

From: American Laboratories and
Research Services, Inc.
P.O. Box 15609
Hattiesburg, MS 39402-5609
601-264-9320

Date: October 9, 1990

To: Mr. William H. Cooper
PPG Industries
Chemicals Division
P.O. Box 1000
Lake Charles, LA 70602

The following analytical results have been obtained for the
indicated sample which was submitted to this laboratory:

Sample I.D. AA04887

LL-1396

Sample location: PPGHC

Cooling Tower Sludge (A)

Collected by: PREJEAN

Collection date: 09/07/90 Time: 13:30

Laboratory submittal date: 09/13/90 Time: 19:00

Received by: RLH

Validated by: RLH

Parameter: TCLP Extraction
Method reference: SW846-1311
Result: done
Date started: 09/20/90
Time started: 11:45

Date finished: 09/21/90
Analyst: MJF

Parameter: TCLP Metals
Method reference: SW846 3rd Ed
Result: see appended report
Date started: 09/27/90
Time started: 09:00

Date finished: 10/08/90
Analyst: JSC

Parameter: TCLP Volatile Organics
Method reference: EPA 624
Result: see appended report
Date started: 09/30/90
Time started: 19:54

Date finished: 09/30/90
Analyst: BB

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Sample I.D. AA04887 (continued)

Parameter: TCLP Semi-Volatiles
Method reference: EPA 625
Result: see appended report
Date started: 09/28/90
Time started: 02:11

Date finished: 09/28/90
Analyst: BB

Parameter: Selected Volatile Organics
Method reference: SW846-8240
Result: see appended report
Date started: 10/02/90
Time started: 21:18

Date finished: 10/02/90
Analyst: BB

Parameter: Semi-Volatile Organics
Method reference: SW846-8270
Result: see appended report
Date started: 10/02/90
Time started: 22:31

Date finished: 10/02/90
Analyst: BB

Parameter: pH
Method reference: EPA 150.1
Result: 7.69 SU
Date started: 09/14/90
Time started: 15:00

MDL or sensitivity: 0.00
Date finished: 09/14/90
Analyst: KEL

Data for TCLP Volatile Organics ug/L

Component Name	Concentration	Component MDL
Benzene	Not Det	10
Carbon Tetrachloride	Not Det	10
Chlorobenzene	Not Det	10
Chloroform	Not Det	10
1,2-Dichloroethane	Not Det	10
1,1-Dichloroethene	Not Det	10
Methyl Ethyl Ketone	Not Det	10
Tetrachloroethene	Not Det	10
Trichloroethene	Not Det	10
Vinyl Chloride	Not Det	10
Pyridine	Not Det	500

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Sample I.D. AA04887 (continued)

Data for TCLP Semi-Volatiles ug/L

Component Name	Concentration	Component MDL
1,4-Dichlorobenzene	Not Det	10
Hexachloroethane	Not Det	10
Nitrobenzene	Not Det	10
Hexachlorobutadiene	Not Det	10
2,4-Dinitrotoluene	Not Det	10
Hexachlorobenzene	Not Det	10
Cresols, total	Not Det	20
2,4,6-Trichlorophenol	Not Det	10
2,4,5-Trichlorophenol	Not Det	50
Pentachlorophenol	Not Det	50

Data for TCLP Metals mg/L

Component Name	Concentration	Component MDL
Arsenic, TCLP	.016	.005
Barium, TCLP	1.3	.1
Cadmium, TCLP	Not Det	.01
Chromium, TCLP	.05	.03
Lead, TCLP	.04	.04
Mercury, TCLP	.014	.005
Selenium, TCLP	Not Det	.005
Silver, TCLP	.06	.03

Data for Selected Volatile Organics mg/Kg

Component Name	Concentration	Component MDL
Chloromethane	Not Det	10
Bromomethane	Not Det	10
Vinyl Chloride	39	10
Chloroethane	100	10
Methylene Chloride	47	5
1,1-Dichloroethene	Trace	5
1,1-Dichloroethane	Not Det	5
trans-1,2-Dichloroethene	Not Det	5
Chloroform	25	5
1,2-Dichloroethane	150	5

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Data for Selected Volatile Organics (continued)

Component Name	Concentration	Component MDL
1,1,1-Trichloroethane	160	5
Carbon Tetrachloride	Trace	5
Bromodichloromethane	Not Det	5
1,2-Dichloropropane	Not Det	5
t-1,3-Dichloropropene	Not Det	5
Trichloroethene	71	5
Dibromochloromethane	Not Det	5
1,1,2-Trichloroethane	74	5
Benzene	Not Det	5
c-1,3-Dichloropropene	Not Det	5
Bromoform	Not Det	5
Tetrachloroethene	430	5
1,1,2,2-Tetrachloroethane	50	5
Toluene	Trace	5
Chlorobenzene	Not Det	5
Ethylbenzene	12	5
Xylene, total	65	5
c-1,2-Dichloroethene	Not Det	5
1,1,1,2-Tetrachloroethane	19	5

Data for Semi-Volatile Organics ug/Kg

Component Name	Concentration	Component MDL
Phenol	5200	300
bis(2-Chloroethyl) Ether	Not Det	300
2-Chlorophenol	Not Det	300
1,3-Dichlorobenzene	Not Det	300
1,4-Dichlorobenzene	Not Det	300
1,2-Dichlorobenzene	Not Det	300
bis(2-Chloroisopropyl) Ether	Not Det	300
N-Nitroso-di-n-propylamine	Not Det	300
Hexachloroethane	Not Det	300
Nitrobenzene	Not Det	300
Isophorone	Not Det	300
2-Nitrophenol	Not Det	300
2,4-Dimethylphenol	Not Det	300
bis(2-Chloroethoxy) Methane	Not Det	300
2,4-Dichlorophenol	Not Det	300
1,2,4-Trichlorobenzene	Not Det	300
Naphthalene	2800	300
Hexachlorobutadiene	Not Det	300
4-Chloro-3-methylphenol	Not Det	300

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Data for Semi-Volatile Organics (continued)

Component Name	Concentration	Component MDL
Hexachlorocyclopentadiene	Not Det	300
2,4,6-Trichlorophenol	Not Det	300
2-Chloronaphthalene	Not Det	300
Dimethyl Phthalate	Not Det	300
Acenaphthylene	Not Det	300
Acenaphthene	Not Det	300
2,4-Dinitrophenol	Not Det	1500
4-Nitrophenol	Not Det	1500
2,4-Dinitrotoluene	Not Det	300
2,6-Dinitrotoluene	Not Det	300
Diethylphthalate	Not Det	300
4-Chlorophenyl-phenylether	Not Det	300
Fluorene	Not Det	300
4,6-Dinitro-2-methylphenol	Not Det	1500
N-Nitrosodiphenylamine	Not Det	300
4-Bromophenylphenyl ether	Not Det	300
Hexachlorobenzene	Not Det	300
Pentachlorophenol	Not Det	1500
Phenanthrene	340	300
Anthracene	Not Det	300
Di-n-Butylphthalate	Not Det	300
Fluoranthene	Trace	300
Pyrene	Trace	300
Butylbenzylphthalate	Not Det	300
3,3'-Dichlorobenzidine	Not Det	600
Benzo(a)anthracene	Not Det	300
bis(2-Ethylhexyl) Phthalate	Not Det	300
Chrysene	Not Det	300
Di-n-octyl Phthalate	Not Det	300
Benzo(b)fluoranthene	Not Det	300
Benzo(k)fluoranthene	Not Det	300
Benzo(a)pyrene	Not Det	300
Indeno(1,2,3-c,d)pyrene	Not Det	300
Dibenzo(a,h)anthracene	Not Det	300
Benzo(g,h,i)perylene	Not Det	300
Benzidine	Not Det	2400
alpha-BHC	Not Det	300
beta-BHC	Not Det	300
delta-BHC	Not Det	300
gamma-BHC	Not Det	300
Heptachlor	Not Det	300
Aldrin	Not Det	300
Heptachlor Epoxide	Not Det	300
Endosulfan I	Not Det	300
Dieldrin	Not Det	300
4,4'-DDE	Not Det	300

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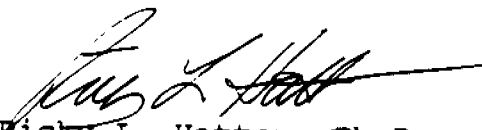
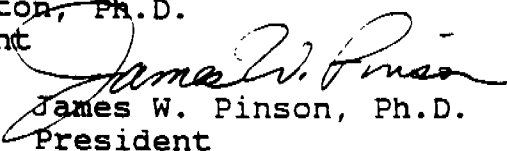
Data for Semi-Volatile Organics (continued)

Component Name	Concentration	Component MDL
Endrin	Not Det	300
Endosulfan II	Not Det	300
4,4'-DDD	Not Det	300
Endosulfan Sulfate	Not Det	300
4,4'-DDT	Not Det	300
Methoxychlor	Not Det	300
Endrin Aldehyde	Not Det	300
alpha-Chlordane	Not Det	300
gamma-Chlordane	Not Det	300
Toxaphene	Not Det	600
Aroclor-1016	Not Det	300
Aroclor-1221	Not Det	300
Aroclor-1232	Not Det	300
Aroclor-1242	Not Det	300
Aroclor-1248	Not Det	300
Aroclor-1254	Not Det	600
Aroclor-1260	Not Det	600
1,2-Diphenylhydrazine	Not Det	300
N-Nitrosodimethylamine	Not Det	300

Comments:

Reference Lab Report No. R1461.

If there are any questions regarding this data, please call.


Ricky L. Hatton, Ph.D.
Vice President
Reviewed By: James W. Pinson, Ph.D.
President