

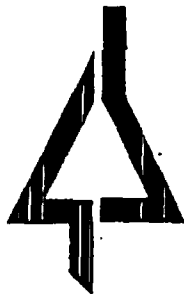
ANALYTICAL RESULTS OF GROUNDWATER
FROM
MONITORING WELLS LOCATED
AT
ENGELHARD CORP., PLAINVILLE, MA

Prepared For

Engelhard Corporation
Route 152
Plainville, MA 02762

Project: D1997, D1976, D2021 and D2024

May 14, 1991



R.I. Analytical

Specialists in Environmental Services

B1145

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D1976
 April 11, 1991

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	MW#1	MW#3	MW#4
DATE SAMPLED	3/18/91	3/18/91	3/18/91
DATE ANALYZED	3/22/91	3/22/91	3/22/91
PARAMETER			
Volatile Organic Compounds (method 624):			
chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	<1 "	<1 "	<1 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	<1 "	210 "	390 "
1,1-dichloroethane	<1 "	28 "	57 "
trans-1,2-dichloroethylene	<1 "	<1 "	<1 "
chloroform	<1 "	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	<1 "	950 "	4,800 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	<1 "	250 "	1,100 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	7 "	67 "	12,000 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylenes	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D1976
 April 11, 1991

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	MW#5	MW#6	MW#7
DATE SAMPLED	3/18/91	3/18/91	3/18/91
DATE ANALYZED	3/22/91	3/22/91	3/22/91

PARAMETER

Volatile Organic Compounds

(method 624):

chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	2 "	<1 "	<1 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	17 "	<1 "	<1 "
1,1-dichloroethane	22 "	<1 "	<1 "
trans-1,2-dichloroethylene	1 "	<1 "	<1 "
chloroform	<1 "	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	270 "	<1 "	<1 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	86 "	<1 "	<1 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	72 "	<1 "	<1 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylene	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D1976 & D2021
 April 11, 1991

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	MW#8	MW#9	MW#12
DATE SAMPLED	3/18/91	3/18/91	3/20/91
DATE ANALYZED	3/25/91	3/25/91	3/25/91

PARAMETER

Volatile Organic Compounds

(method 624):			
chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	<1 "	<1 "	<1 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	5 "	<1 "	2 "
1,1-dichloroethane	2 "	<1 "	27 "
trans-1,2-dichloroethylene	<1 "	<1 "	<1 "
chloroform	<1 "	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	140 "	1 "	32 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	19 "	<1 "	40 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	15 "	<1 "	14 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylene	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D1997, D2021 & D2024
 April 11, 1991

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                MW#13      MW#14      MW#15
    DATE SAMPLED  3/19/91    3/21/91    3/20/91
    DATE ANALYZED 3/22/91    3/25/91    3/25/91
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PARAMETER

**Volatile Organic Compounds
 (method 624):**

	MW#13	MW#14	MW#15
chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	<1 "	<1 "	<1 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	<1 "	140 "	79 "
1,1-dichloroethane	<1 "	35 "	34 "
trans-1,2-dichloroethylene	<1 "	<1 "	<1 "
chloroform	<1 "	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	<1 "	2,100 "	5,300 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	<1 "	200 "	2,100 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	<1 "	600 "	16,000 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylenes	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D2021
 April 11, 1991

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	MW#16	MW#17	MW#18
DATE SAMPLED	3/20/91	3/20/91	3/20/91
DATE ANALYZED	3/25/91	3/25/91	3/25/91

PARAMETER

Volatile Organic Compounds

(method 624):

chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	<1 "	<1 "	15 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	42 "	85 "	9 "
1,1-dichloroethane	20 "	24 "	101 "
trans-1,2-dichloroethylene	<1 "	<1 "	1 "
chloroform	<1 "	1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	1,800 "	15,000 "	1,400 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	110 "	48 "	270 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	220 "	7,300 "	24 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylene	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D2021 & D1997
 April 11, 1991

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	MW#19	MW#20A	MW#20B
DATE SAMPLED	3/20/91	3/19/91	3/19/91
DATE ANALYZED	3/27/91	3/22/91	3/22/91

PARAMETER

Volatile Organic Compounds

(method 624):

	MW#19	MW#20A	MW#20B
chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	<1 "	<1 "	<1 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	32 "	<1 "	<1 "
1,1-dichloroethane	21 "	<1 "	<1 "
trans-1,2-dichloroethylene	<1 "	<1 "	<1 "
chloroform	<1 "	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	640 "	16 "	10 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	210 "	<1 "	<1 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	88 "	<1 "	<1 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylenes	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D2021 & D1997
 April 11, 1991

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	MW#21A	MW#21B	MW#22A
DATE SAMPLED	3/20/91	3/20/91	3/19/91
DATE ANALYZED	3/27/91	3/27/91	3/25/91
PARAMETER			
Volatile Organic Compounds (method 624):			
chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	<1 "	<1 "	<1 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	9 "	38 "	<1 "
1,1-dichloroethane	78 "	76 "	<1 "
trans-1,2-dichloroethylene	2 "	<1 "	<1 "
chloroform	<1 "	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	420 "	2,400 "	<1 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	250 "	200 "	<1 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	1,700 "	830 "	<1 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylene	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D1997
 April 11, 1991

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	MW#22B	MW#23A	MW#23B
DATE SAMPLED	3/19/91	3/19/91	3/19/91
DATE ANALYZED	3/25/91	3/25/91	3/25/91
PARAMETER			
Volatile Organic Compounds (method 624):			
chloromethane	<1 µg/l	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "	<1 "
vinyl chloride	<1 "	<1 "	<1 "
chloroethane	<1 "	<1 "	<1 "
methylene chloride	<1 "	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "	<1 "
1,1-dichloroethylene	3 "	<1 "	<1 "
1,1-dichloroethane	36 "	<1 "	<1 "
trans-1,2-dichloroethylene	<1 "	<1 "	<1 "
chloroform	<1 "	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "	<1 "
1,1,1-trichloroethane	170 "	<1 "	<1 "
carbon tetrachloride	<1 "	<1 "	<1 "
bromodichloromethane	<1 "	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "	<1 "
trichloroethylene	41 "	<1 "	<1 "
trans-1,3-dichloropropylene	<1 "	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "	<1 "
dibromochloromethane	<1 "	<1 "	<1 "
bromoform	<1 "	<1 "	<1 "
tetrachloroethylene	5 "	<1 "	<1 "
1,1,2,2-tetrachloroethane	<1 "	<1 "	<1 "
chlorobenzene	<1 "	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "	<1 "
benzene	<1 "	<1 "	<1 "
toluene	<1 "	<1 "	<1 "
ethylbenzene	<1 "	<1 "	<1 "
xylene	<1 "	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D1997
 April 11, 1991

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	MW#24A	MW#24B
DATE SAMPLED	3/19/91	3/19/91
DATE ANALYZED	3/25/91	3/25/91

PARAMETER

Volatile Organic Compounds
 (method 624):

chloromethane	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "
vinyl chloride	<1 "	<1 "
chloroethane	<1 "	<1 "
methylene chloride	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "
1,1-dichloroethylene	<1 "	<1 "
1,1-dichloroethane	<1 "	<1 "
trans-1,2-dichloroethylene	<1 "	<1 "
chloroform	<1 "	<1 "
1,2-dichloroethane	<1 "	<1 "
1,1,1-trichloroethane	<1 "	<1 "
carbon tetrachloride	<1 "	<1 "
bromodichloromethane	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "
trichloroethylene	<1 "	<1 "
trans-1,3-dichloropropylene	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "
dibromochloromethane	<1 "	<1 "
bromoform	<1 "	<1 "
tetrachloroethylene	<1 "	<1 "
1,1,2,2-tetrachloroethane	<1 "	<1 "
chlorobenzene	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "
benzene	<1 "	<1 "
toluene	<1 "	<1 "
ethylbenzene	<1 "	<1 "
xylenes	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
INVOICE #: D1976
April 11, 1991

	MW#3	MW#4
DATE SAMPLED	3/18/91	3/18/91
DATE ANALYZED	3/25/91	3/25/91
PARAMETER		
Metals (Soluble):		
Antimony	<0.005 mg/l	<0.005 mg/l
Arsenic	<0.005 "	<0.005 "
Beryllium	<0.01 "	<0.01 "
Cadmium	<0.01 "	<0.01 "
Chromium	<0.03 "	<0.03 "
Copper	<0.05 "	<0.05 "
Lead	<0.04 "	<0.04 "
Mercury	<0.0005 "	<0.0005 "
Nickel	<0.02 "	<0.02 "
Selenium	<0.005 "	<0.005 "
Silver	<0.02 "	0.03 "
Thallium	<0.005 "	<0.005 "
Zinc	0.04 "	<0.02 "
Gross Alpha Radioactivity	0.0+/-2.7 pCi/L	0.0+/-2.5 pCi/L
Gross Beta Radioactivity	0.0+/-3.4 pCi/L	0.0+/-3.3 pCi/L

	MW#5	MW#6
DATE SAMPLED	3/18/91	3/18/91
DATE ANALYZED	3/25/91	3/25/91
PARAMETER		
Metals (Soluble):		
Antimony	<0.005 mg/l	<0.005 mg/l
Arsenic	<0.005 "	<0.005 "
Beryllium	<0.01 "	<0.01 "
Cadmium	<0.01 "	<0.01 "
Chromium	<0.03 "	<0.03 "
Copper	<0.05 "	<0.05 "
Lead	<0.04 "	<0.04 "
Mercury	<0.0005 "	<0.0005 "
Nickel	<0.02 "	<0.02 "
Selenium	<0.005 "	<0.005 "
Silver	<0.02 "	<0.02 "
Thallium	<0.005 "	<0.005 "
Zinc	<0.02 "	<0.02 "
Gross Alpha Radioactivity	0.0+/-2.5 pCi/L	2.2+/-1.6 pCi/L
Gross Beta Radioactivity	0.0+/-3.3 pCi/L	1.2+/-2.8 pCi/L

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.

INVOICE #: D2021 & D2024

April 11, 1991

	MW#14	MW#15
DATE SAMPLED	3/21/91	3/20/91
DATE ANALYZED	4/01/91	3/25/91
PARAMETER		
Metals (Soluble):		
Antimony	<0.005 mg/l	<0.005 mg/l
Arsenic	<0.005 "	<0.005 "
Beryllium	<0.01 "	<0.01 "
Cadmium	<0.01 "	<0.01 "
Chromium	<0.03 "	<0.03 "
Copper	<0.05 "	<0.05 "
Lead	<0.04 "	<0.04 "
Mercury	<0.0005 "	<0.0005 "
Nickel	<0.02 "	<0.02 "
Selenium	<0.005 "	<0.005 "
Silver	<0.02 "	<0.02 "
Thallium	<0.005 "	<0.005 "
Zinc	<0.02 "	<0.02 "
Gross Alpha Radioactivity	0.0+/-1.3 pCi/L	1.5+/-1.9 pCi/L
Gross Beta Radioactivity	0.0+/-2.9 pCi/L	0.6+/-3.0 pCi/L

	MW#17	MW#18
DATE SAMPLED	3/20/91	3/20/91
DATE ANALYZED	3/25/91	3/25/91
PARAMETER		
Metals (Soluble):		
Antimony	<0.005 mg/l	<0.005 mg/l
Arsenic	<0.005 "	<0.005 "
Beryllium	<0.01 "	<0.01 "
Cadmium	<0.01 "	<0.01 "
Chromium	<0.03 "	<0.03 "
Copper	<0.05 "	<0.05 "
Lead	<0.04 "	<0.04 "
Mercury	<0.0005 "	<0.0005 "
Nickel	<0.02 "	<0.02 "
Selenium	<0.005 "	<0.005 "
Silver	<0.02 "	<0.02 "
Thallium	<0.005 "	<0.005 "
Zinc	<0.02 "	<0.02 "
Gross Alpha Radioactivity	3.0+/-2.2 pCi/L	1.1+/-1.4 pCi/L
Gross Beta Radioactivity	0.0+/-3.0 pCi/L	0.0+/-3.1 pCi/L

RI ANALYTICAL LABORATORIES, INC.

MONITORING WELL DATA

WELL NO.	DEPTH OF WELL (ft)	DIAMETER OF CASING	WATER LEVEL	VOLUME (gal.)	3X VOLUME (gal.)
1	17'3"	2"	8'9"	3.91	4.0
3	25'6"	2"	11'6"	5.38	5.5
4	26'	2"	5'3"	2.44	2.5
5	22'	2"	14'	6.84	7.0
6	19'6"	2"	9'3"	6.84	7.0
7	21'6"	2"	9'3"	4.40	4.5
8	21'	2"	15'	7.33	7.5
9	21'	2"	15'	7.33	7.5
12	29'6"	2"	6'6"	2.93	3.0
13	37'	4"	23'	45.0	45.0
14	33'	4"	17'8"	33.3	33.5
15	38'	4"	17'	33.3	33.5
16	71'	4"	53'7"	103.8	104.0
17	74'5"	4"	54'7"	105.1	106.0
18	41'6"	4"	40'9"	78.3	78.5
19	39'6"	4"	32'6"	62.6	63.0
20A	10'	4"	4'	7.83	8.0
20B	47'6"	4"	43'6"	84.2	84.5
21A	10'	4"	4'6"	7.83	8.0
21B	53'	4"	47'	92.0	92.0
22A	9'	4"	3'	5.87	6.0
22B	68'	4"	63'	123.4	123.5
23A	9'	4"	4'6"	7.83	8.0
23B	48'	4"	45'	88.1	88.5
24A	14'6"	4"	2'6"	3.91	4.0
24B	53'	4"	44'3"	86.1	86.5

RI ANALYTICAL LABORATORIES, INC.

MATRIX SPIKING DATA

MW 22A

PARAMETER	SPIKE LEVEL	EXPECTED LEVEL	DETECTED LEVEL	% REC.
Volatile Organic Compounds (method 624):				
chloromethane	20 µg/l	20 µg/l	18.7 µg/l	93
vinyl chloride	20 "	20 "	18.9 "	94
dichlorodifluoromethane	20 "	20 "	30.6 "	153
chloroethane	20 "	20 "	12.2 "	61
methylene chloride	20 "	20 "	17.3 "	86
trichlorofluoromethane	20 "	20 "	16.8 "	84
1,1-dichloroethylene	20 "	20 "	18.8 "	94
1,1-dichloroethane	20 "	20 "	19.7 "	98
trans-1,2-dichloroethylene	20 "	20 "	30.8 "	154
chloroform	20 "	20 "	19.3 "	96
1,2-dichloroethane	20 "	20 "	17.8 "	89
1,1,1-trichloroethane	20 "	20 "	22.7 "	113
carbon tetrachloride	20 "	20 "	16.6 "	83
bromodichloromethane	20 "	20 "	18.8 "	94
1,2-dichloropropane	20 "	20 "	19.0 "	95
cis-1,3-dichloropropylene	20 "	20 "	17.7 "	88
trichloroethylene	20 "	20 "	18.7 "	93
trans-1,3-dichloropropylene	20 "	20 "	17.3 "	86
1,1,2-trichloroethane	20 "	20 "	18.7 "	93
dibromochloromethane	20 "	20 "	18.6 "	93
bromoform	20 "	20 "	19.0 "	95
tetrachloroethylene	20 "	20 "	18.6 "	92
1,1,2,2-tetrachloroethane	20 "	20 "	21.8 "	109
chlorobenzene	20 "	20 "	18.9 "	94
dichlorobenzenes	60 "	60 "	52.8 "	88
benzene	20 "	20 "	18.7 "	93
toluene	20 "	20 "	17.6 "	88
ethylbenzene	20 "	20 "	18.1 "	90
xylenes	60 "	60 "	53.3 "	89

RI ANALYTICAL LABORATORIES, INC.

MATRIX SPIKING DATA

MW 17

PARAMETER	SPIKE LEVEL	EXPECTED LEVEL	DETECTED LEVEL	% REC.
Metals (mg/l):				
Antimony	0.040	0.040	0.036	90
Arsenic	0.040	0.040	0.040	100
Beryllium	0.50	0.50	0.49	98
Cadmium	0.50	0.50	0.49	98
Chromium	0.50	0.50	0.48	96
Copper	0.50	0.50	0.49	98
Lead	0.50	0.50	0.53	106
Nickel	0.50	0.50	0.49	98
Selenium	0.040	0.040	0.040	100
Silver	0.50	0.50	0.44	88
Thallium	0.040	0.040	0.039	98
Zinc	0.50	0.50	0.50	100

RI ANALYTICAL LABORATORIES, INC.

REPLICATE SAMPLE RESULTS

PARAMETER	MW #3	RELATIVE % DIFFERENCE
Volatile Organic Compounds (method 624):		
chloromethane	<1 µg/l	0
bromomethane	<1 "	0
vinyl chloride	<1 "	0
dichlorodifluoromethane	<1 "	0
chloroethane	<1 "	0
methylene chloride	<1 "	0
trichlorofluoromethane	<1 "	0
1,1-dichloroethylene	200 "	5
1,1-dichloroethane	29 "	4
trans-1,2-dichloroethylene	<1 "	0
chloroform	<1 "	0
1,2-dichloroethane	<1 "	0
1,1,1-trichloroethane	938 "	1
carbon tetrachloride	<1 "	0
bromodichloromethane	<1 "	0
1,2-dichloropropane	<1 "	0
cis-1,3-dichloropropylene	<1 "	0
trichloroethylene	300 "	18
trans-1,3-dichloropropylene	<1 "	0
1,1,2-trichloroethane	<1 "	0
dibromochloromethane	<1 "	0
bromoform	<1 "	0
tetrachloroethylene	65 "	3
1,1,2,2-tetrachloroethane	<1 "	0
chlorobenzene	<1 "	0
2-chloroethyl vinyl ether	<1 "	0
dichlorobenzenes	<1 "	0
benzene	<1 "	0
toluene	<1 "	0
ethylbenzene	<1 "	0
xylenes	<1 "	0

REPLICATE SAMPLE RESULTS

PARAMETER	MW #13	RELATIVE % DIFFERENCE
Volatile Organic Compounds (method 624):		
chloromethane	<1 µg/l	0
bromomethane	<1 "	0
vinyl chloride	<1 "	0
dichlorodifluoromethane	<1 "	0
chloroethane	<1 "	0
methylene chloride	<1 "	0
trichlorofluoromethane	<1 "	0
1,1-dichloroethylene	<1 "	0
1,1-dichloroethane	<1 "	0
trans-1,2-dichloroethylene	<1 "	0
chloroform	<1 "	0
1,2-dichloroethane	<1 "	0
1,1,1-trichloroethane	<1 "	0
carbon tetrachloride	<1 "	0
bromodichloromethane	<1 "	0
1,2-dichloropropane	<1 "	0
cis-1,3-dichloropropylene	<1 "	0
trichloroethylene	<1 "	0
trans-1,3-dichloropropylene	<1 "	0
1,1,2-trichloroethane	<1 "	0
dibromochloromethane	<1 "	0
bromoform	<1 "	0
tetrachloroethylene	<1 "	0
1,1,2,2-tetrachloroethane	<1 "	0
chlorobenzene	<1 "	0
2-chloroethyl vinyl ether	<1 "	0
dichlorobenzenes	<1 "	0
benzene	<1 "	0
toluene	<1 "	0
ethylbenzene	<1 "	0
xylenes	<1 "	0

RI ANALYTICAL LABORATORIES, INC.

REPLICATE SAMPLE RESULTS

PARAMETER	MW#14	RELATIVE % DIFFERENCE
Metals (soluble):		
Antimony	<0.01 mg/l	0
Arsenic	<0.01 "	0
Beryllium	<0.01 "	0
Cadmium	<0.01 "	0
Chromium	<0.03 "	0
Copper	<0.05 "	0
Lead	<0.04 "	0
Mercury	<0.0005"	0
Nickel	<0.02 "	0
Selenium	<0.01 "	0
Silver	<0.02 "	0
Thallium	<0.01 "	0
Zinc	<0.02 "	0

RI ANALYTICAL LABORATORIES, INC.

FIELD DUPLICATE RESULTS

PARAMETER	MW #15	RELATIVE % DIFFERENCE
Volatile Organic Compounds (method 624):		
chloromethane	<1 µg/l	0
bromomethane	<1 "	0
vinyl chloride	<1 "	0
dichlorodifluoromethane	<1 "	0
chloroethane	<1 "	0
methylene chloride	<1 "	0
trichlorofluoromethane	<1 "	0
1,1-dichloroethylene	67 "	8
1,1-dichloroethane	31 "	9
trans-1,2-dichloroethylene	<1 "	0
chloroform	<1 "	0
1,2-dichloroethane	<1 "	0
1,1,1-trichloroethane	6,200 "	15
carbon tetrachloride	<1 "	0
bromodichloromethane	<1 "	0
1,2-dichloropropane	<1 "	0
cis-1,3-dichloropropylene	<1 "	0
trichloroethylene	2,150 "	2
trans-1,3-dichloropropylene	<1 "	0
1,1,2-trichloroethane	<1 "	0
dibromochloromethane	<1 "	0
bromoform	<1 "	0
tetrachloroethylene	19,000 "	17
1,1,2,2-tetrachloroethane	<1 "	0
chlorobenzene	<1 "	0
2-chloroethyl vinyl ether	<1 "	0
dichlorobenzenes	<1 "	0
benzene	<1 "	0
toluene	<1 "	0
ethylbenzene	<1 "	0
xylene	<1 "	0

FIELD DUPLICATE RESULTS

PARAMETER	MW #20B	RELATIVE % DIFFERENCE
Volatile Organic Compounds (method 624):		
chloromethane	<1 µg/l	0
bromomethane	<1 "	0
vinyl chloride	<1 "	0
dichlorodifluoromethane	<1 "	0
chloroethane	<1 "	0
methylene chloride	<1 "	0
trichlorofluoromethane	<1 "	0
1,1-dichloroethylene	<1 "	0
1,1-dichloroethane	<1 "	0
trans-1,2-dichloroethylene	<1 "	0
chloroform	<1 "	0
1,2-dichloroethane	<1 "	0
1,1,1-trichloroethane	15 "	40%
carbon tetrachloride	<1 "	0
bromodichloromethane	<1 "	0
1,2-dichloropropane	<1 "	0
cis-1,3-dichloropropylene	<1 "	0
trichloroethylene	<1 "	0
trans-1,3-dichloropropylene	<1 "	0
1,1,2-trichloroethane	<1 "	0
dibromochloromethane	<1 "	0
bromoform	<1 "	0
tetrachloroethylene	<1 "	0
1,1,2,2-tetrachloroethane	<1 "	0
chlorobenzene	<1 "	0
2-chloroethyl vinyl ether	<1 "	0
dichlorobenzenes	<1 "	0
benzene	<1 "	0
toluene	<1 "	0
ethylbenzene	<1 "	0
xylenes	<1 "	0

RI ANALYTICAL LABORATORIES, INC.

FIELD DUPLICATE RESULTS

PARAMETER	MW#15	RELATIVE % DIFFERENCE
Metals (soluble):		
Antimony	<0.005 mg/l	0
Arsenic	<0.005 "	0
Beryllium	<0.01 "	0
Cadmium	<0.01 "	0
Chromium	<0.03 "	0
Copper	<0.05 "	0
Lead	<0.04 "	0
Mercury	<0.0005"	0
Nickel	<0.02 "	0
Selenium	<0.005 "	0
Silver	<0.02 "	0
Thallium	<0.005 "	0
Zinc	<0.02 "	0
Gross Alpha Radioactivity	1.4+/-1.8 pCi/L	6.9%
Gross Beta Radioactivity	0.0+/-2.9 pCi/L	.200%

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
INVOICE #: D1997
April 11, 1991

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	BAILER BLANK	TRIP BLANK
DATE SAMPLED	3/19/91	3/19/91
DATE ANALYZED	3/25/91	3/25/91

PARAMETER

**Volatile Organic Compounds
(method 624):**

chloromethane	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "
vinyl chloride	<1 "	<1 "
chloroethane	<1 "	<1 "
methylene chloride	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "
1,1-dichloroethylene	<1 "	<1 "
1,1-dichloroethane	<1 "	<1 "
trans-1,2-dichloroethylene	<1 "	<1 "
chloroform	5 "	<1 "
1,2-dichloroethane	<1 "	<1 "
1,1,1-trichloroethane	<1 "	<1 "
carbon tetrachloride	<1 "	<1 "
bromodichloromethane	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "
trichloroethylene	<1 "	<1 "
trans-1,3-dichloropropylene	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "
dibromochloromethane	<1 "	<1 "
bromoform	<1 "	<1 "
tetrachloroethylene	<1 "	<1 "
1,1,2,2-tetrachloroethane	<1 "	<1 "
chlorobenzene	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "
benzene	<1 "	<1 "
toluene	<1 "	<1 "
ethylbenzene	<1 "	<1 "
xylenes	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
 INVOICE #: D2021
 April 11, 1991

	BAILER BLANK	TRIP BLANK
DATE SAMPLED	3/20/91	3/20/91
DATE ANALYZED	3/27/91	3/27/91
PARAMETER		
Volatile Organic Compounds (method 624):		
chloromethane	<1 µg/l	<1 µg/l
bromomethane	<1 "	<1 "
vinyl chloride	<1 "	<1 "
chloroethane	<1 "	<1 "
methylene chloride	<1 "	<1 "
trichlorofluoromethane	<1 "	<1 "
1,1-dichloroethylene	<1 "	<1 "
1,1-dichloroethane	<1 "	<1 "
trans-1,2-dichloroethylene	<1 "	<1 "
chloroform	4 "	<1 "
1,2-dichloroethane	<1 "	<1 "
1,1,1-trichloroethane	<1 "	<1 "
carbon tetrachloride	<1 "	<1 "
bromodichloromethane	<1 "	<1 "
1,2-dichloropropane	<1 "	<1 "
cis-1,3-dichloropropylene	<1 "	<1 "
trichloroethylene	<1 "	<1 "
trans-1,3-dichloropropylene	<1 "	<1 "
1,1,2-trichloroethane	<1 "	<1 "
dibromochloromethane	<1 "	<1 "
bromoform	<1 "	<1 "
tetrachloroethylene	<1 "	<1 "
1,1,2,2-tetrachloroethane	<1 "	<1 "
chlorobenzene	<1 "	<1 "
2-chloroethyl vinyl ether	<1 "	<1 "
dichlorobenzenes	<1 "	<1 "
benzene	<1 "	<1 "
toluene	<1 "	<1 "
ethylbenzene	<1 "	<1 "
xylenes	<1 "	<1 "

RI ANALYTICAL LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

ENGELHARD CORP.
INVOICE #: D1997 & D2021
April 11, 1991

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DATE SAMPLED:	BAILER BLANK
DATE ANALYZED:	3/20/91
	3/29/91

PARAMETER

Metals (soluble):

Antimony	<0.005 mg/l
Arsenic	<0.005 "
Beryllium	<0.01 "
Cadmium	<0.01 "
Chromium	<0.03 "
Copper	<0.05 "
Lead	<0.04 "
Mercury	<0.0005 "
Nickel	<0.02 "
Selenium	<0.005 "
Silver	<0.02 "
Thallium	<0.005 "
Zinc	<0.02 "

RI ANALYTICAL LABORATORIES, INC.