.0 mg/l. Spot cleanup excavations at these locations were performed. On September 23, 1988, additional confirmatory samples (RS1 and RS2) (Figure 4), were collected in these two areas with Mr. David Dixon from the OCHCA present during the sampling. The soluble lead concentrations in Samples RS1 and RS2 were reported at 0.27 mg/l and 0.16 mg/l, respectively, which are well below the STLC level of 5.0 mg/l. The results of the confirmatory samples indicated that the soils with likely soluble lead concentrations above the STLC level have been removed from the storm drain ditch and the retention basin area. As previously mentined in Subsection 1.1, the excavated soil was stockpiled at the site, treated, and disposed of at Santiago Canyon Class III landfill.

3.0 GEOLOGIC AND HYDROGEOLOGIC SETTING

3.1 REGIONAL SETTING

The site is located in the northern part of the Orange County Coastal Plain and is locally underlain by a thick sequence of poorly consolidated to unconsolidated clay, silt, sand, and gravel of continental origin. The sediments were deposited by rivers draining highland areas to the north and transporting sediment west and southwestward across the Orange County Plain. The nearby surface water bodies include the Santa Ana River 6-1/2 miles to the east, Carbon Creek 1-1/2 miles to the south, and Coyote Creek 5.2 miles to the west. Alluvial deposits are generally described as widely variable mixtures of clay, silt, sand, and gravel.

The site is situated in the lower Santa Ana River Ground-Water Basin. This basin is actually part of a larger ground-water basin that underlies both the Los Angeles and Orange County Coastal Plains. Well records indicate that the regional ground-water table, used sparingly for domestic water supply, occurs approximately 100 feet below ground surface in the site area. Deeper aquifers are used more for domestic purposes. The Orange County Water District report from 1984-85 indicates a southwesterly flow direction for the regional water table. Shallow ground-water flow is reportedly to the southwest (Orange County Water District, 1986).

The quality of the shallow ground water, where present, in the area is generally considered very poor. Recent publications by Robbins (1986) report concentrations of total dissolved solids in excess of several thousand milligrams per liter in the perched ground water. Water wells in the area do not utilize the shallow ground water. The ground-water quality in the deeper producing zones in the Anaheim area is generally good. Values up to 600 milligrams per liter for total dissolved solids and up to 325 milligrams per liter for

hardness in deep ground water have been reported in the Anaheim area.

3.2 SITE SPECIFIC SETTING

As part of the previous site investigations, three ground-water monitoring wells, MW-1 through MW-3, were installed, sampled, and analyzed at the site (Figure 5). The purpose, methodology, and results of the installation of these monitoring wells have been discussed in Dames & Moore's November 1, 1988 report entitled "Report of Ground-Water Investigation for Delco Remy, Anaheim, California." This report was submitted to the Regional Water Quality Control Board (RWQCB), Santa Ana Region. The boring logs of the monitoring wells are included in Appendix B. A geologic cross section was prepared (Figure 6) based on the boring logs. The site specific geology and hydrogeology are derived from the results of these monitoring wells.

Based on the exploratory drilling results, the site geology is characterized by relatively fine-grained sediments, predominantly dense to medium dense silt and clay, from the surface to between fifteen and twenty feet bgs. The upper silt and clay layer is underlain by a coarser-grained interval of soil, generally sand, to an approximate depth ranging from twenty-five to thirty-five feet bgs. Beneath this sandy interval, sediments are characterized as interbedded sands and silts up to the total depth of the monitoring well borings.

Shallow ground water was encountered at the site at approximately 30 feet bgs. Based on the water level measurements conducted in July 1988, the ground water showed a southwesterly flow direction beneath the site.

4.0 EVALUATION OF REMEDIAL ACTION ALTERNATIVES

4.1 SITE REMEDIATION OBJECTIVES

The primary goals of remediation at the site are to protect human health, environment, and the waters of the state from potential adverse affects or degradation resulting from the lead concentrations in the shallow soil. Specific objectives of the site remediation are as follows:

- Assist in minimizing the potential for offsite migration of lead to potential receptors; and
- Assist in the prevention of lead from coming into contact with ground water or surface water.

In order to achieve the above goals and objectives, and to establish appropriate site cleanup criteria, the following factors were considered:

- Extent of lead concentrations in the soil;
- Environmental factors that may affect migration of lead from the site to the environment, including soil physical and chemical properties, potential attenuation of lead, area rainfall, surface water considerations, etc.;
- Proximity to and potential for beneficial use of ground water and surface water;
- Potential biological receptors and exposure pathways;
- Past and potential future site land use; and
- Cost effectiveness.

4.2 DISCUSSION OF POTENTIAL LEAD MIGRATION TO GROUND WATER

Based on the results of surface and subsurface soil sampling at the northwest field (Section 2.0), lead is the major element of concern in onsite soils. Results of chemical analyses indicate lead concentrations attenuating within the upper one foot of soil in the northwest field.

As stated in Section 3.2, the results of subsurface investigations indicate that the site is underlain with about 15 to 20 feet of a dense to medium dense silt and clay layer. This layer was also observed in the excavation of the retention basin, in the northwest field area. The first ground water occurs at approximately 30 feet bgs.

The migration of lead in the soil (unsaturated zone) is controlled by physical and chemical processes. Because lead and lead compounds are in solid form and non-volatile, lead can potentially migrate, if it migrates at all, in a dissolved phase in the unsaturated zone. Given our current understanding of the site, potential infiltration of natural (rain) and irrigation water, if any, into the soil appears to be the possible mechanism that may dissolve lead and carry it to the ground water. Such a possibility is discussed below.

4.2.1 POTENTIAL INFILTRATION OF WATER

The potential infiltration rate of water into the soil at the site is a function of duration and intensity of precipitation, evapotranspiration, runoff, antecedent moisture content, and hydraulic conductivity of soil. The average annual precipitation at the site is about 14 inches (Poland, 1959). Whereas, the potential evaporation (Mean Annual Class A Pan Evaporation) at the site area is about 65 inches (Climatic Atlas of the United States, 1968). Therefore, because almost all of the rainfall at the site can potentially be evaporated, natural infiltration is expected to be very insignificant.