

GE Plastics

18-PP

June 5, 1992

OTS Receipt 6/6/92

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
R097-111-853

Document Processing Center (TS-790)
Office of Toxic Substances
U. S. Environmental Protection Agency
401 M. Street, S. W.
Washington, D. C. 20460
Attention: Section 8(e) Coordinator

BEHQ-0692-24958 J.T.



88928883684

SEE CASE #12

DOCKET NUMBER TSCA 8(E) TSCA-90-H-19

General Electric Company submits the enclosed information to the U. S. Environmental Protection Agency in accordance with Section 8(e) of TSCA and the provisions of the Consent Agreement and Consent Order Docket Number TSCA-90-H-19.

The information contained in the enclosed toxicity test reports and the lists of reports both timely and untimely, consists entirely of animal toxicity test results obtained from independent testing laboratories.

ATTACHMENT A consists of 29 cases. Full text reports are included with this submission.

ATTACHMENT B is a list of four reports previously submitted to the EPA but classified as "untimely submissions".

ATTACHMENT C is a list of ten reports previously submitted to the EPA and classified as "timely submissions". We request that the EPA reclassify these submissions as TSCA 8(e) submissions and assign a separate TSCA 8(e) docket number to each submission.

Sincerely,

Stephen F. Austin, Manager
Regulatory Relations
(413)448-4853

No CD contained in this
Submission as per phone
call to [unclear]

/eh

NIS
DCO
9 June 92

ATTACHMENT ACASE #1

Tracking No.: GEP-91-088
Study Title: Evaluation Of DX80-2 For Acute Oral Toxicity In Rats, Primary Dermal And Ocular Irritation In Rabbits, And Acute Dermal Toxicity In Rabbits.
Substance: 3,5-dimethyl-4-hydroxyphenyl sulfonic acid
CAS#: 21304-02-0
Date: 5-13-81
Laboratory: T.P.S.
Comments: Neurotoxic effects were noted in the acute oral toxicity test. Also, this material was corrosive to rabbit eyes in the primary irritation study.

CASE #2

Tracking No.: GEP-91-089
Study Title: Evaluation Of BD80-3 For Acute Oral Toxicity In Rats, And Primary Dermal, Acute Dermal Toxicity And Ocular Irritation In Rabbits.
Substance: Hydrogenation product mixture - principally diol-ethers and propyl-t-butylether
CAS#: Mixture (see note below)
Date: 7-13-81
Laboratory: T.P.S.
Comments: Treatment-related kidney effects noted in the acute dermal toxicity portion of the battery of tests.

Note: This substance (obtained from an experimental process that was never commercialized) is a hydrogenation product mixture containing principally diols and diol ethers with lesser quantities of t-butanol, n-butanol, iso-butanol, and n-propanol.

CASE #3

Tracking No.: GEP-91-090
Study Title: Evaluation Of BD80-4 For Acute Oral Toxicity In Rats, Primary Dermal And Ocular Irritation In Rabbits, And Acute Dermal Toxicity In Rabbits.
Substance: De-etherification product mixture - principally diols and diol ethers
CAS#: Mixture (see note below)
Date: 7-29-81
Laboratory: T.P.S.
Comments: Treatment-related gastrointestinal, hepatic, and renal alterations were observed in the acute dermal toxicity test.

Note: The test substance (obtained from an experimental process that was never commercialized) is a complex mixture consisting primarily of 1,4-butanediol, 2-methyl-1,3 propanediol, 3-t-butoxy-2-methyl-1-propanol, and 4-t-butoxy-1-butanol. Also contained in the mixture as minor constituents are butyl alcohol, isobutyl alcohol, t-butyl alcohol, propyl alcohol, and tetrahydrofuran.

0003

CASE #4

Tracking No.: GEP-91-098
Study Title: Evaluation Of UI80-4 For Acute Oral Toxicity In Rats, Primary Dermal And Ocular Irritation In Rabbits, And Acute Dermal Toxicity In Rabbits.
Substance: 1,3-Isobenzofurandione, 5,5'-((1-methylethylidene) bis (4,1-phenyleneoxy))bis-
CAS#: 38103-06-9
Date: 5-1-81
Laboratory: T.P.S.
Comments: Treatment related renal changes noted in the acute dermal toxicity test.

CASE #5

Tracking No.: GEP-91-099
Study Title: Rat Teratology Study With BPA-DA, BPA-BI, NMP.
Substance: BPA-BI; 1H-Isoindole-1,3 (2H)-dione, 5,5'-((1-methylethylidene) bis (4,1-phenyleneoxy)) bis (2-methyl-
CAS#(s): 54395-52-7 (BPA-BI), 550-44-7 (NMP), 38103-06-9 (BPA-DA)
Date: 3-5-87
Laboratory: Hazleton
Comments: Significantly higher incidence of developmental variation dilated ureters were observed in the BPA-BI (1000 mg/kg) treatment group when compared to the control group. Also, implantation efficiency and mean fetal body weights were slightly lower, but not statistically significant, for the NMP(500 mg/kg) group when compared to the other groups.

CASE #6

Tracking No.: GEP-91-100
Study Title: Evaluation Of UI80-2 For Acute Oral Toxicity In Rats, Primary Dermal And Ocular Irritation In Rabbits, And Acute Dermal Toxicity In Rabbits.
Substance: 4-NPI; 1H-Isoindole-1,3 (2H)-dione, 2-methyl-5-nitro-
CAS#: 41663-84-7
Date: 6-15-81
Laboratory: T.P.S.
Comments: Hematological effects were observed for the study above. These observed effects can be expected from exposure to nitrated materials.

CASE #7

Tracking No.: GEP-91-064
Study Title: 4-Nitro-N-Butyl Phthalimide (Pure). Acute Toxicity And Primary Irritancy Studies.
Substance: 4-NBPI; 1H-Isoindole-1,3 (2H)-dione, 2-butyl-5-nitro-
CAS#: 54395-37-8
Date: 10-17-89
Laboratory: Bushy Run Research Center

0004

Tracking No.: GEP-91-068
Study Title: 4-Nitro-N-Butyl Phthalimide. Acute Toxicity And Primary Irritancy Studies.
Substance: 4-NBPI; 1H-Isoindole-1,3 (2H)-dione, 2-butyl-5-nitro-
CAS#: 54395-37-8
Date: 10-17-89
Laboratory: Bushy Run Research Center

Tracking No.: GEP-91-067
Study Title: 3-NBPI; 3-Nitro-N-Butyl Phthalimide (Pure). Acute Toxicity And Primary Irritancy Studies.
Substance: 1H-Isoindole-1,3 (2H)-dione, 2-butyl-4-nitro-
CAS#: 54395-36-7
Date: 10-16-89
Laboratory: Bushy Run Research Center

Comments: Hematological effects were observed for the studies listed above. These effects can be expected from exposure to nitrated substances.

Note: The substance, 4-NBPI, was evaluated for use as a monomer. It has not been commercialized. The substance, 3-NBPI, is a contaminant in 4-NBPI.

CASE #8

Tracking No.: GEP-91-110
Study Title: 30-Day Subchronic Oral Toxicity Study In Rats. PI and 4-NPI, Final Report.
Substance: 4-NPI; 1H-Isoindole-1,3 (2H)-dione, 2-methyl-5-nitro-
CAS#: 41663-84-7
Date: 1-21-83
Laboratory: Hazleton

Tracking No.: GEP-91-109
Study Title: 28-Day Dose Range Finding Study in Rats with 4-NPI.
Substance: 4-NPI; 1H-Isoindole-1,3 (2H)-dione, 2-methyl-5-nitro-
CAS#: 41663-84-7
Date: 6-24-88
Laboratory: Hazleton

Tracking No.: GEP-91-074
Study Title: Subchronic Toxicity Study In Rats With 4-NPI.
Substance: 4-NPI; 1H-Isoindole-1,3 (2H)-dione, 2-methyl-5-nitro-
CAS#: 41663-84-7
Date: 10-5-89
Laboratory: Hazleton

Comments: It was not known whether the adverse effects observed in the 30-day feeding study were due to the test material or from starvation due to a palatability problem or a combination of both. Therefore, the 28-day and 90-day oral gavage studies were conducted. Treatment-related effects on blood, spleen, liver and kidneys were observed in the studies above.

0005

CASE #9

Tracking No.: GEP-91-111
Study Title: Mutagenicity Evaluation Of IFR-1000, Lot 308-46A In The Mouse Lymphoma Forward Mutation Assay. Final Report.
Substance: Bis-melammonium pentate; B-MAP
Date: 6-18-80
Laboratory: Litton Bionetics

Tracking No.: GEP-91-112
Study Title: Evaluation Of IFR 1000, Lot 308-46A In The In Vitro Transformation Of BALB/3T3 Cells Assay. Final Report.
Substance: Bis-melammonium pentate; B-MAP
Date: 5-16-80
Laboratory: Litton Bionetics

Comments: The test substance was active in both the Mouse Lymphoma Forward Mutation assay and the In Vitro Transformation of BALB/3T3 Cells assay.

CASE #10

Tracking No.: GEP-91-116
Study Title: Acute Inhalation Toxicity Study Of Dimer Bottoms In The Rats.
Substance(s): A mixture of 4-vinyl cyclohexane and 4-tert butylcatechol
CAS#(s): 100-40-3 and 98-29-3
Date: 4-9-80
Laboratory: Bio/dynamics Inc.
Comments: Neurotoxic effects were observed in both moribund and non-moribund animals.

Note: 4-vinyl cyclohexane is the primary component of this substance.

CASE #11

Tracking No.: GEP-91-145
Study Title: Screening Test for Neurotoxicity Of Triphenylphosphite (TPP) In The Chicken Following Subcutaneous Administration.
Substance: Triphenylphosphite; Phosphorous Acid, Triphenyl Ester
CAS#: 101-02-0
Date: 10-19-82
Laboratory: Huntingdon Research Centre
Comments: Clinical signs of neurotoxicity with corresponding neuropathology were observed.

Note: This study is submitted SUPPLEMENTAL to EPA Document No. BEHQ-1282-0451, microfiche No. 0503675.

CASE #12

Tracking No.: GEP-91-041
Study Title: Data Summary For NTE Assays On Six Compounds.
Substance: Kronitex 50 Triaryl Phosphate; K-50
CAS#: 68937-41-7

0006

Date: 6-10-83
Laboratory: University of Michigan
Comments: K-50 produced 53.1% NTE inhibition in the 2-hen screening test.

Note: This study is being submitted as SUPPLEMENTAL to an untimely 8(d) submission which showed K-50 to produce a similar NTE inhibition (57.4%). The untimely 8(d) is EPA Document No. 878210715, microfiche no. 0205888, which is being submitted as a listed study per the Consent agreement. (See study identified as List #1 in Attachment B for listed studies.)

CASE #13

Tracking No.: GEP-91-080
Study Title: Primary Ocular Irritation Evaluation In Rabbits.
Substance: MGCC; 1,3,5-triazine, 2-chloro-4-(oxiranylmethoxy)-6-(2,4,6-trimethylphenoxy)-(9CI)
CAS#: 125025-92-5
Date: 12-20-89
Laboratory: T.P.S.
Comments: This substance (pH 6.5) was corrosive to the eyes of albino rabbits.

CASE #14

Tracking No.: GEP-91-081
Study Title: Evaluation Of CR-733S In A Repeated Dose 28-Day Oral Gavage Study In Rats.
Substance: Phosphoric acid, 1,3-phenylene tetraphenyl ester
CAS#: 57583-54-7
Date: 12-20-89
Laboratory: Arthur D. Little

Tracking No.: GEP-91-072
Study Title: Rangefinding For Cholinesterase Evaluation Following Acute Oral Administration Of CR733s In Rats.
Substance: Phosphoric acid, 1,3-phenylene tetraphenyl ester
CAS#: 57583-54-7
Date: 11-3-89
Laboratory: T.P.S.

Comments: The effects seen in the two studies above were similar to effects seen in previous timely FYI submissions for this compound.

NOTE: These studies are being submitted as SUPPLEMENTAL to the previous timely FYI submissions, EPA Document Number FYI-OTS-1189-0723, which is being converted to 8(e) (see study identified as List Number 10 in Attachment C).

CASE #15

Tracking No.: GEP-91-086
Study Title: Acute Oral And Dermal Screening Studies In Mice And Primary Ocular Irritation Evaluation In Rabbits With SSM-79-7.

Substance: Dimethyl n-butylamine
CAS#: 927-62-8
Date: 6-18-79
Laboratory: T.P.S.
Comments: The minimum lethal dose by the oral route of administration was found to be less than 0.5 ml/kg.

CASE #16

Tracking No.: GEP-91-087
Study Title: Data Summary For NTE Assays For Four Compounds.
Substance: Dixylyl m/p cresyl phosphate
Date: 4-11-84
Laboratory: University of Michigan
Comments: Of the four materials tested, only dixylyl m/p cresyl phosphate produced significant inhibition of NTE (35%) at a dose of 1000 mg/kg.

CASE #17

Tracking No.: GEP-91-016
Study Title: Acute Toxicity Tests Of Six Compounds In Fischer 344 Rats
Substance(s): Diphenyliodonium hexafluoroarsenate, Diphenyliodonium hexafluoroantimonate; (PIFA, PIFP)
CAS#(s): 62613-15-4, 58109-40-3
Date: 10-1-79
Laboratory: EG&G Mason Research Institute

Tracking No.: GEP-91-003
Study Title: Acute Toxicity Tests Of Eight Compounds In Fischer 344 Rats, Final Report Resulting From Proposal WC79-2
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 2-15-80
Laboratory: EG&G Mason Research Institute

Tracking No.: GEP-91-031
Study Title: Range Finding Study On Rats Preparatory To Acute (Oral) LD50 Studies
Substance: 1% PIFA in epoxy paste (WC-10)
CAS#: 62613-15-4
Date: 4-2-81
Laboratory: EG&G Mason Research Institute

Tracking No.: GEP-91-032
Study Title: Acute (Oral) LD50 Studies On Rats
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 6-26-81
Laboratory: EG&G Mason Research Institute

Tracking No.: GEP-91-013
Study Title: Acute Inhalation Evaluation Of A-1000-79-2 In Rats
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 2-11-80
Laboratory: T.P.S.

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Tracking No.: GEP-91-092
Study Title: Acute Intravenous LD50 Study In Rats
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 6-23-81
Laboratory: Hazleton

Tracking No.: GEP-91-149
Study Title: The Pharmacokinetic Evaluation Of 14C-PIFA In The Rat
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 7-2-84
Laboratory: Hazleton

Comments: The six acute toxicity studies are being submitted as SUPPLEMENTAL to EPA Document No. FYI-OTS-0180-0054, which was a timely FYI submission and is being converted to 8(e) (see study identified as List Number 8 in Attachment C). The lethality observed in these acute studies in rats was similar to this previous timely FYI submission. The pharmacokinetic study is being submitted as a non-8(e) supplemental to the previous timely FYI submission. See NOTE for Case #21.

CASE #18

Tracking No.: GEP-91-000
Study Title: Acute Toxicity of PIFA In Dogs, Final Report
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 10-14-81
Laboratory: Hazleton
Comments: This material is highly acutely toxic.

CASE #19

Tracking No.: GEP-91-009
Study Title: Acute Rangefinding Evaluation Of A-1000-79-2 Administered Intraperitoneally In One Dog And Two Monkeys
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 12-8-81
Laboratory: T.P.S.
Comments: This material is highly acutely toxic.

CASE #20

Tracking No.: GEP-91-033
Study Title: Skin Irritation Tests In Albino Rabbits
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 6-17-81
Laboratory: EG&G Macon Research Institute

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Tracking No.: GEP-91-034
Study Title: Eye Irritation Tests In Albino Rabbits
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 7-17-81
Laboratory: EG&G Mason Research Institute

Tracking No.: GEP-91-044
Study Title: Testing Corrosion To Skin
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 12-24-80
Laboratory: EG&G Mason Research Institute

Tracking No.: GEP-91-030
Study Title: Delayed Contact Hypersensitivity
Substance: Diphenyliodonium hexafluoroarsenate; PIFA
CAS#: 62613-15-4
Date: 6-20-81
Laboratory: Howard Maibach, M.D., San Francisco, CA 94143

Comments: The test material produced lethality by both ocular and dermal routes of exposure. The corrosion and guinea pig sensitization studies (GEP-91-044 and GEP-91-030) are being submitted as non-8(e) supplemental to irritation studies.

CASE #21

Tracking No.: GEP-91-005
Study Title: A Subacute Dermal Toxicity Study Of PT3000-80-6 In Albino Rabbits
Substance: Catalyzed liquid epoxy resin mixture containing 2.5% PIFA
CAS#: 62613-15-4
Date: 2-13-81
Laboratory: T.P.S.

Tracking No.: GEP-91-006
Study Title: Subacute Oral Toxicity Study Of PT3000-80-6 In Hairless Mice
Substance: Catalyzed liquid epoxy resin mixture containing 2.5% PIFA
CAS#: 62613-15-4
Date: 6-12-81
Laboratory: T.P.S.

Tracking No.: GEP-91-007
Study Title: Subacute Oral Toxicity Study Of PT3000-80-6 In Albino Rats
Substance: Catalyzed liquid epoxy resin mixture containing 2.5% PIFA
CAS#: 62613-15-4
Date: 5-5-81
Laboratory: T P.S.

Comments: These three subacute toxicity studies are being submitted as SUPPLEMENTAL to EPA Document No. FYI-OTS-0680-0071 ("A Subacute Dermal Toxicity Study of A-3000-80-2 in Hairless Mice"), which was a timely FYI submission and is being converted to 8(e) (see study identified as Number 9 in Attachment C). Because FYI-OTS-0680-0071 contained a summary only, the full report is enclosed to complete

this file. Effects seen in the above studies included increased mortality, hematological changes, increased heart weights, and various histological changes in the heart, liver, and kidneys.
NOTE: The test substance, PIFA, identified in Cases 16, 17, 18, 19 and 20 is no longer being used.

CASE #22

Tracking No.: GEP-91-091
Study Title: Acute Oral Toxicity Study In Rats PH 402-GE-002-83
Substance: 3,6-Dihydro-5-phenyl-2H-1,3,4-oxadiazin-2-one
CAS#: 62501-39-7
Date: 11-22-83
Laboratory: Pharmakon Research International, Inc.
Comments: Neurotoxic effects were observed in non-moribund animals (abnormal gait in at least 1 male and 1 female for 3 days at a dose of 400 mg/kg, loss of righting reflex in moribund animals) and the test substance was of moderate acute toxicity (LD50 441 mg/kg).

CASE #23

Tracking No.: GEP-91-063
Study Title: N-Butyl Phthalimide Acute Toxicity And Primary Irritancy Studies
Substance: BU-PI; 1H-Isoindole-1,3(2H)-dione,2-butyl-
CAS#: 1515-72-6
Date: 10-16-89
Laboratory: Bushy Run Research Center
Comments: Neurotoxic effects observed included one animal with "loss of coordination characterized by circular and backward movement, with abnormal tilting of the head.

CASE #24

Tracking No.: GEP-91-069
Study Title: Toxikon Project Number: 90G-0618 Acute Oral Toxicity Study
Substance: Diphenyl Carbonate; DPC
CAS#: 102-09-0
Date: 11-27-90
Laboratory: Toxikon Corporation
Comments: Neurotoxic signs were observed in non-moribund animals.

CASE #25

Tracking No.: GEP-91-075
Study Title: Toxikon Project Number: 91G-0131 Acute Oral Toxicity Study (LD50)
Substance: tetraethylguanidinium bromide
Date: 4-24-91
Laboratory: Toxikon Corporation
Comments: Multiple neurotoxic signs were observed in non-moribund and moribund animals.

CASE #26

Tracking No.: GEP-91-134
Study Title: Acute Oral Toxicity (LD50) Study In Albino Rats with SAN-MA
Substance: Styrene Acrylonitrile Maleic Anhydride; SAN-MA
Date: 1-16-86
Laboratory: Wil Research Laboratories, Inc.
Comments: Neurotoxic signs observed in non-moribund animals included decreased limb tone, ataxia, and hypersensitivity to touch.

CASE #27

Tracking No.: GEP-91-147
Study Title: Primary Dermal Irritation Study In Rabbits
Substance: 4,4' isopropylidenediphenol alkyl(C12-15) phosphite; (Weston XP-439)
CAS#: 93356-94-6
Date: 6-25-81
Laboratory: Bio/dynamics Inc.
Comments: Dermal exposure to this material resulted in dermal necrosis. This material is not currently being manufactured.

CASE #28

Tracking No.: GEP-91-141
Study Title: Primary Dermal Irritation Study In Rabbits
Substance: Reaction product of trishydroxyethylisocyanurate, triphenyl phosphite, and 2,2',2''(1,3,5-s-triazine-2,4,6-(1H,3H,5; (Weston XR-1624)
Date: 2-16-82
Laboratory: Bio/dynamics Inc.
Comments: Dermal exposure to this material resulted in severe dermal irritation. This material is not currently being manufactured

CASE #29

Tracking No.: GEP-91-148
Study Title: "Draft Final Report" N-Butylphthalimide (BU-PI) Repeated Dose 28 Day Oral Gavage Study In Rats.
Substance: BU-PI; 1H-Isoindole-1,3(2H)-dione,2-butyl-
CAS#: 1515-72-6
Date: 12-7-90
Laboratory: Arthur D. Little, Inc.
Comments: A statistically significant decrease in sperm motility was observed in the high dose (468 mg/kg) recovery group. This effect however was not observed in the high dose treatment group sacrificed on Day 29.

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ATTACHMENT B
LIST OF UNTIMELY SUBMISSIONS

List #1

EPA Document No.: 878210715 (microfiche # 0205888)
Title: Neurotoxic Esterase Assay By Univ Of Michigan School Of
Public Health; (See Case #12)

List #2

EPA Document No.: 878210707 (microfiche # OTS0205887)
Title: Dichloromethane Fourteen Day Range Finding Study in Rats.

List #3

EPA Document No.: 40 CFR 716: Health and Safety Studies, Aryl Phosphate Esters
Title: A rangefinding comparative intravenous and intraperitoneal
evaluation of CR733s in the Rhesus Monkey.

List #4

EPA Document No.: 40 CFR 716: Health and Safety Studies, Phosphate Esters
Title: Rangefinding for cholinesterase evaluation following acute
oral administration of CR733s in chickens.

ATTACHMENT C
LIST OF TIMELY SUBMISSIONS (NO PENALTY)

Number 1

EPA Document No.: FYI-OTS-0282-0170 (microfiche # OTS0000170-0)
Title: Toxicity Information on 4-Nitro-N-Methylphthalimide.
(See Case #12.)

Number 2

EPA Document No.: FYI-OTS-0982-0170 (microfiche # OTS0000170-1)
Title: Rabbit Teratogenicity Study with 4-NPI, Preliminary Report of Findings.

Number 3

EPA Document No.: FYI-OTS-1082-0170 (microfiche # OTS0000170-1)
Title: Data Package Containing Additional Information For FYI-OTS-0282-0170 and FYI-OTS-0982-0170 With Cover Letter Dated 10-14-82.

Number 4

EPA Document No.: FYI-OTS-0185-0170 (microfiche # OTS0000170-2)
Title: Pilot Rabbit Teratogenicity Study, 4-NPI, Final Report with Cover Letter Dated 12-31-85.

Number 5

EPA Document No.: FYI-OTS-0386-0170 (microfiche # OTS0000170-3)
Title: Rabbit Teratology Study with Test Article 4-NPI (Final Report) with Cover Letter Dated 03-21-86.

Number 6

EPA Document No.: FYI-OTS-0686-0170 (microfiche # OTS0000170-4)
Title: Range-Finding Rat Teratology Study with 4-NPI (Final Report) with Cover Letter Dated 05-23-86.

Number 7

EPA Document No.: FYI-OTS-0586-0170 (microfiche # OTS 0000170-5)
Title: Final Report on the Study of Rat Teratology with 4-Nitro-N-Methylphthalimide with Cover Letter Dated 05-18-87.

Number 8

EPA Document No.: FYI-OTS-0180-0054 (microfiche # OTS0000054-0)
Title: Acute Toxicity Information, Final Results. (See Case #17)

Number 9

EPA Document No.: FYI-OTS-0680-0071 (microfiche # OTS0000071-0)
Title: Subacute Dermal Toxicity Study In Hairless Mice, T.P.S. Study No. 81A-001-230-80. (See Case #21)

Number 10

EPA Document No.: FYI-OTS-1189-0723 (Noted in Chem. in Prog. Bull 11 #1:19 (Feb. 1990)
Title: Rangefinding & Acute Intraperitoneal Toxicity Evaluations of TPPA In Mice, TPPA & CR733S In Rats & a 28-Day Intraperitoneal Evaluation Of CR733S In Rats, With Cover Letter Dated 10-11-89. (See Case #14)

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CONTAINS NO CBR733

THE UNIVERSITY OF MICHIGAN

SCHOOL OF PUBLIC HEALTH

CASE # 12

14

ANN ARBOR, MICHIGAN 48109

Department of Environmental
and Industrial Health

Toxicology 4-5430

June 10, 1983

L. W. SMITH

JUN 15 1983

RECEIVED

Dr. Ladd W. Smith
Manager, Toxicology and Industrial Hygiene
General Electric Company
Plastics Technology Department
One Plastics Avenue
Pittsfield, MA 01201

Dear Dr. Smith:

Enclosed please find our data summary for NTE assays on the six compounds you shipped to us listed in your letter of authorization of April 25, 1983.

All test compounds were administered at 1000 mg/kg on Day 1 of the experiment. All animals survived and showed no overt signs of toxicity, so further range-finding was not needed.

Compound "Rescorcinol" developed a sharp, irritating odor, similar to concentrated HCl vapor, after the initial experiment on Day 1. It was subsequently administered on Days 2 and 3 of the experiment with no apparent ill effects being produced in the animals and without significant change in its apparent inertness as an NTE inhibitor.

No significant effect of treatment was found for compounds designated "BPA", "Rescorcinol", "Hydroquinone", or "CR-733". TOCP was included as a positive control and showed the expected high inhibition at 750 mg/kg. Compound "K-50" produced 53.1% inhibition in a 2-hen screening test. "MXP" produced 4.1% inhibition, which was not statistically or biologically significant.

Significant between-day differences were not noted except for compound "Hydroquinone" which showed a significant difference (0.05 level by Scheffe and Bonferroni) between days 2 and 3. Nevertheless, the overall mean and standard error was computed and found not to differ significantly from control.

We conclude that none of the compounds tested produced significant NTE inhibition at 1000 mg/kg in the adult hen, except for compound K-50, which produced 53.1% inhibition in a 2-hen screening test.

We hope that this information will be useful to you and that we might be of service to you again at some time in the future.

Sincerely yours,

Rudy J. Richardson

Rudy J. Richardson, Sc.D.
Associate Professor of Toxicology

Enclosure

rjr/ccw

0015

Non Brain NTE : 88 Compounds and Controls^{a, b}

Compound ^c	Day ^{d, e}			Mean \pm SEM	% Inhibition ^g
	1	2	3		
Corn Oil	2364, 1929	2322, 2520	2610, 2193	2323 \pm 99	0.0
TOCP	214	52 ^h	193	310 \pm 107	36.6
BPA	2425, 2406	2165, 1910	2219, 2423	2258 \pm 83	2.8
Resorcinol	2067, 2252	2125, 2204	2353, 2461	2244 \pm 59	3.4
Hydroquinone	2303, 2189	2114, 2045	2598, 2408	2276 \pm 93	2.0
→ CR-733	2181, 2300	1981, 1959	2490, 2160	2178 \pm 82	6.2
MXP	2302, 2154	---	---	2228 \pm 74	4.1
K-50	1215, 964	---	---	1090 \pm 125	53.1

- a. NTE activity values expressed as nmol substrate converted/min/gm. wet weight of whole brain, 24 hr post dosing. Assay according to M.K. Johnson, Arch. Toxicol. 37:113-115, 1977, using 6.0 mg tissue per tube.
- b. All compounds administered orally in gelatine capsules. Test compounds dosed at 1000 mg/kg; corn oil, 1.0 ml/kg; TOCP (Eastman Practical Grade, lot #AOA), 750 mg/kg. Hens were fasted 16 hr prior to dosing and 4 hours post dosing. Water allowed ad lib throughout.
- c. Compounds = corn oil (Mazola), control; TOCP (Eastman Practical Guide), positive control; BPA = tetraphenyl diphosphate of bisphenol-A; Resorcinol = tetraphenyl diphosphate of resorcinol; Hydroquinone = tetraphenyl diphosphate of hydroquinone; CR-733 = mixed diphosphate of resorcinol; MXP = mesityl xylyl phosphate; K-50 = diphenyl isopropylphenyl phosphate.
- d. Day = experiment days. For practical reasons, each of the compounds was given to pairs of hens on three successive days. TOCP was given to single hens and served only as an internal check with a known highly inhibitory compound. MXP and K-50 were given only on one day to provide abbreviated screening data only.
- e. No significant differences were noted between days (ANOVA) except for "Hydroquinone" between days 2 and 3 (significant at 5% level by Scheffe and Bonferroni). Nevertheless, an overall mean NTE and % inhibition was calculated for the compound.
- f. TOCP and K-50 are obviously different from control, but were not included in the ANOVA comparison due to the differences in n and experimental design for these compounds. No significant effect due to treatment was found for any of the other

compounds (ANOVA). [ANOVA calculated by a Dynacomp computer program for the Apple-II written by A.M. Barker and T.B. Barker].

- g. Percent inhibition relative to corn oil control. Values obtained were similar to the standard error in the control values for all compounds except TOCP and K-50.

UNIVERSITY OF MICHIGAN

SCHOOL OF PUBLIC HEALTH

ANN ARBOR, MICHIGAN 48109

Department of Environmental
and Industrial Health

Toxicology
(313)764-5430

May 11, 1983

L. W. SMITH

MAY 23 1983

RECEIVED

Dr. Ladd W. Smith
Manager, Toxicology & Industrial Hygiene
General Electric Company
Plastics Technology Department
One Plastics Avenue
Pittsfield, MA 01201

Dear Dr. Smith:

Thank you for your letter of April 25, 1983, and the shipment of 6 compounds for NTE assay.

The protocol will be essentially the same as described in the letter dated July 10, 1979, from Ms. Mary Barth to Dr. Arthur Katchman and as summarized in my report to Dr. Katchman dated October 25, 1979.

Compounds will be administered orally in gelatine capsules at 1000 mg/kg or at the maximum tolerated dose determined by range finding to adult hens following a 16 hr fast. No vehicle will be used. Food will continue to be withheld for 4 additional hrs, but water will be allowed ad lib throughout. Sacrifice will be 24 hr post dosing by decapitation.

Brain NTE (whole brain homogenate) will be assayed in treated and control brains according to the method of M.K. Johnson (Arch. Toxicol. 37, 113-115, 1977), using 6.0 mg of tissue per assay tube.

An orthogonal design will be used as follows:

Compound	Number of Hens			Cost
	Day 1	Day 2	Day 3	
MXP	1	1	0	\$ 1,000
K-50	1	1	0	1,000
BPA	2	2	2	2,400
CR-733	2	2	2	2,400
Resorcinol	2	2	2	2,400
Hydroquinone	2	2	2	2,400
TOCP	1	1	1	N/C
Corn Oil	2	2	2	N/C
Total	<u>13</u>	<u>13</u>	<u>11</u>	\$11,600

Range-finding as needed \$500/comp'd,
(2 hens each, 100, 500, 200, 100, 50 mg/kg) \$0-2,000

TOTAL COST \$11,600 min
\$13,600 max

Dr. Ladd W. Smith
General Electric Company
May 11, 1983

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To cut costs, all compounds will be dosed at 1000 mg/kg as part of Day 1 in the orthogonal design. If all animals survive, the experiment will be continued at this dose with no further range-finding required.

Data will be analyzed by appropriate analysis of variance procedures to test for day-to-day as well as between-group variances to give the most valid comparison of experimental and control groups.

I estimate that the experimental work will be completed by May 27, 1983. The results will be communicated to you by telephone as soon as they are available. The final written report with statistical analysis of the data should be ready to send to you by June 30, 1983. Billing will be handled through our departmental office.

Thank you for giving us the opportunity to work with you on this project.

Sincerely yours,



Rudy J. Richardson, Sc.D.
Associate Professor of Toxicology

RJR/ss

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