

245069

C&D RECYCLING SITE
ADMINISTRATIVE RECORD FILE * **
INDEX OF DOCUMENTS

I. SITE IDENTIFICATION

1. Hand-drawn sketch of arrangement of "sweat furnaces" at Lurgan Corporation, Sandy Run, PA, 9/1/66. P. 100001-100005.
2. Letter to Lurgan Corporation, from Mr. James W. Chester, Pennsylvania Department of Health, re: Information on the installation of sweat furnaces, 10/17/66. P. 100006-100006.
3. Inspection Report for Lurgan Corporation, prepared by Pennsylvania Department of Environmental Resources (PADER), 8/6/73. P. 100007-100010.
4. Inspection Report for Lurgan Corporation, prepared by PADER, 1/7/74. P. 100011-100012.
5. Data package cover sheet, 4/22/74. P. 100013-100018. The following are attached:
 - a) a transmittal letter for sample results;
 - b) a dustfall sample and laboratory report;
 - c) two sample and laboratory reports.
6. Letter to Mr. Thomas Evanko, Lurgan Corporation, from Mr. W.A. Lusher, PADER, re: Transmittal of a Primary Plant Information Form, 5/9/74. P. 100019-100021. A Primary Plant Information Form is attached.
7. Letter to Lurgan Corporation, White Haven, Pennsylvania, from Mr. William A. Lusher, PADER, re: Items discussed at site inspection, 7/9/74. P. 100022-100022.
8. Letter to Mr. W.A. Lusher, PADER, from Mr. Charles H. Stevens, P.E., Spotts, Stevens and McCoy, Inc., re: Visit to the Lurgan Corporation Plant, 7/16/74. P. 100023-100024.

* Administrative Record File available 1/31/92, updated 4/17/92, 4/23/92, and 9/29/92.

** This information has been considered confidential and can be found at EPA Region III, Philadelphia, PA.

9. Letter to Mr. William A. Lusher, PADER, from Mr. Kenneth H. Gibson, Lurgan Corporation, re: Outside burning of PVC coated wire and duct work, 7/16/74. P. 100025-100025.
10. Letter to Mr. William A. Lusher, PADER, from Mr. Charles H. Stevens, Spotts, Stevens and McCoy, Inc., re: A request for the manufacturers on afterburning equipment to submit proposals for air pollution control, 7/30/74. P. 100026-100026.
11. Letter to Mr. William A. Lusher, PADER, from Mr. Kenneth H. Gibson, Lurgan Corporation, re: Emission inventory forms, 8/6/74. P. 100027-100039. Emission inventory forms are attached.
12. Letter to Mr. William Job from Mr. William A. Lusher, PADER, re: Complaint registered concerning smoke, odor and lead emissions from the Lurgan Plant in Freeland, 9/24/74. P. 100040-100040.
13. Inspection report for Lurgan Corporation prepared by PADER, 10/11/74. P. 100041-100042.
14. Letter to Mr. Charles H. Stevens, Spotts, Stevens and McCoy, Inc., from Mr. Kenneth H. Gibson, Lurgan Corporation, re: Strained financial position concerning the Hauck Manufacturing Company equipment, 12/19/74. P. 100043-100043.
15. Letter to Mr. Alvin M. Cunningham, Hauck Manufacturing Company, from Mr. Kenneth H. Gibson, Lurgan Corporation, re: Hauck Manufacturing Company equipment, 12/19/74. P. 100044-100044.
16. Letter to Mr. William A. Lusher, PADER, from Mr. Kenneth H. Gibson, Lurgan Corporation, re: Hauck Manufacturing Company equipment, 12/19/74. P. 100045-100045.
17. Background information narrative on the Lurgan Corporation operation, 1975. P. 100046-100047.
18. Inspection report for Lurgan Corporation prepared by PADER, 6/6/75. P. 100048-100051.
19. Letter to Lurgan Corporation from Mr. William A. Lusher, PADER re: Notes on Lurgan Corporation inspection, 6/12/75. P. 100052-100052.

43. Stationary Source Inspection Report for C&D Facility, Lurgan Corporation, 5/24/78. P. 100097-100100.
44. Memorandum to file from Lee S. Smith, re: Observation of violations at the Lurgan Corporation, 6/5/78. P. 100101-100101.
45. Memorandum to file from Mr. James D. Parette, re: Inspection of company grounds, 9/19/78. P. 100102-100102.
46. Memorandum to file from Mr. James D. Parette, re: Inspection of grounds surrounding the plant building, 9/29/78. P. 100103-100103.
47. Memorandum to file from Mr. James D. Parette, re: Inspection of company grounds, 10/17/78. P. 100104-100104.
48. Application for Plan Approval to Construct, Modify or Reactivate an Air Contamination Source and/or Air Cleaning Device or for a Permit to Operate, prepared by the Bureau of Air Quality and Noise Control, 6/4/79. P. 100105-100116.
49. Memorandum to Regional Coordinator from Mr. Robert M. Deluca, re: C&D Recycling Air Cleaning Device Installation Form, 7/20/79. P. 100117-100117.
50. Inspection Report for C&D Recycling prepared by PADER, 8/2/79. P. 100118-100120.
51. Report: Water-Related Environmental Fate of 129 Priority Pollutants, Volume I: Introduction and Technical Background, Metals and Inorganics, Pesticides and PCB's, prepared by National Technical Information Service (NTIS), 12/79. P. 100121-100142.
52. Memorandum to file from Mr. Martin M. Cebula, PADER, re: Observations of burning activities at the site, 1/28/80. P. 100143-100143.
53. Inspection Report for C&D Recycling prepared by the Bureau of Air Quality and Noise Control, 4/8/80. P. 100144-100146.
54. Memorandum to file from Mr. Martin M. Cebula, PADER, re: Burning emission observations, 10/21/80. P. 100147-100148.

55. Letter to State Senator Martin L. Murray from Ms. Deborah Oberst, re: Concern about C&D Recycling outside fires, 4/21/81. P. 100149-100150.
56. Letter to Mr. Jerome Balter, Public Interest Law Center of Philadelphia, from Ms. Deborah Oberst, re: Concern about C&D Recycling fire hazards, 4/21/81. P. 100151-100152.
57. Letter to C&D Recycling from Mr. Anthony G. Zvirblis, the Bureau of Air Quality Control, re: Open burning operation, 5/7/81. P. 100153-100153.
58. Letter to Ms. Jane Sulima from Ms. Jennifer Nash, Delaware Valley Citizens' Council for Clean Air, re: Response to previous letter of concern about C&D Recycling fires, 5/7/81. P. 100154-100154.
59. Letter to The Honorable Thomas J. McCall, Pennsylvania House of Representatives, from Mr. James W. Chester, U.S. EPA, re: Response to letter of complaint about C&D Recycling air pollution, 5/8/81. P. 100155-100156.
60. Letter to the Honorable Clifford L. Jones from Thomas J. McCall, Pennsylvania House of Representatives, re: Burning being conducted by Brenner's Inc., 5/8/81. P. 100157-100157.
61. Memorandum to Mr. Abe Ferdas, U.S. EPA, from Mr. Jim Gouvas, U.S. EPA, re: Plant inspection of the C&D Recycling Company, 5/15/81. P. 100158-100160.
62. Letter to Mrs. Jane K. Sulima from Mr. James K. Hambright, the Bureau of Air Quality Control, re: Acknowledgement of receipt of 4/21/81 letter to Senator Martin L. Murray concerning C&D Recycling, Inc., 5/21/81. P. 100161-100161.
63. Letter to Public Interest Law Center of Philadelphia from A.G. Zvirblis, the Bureau of Air Quality Control, re: Prohibition of burning PVC or lead encased wire, 6/1/81. P. 100162-100162.
64. PADER Operating Permit for C&D Recycling, Inc., 6/17/81. P. 100163-100163.
65. Citation to C&D Recycling for conducting open burning issued by Officer Lee S. Smith, 12/7/82. P. 100164-100164.

66. Memorandum to record from A.J. Chukusky, re: Business relationships between C&D Recycling and AT&T, 1/27/83. P. 100165-100165.
67. Criminal Prosecution - Supplemental Report of C&D Recycling, Inc., 2/14/83. P. 100166-100166.
68. Letter to C&D Recycling from Lee S. Smith, PADER, re: Inspection discoveries and correction plan request, 7/12/83. P. 100167-100168.
69. Hazardous Waste Publications, Resource List for Hazardous Waste, prepared by Pennsylvania Environmental Research Foundation, 10/83. P. 100169-100181.
70. Letter to Mr. Myron Brenner, C&D Recycling, from Mr. John J. Wilkes, Jr., the Bureau of Air Quality Control, re: Temporary operating permit, 10/4/83. P. 100182-100182.
71. Operating Permit Renewal for C&D Recycling prepared by the Bureau of Air Quality Control, 1/12/84. P. 100183-100183.
72. Memorandum to Mr. James W. Chester, U.S. EPA, from Mr. William F. McDonnell, U.S. EPA, re: Laboratory data recording error, 4/17/84. P. 100184-100185.
73. Potential Hazardous Waste Site Identification for C&D Recycling, 5/24/84. P. 100186-100186.
74. Data package cover sheet, 5/24/84. P. 100187-100193. The following are attached:
 - a) Water or Waste Quality Reports for samples 018205 and 018206;
 - b) Water and Wastewater Reports for samples 8418205 and 8418206;
 - c) PADER Special Analysis Report for samples 018124 and 018125.
75. Bacteriological Examination of Water for C&D Recycling, 5/31/84. P. 100194-100194.
76. Data package cover sheet, 6/6/84. P. 100195-100203. The following are attached:
 - a) a transmittal letter to Mr. Evancho;
 - b) a Water or Waste Quality Report;

- c) two information sheets regarding the lab report and EPA drinking water standards;
 - d) a transmittal letter to Ms. Sulima;
 - e) a Water or Waste Quality Report for sample 019578;
 - f) a Water and Wastewater Report for sample 8419578.
77. Data package cover sheet, 9/12/84 - 10/1/84.
P. 100204-100301. The following are attached:
- a) 36 Water or Waste Quality Reports;
 - b) 36 Water and Wastewater Reports;
 - c) a transmittal letter to Mr. Evancho;
 - d) a transmittal letter to Mr. Rapczynski;
 - e) a transmittal letter to Ms. Sulima;
 - f) a transmittal letter to Mr. Rohrbach;
 - g) a transmittal letter to Mr. Drasher;
 - h) a transmittal letter to Mr. Oberst;
 - i) a transmittal letter to Mr. Reznick;
 - j) a transmittal letter to Mr. Sheavnan;
 - k) a transmittal letter to Mr. Frymoyer;
 - l) a transmittal letter to Mr. Russell;
 - m) a transmittal letter to Mr. Clarlee;
 - n) a transmittal letter to Mr. Cawley;
 - o) a transmittal letter to Mr. Rock;
 - p) a transmittal letter to Mr. Cenzar;
 - q) a transmittal letter to Mr. Chapinski;
 - r) a transmittal letter to Mr. Cona;
 - s) a hand-drawn map of the site.
78. Data package cover sheet, 9/13/84. P. 100302-100330.
The following are attached:
- a) a grab soil sample table;
 - b) three grab soil sample maps;
 - c) 13 Water or Waste Quality Reports;
 - d) 12 Water and Wastewater Reports.
79. Data package cover sheet, 9/14/84. P. 100331-100333.
Sampling data is attached.
80. Memorandum to file from Lee S. Smith, the Bureau of Air Quality Control, re: Visit to C&D Recycling, 9/18/84.
P. 100334-100334.
81. Data package cover sheet, 9/14/84 - 10/10/84.
P. 100335-100341. Three Water or Waste Quality Reports and three Water and Wastewater Reports are attached.

82. Memorandum to Ms. Laura Boornazian from Mr. George Bochanski, re: Information on C&D Recycling investigation, 10/1/84. P. 100342-100342.
83. C&D Recycling Site data package cover sheet, 10/4/84 - 10/23/84. P. 100343-100365. The following are attached:
- a) a transmittal letter to Ms. Sulima;
 - b) two Water or Waste Quality Reports for the Sulima residence;
 - c) two Water and Wastewater Reports for the Sulima residence;
 - d) a transmittal letter to Mr. and Mrs. Rohrbach;
 - e) Water or Waste Quality Reports for samples 8437126, 8437127, 037025, 037128 & 037129;
 - f) Water and Wastewater Reports for samples 8437126, 8437127, 8437025, 8437128 & 8437129;
 - g) a transmittal letter to Ms. Sophie Martincek;
 - h) Water or Waste Quality Reports for samples 037027 and 038711;
 - i) Water and Wastewater Reports for samples 8437027 and 8438711.
84. Memorandum to Mr. Paul Koval, PADER, from Mr. Richard J. Sichler, PADER, re: Ground water investigation interim report, 10/9/84. P. 100366-100367.
85. Information sheet, re: The history of C&D Recycling, 10/15/84. P. 100368-100368.
86. Foster Township Screening prepared by the National Community Lead Poisoning Data System, 10/29/84. P. 100369-100371.
87. Memorandum to Mr. William McDonnell, PADER, from Mr. Richard J. Sichler, PADER, re: Description of abandoned wells, 11/15/84. P. 100372-100372.
88. C&D Recycling Site data package cover sheet, 11/26/84. P. 100373-100380. A transmittal letter, three Water or Waste Quality Reports, and three Water and Wastewater Reports are attached.

89. C&D Recycling Site data package cover sheet, 12/12/84 - 1/2/85. P. 100381-100432. The following are attached:
- a) a transmittal letter to Mr. and Mrs. Rohrbach;
 - b) Water or Waste Quality Reports for samples 000090, 000026, 000089, 000088, 000087, 000086, 000085, 000084, 000083, 000082, 000081, 000080, 000078, 045045, 001372, and 001373;
 - c) Water and Wastewater Reports for samples 8500090, 8500026, 8500089, 8500088, 8500087, 8500086, 8500085, 8500084, 8500083, 8500082, 8500081, 8500080, 8500079, 8500078, 8445045, 8501371, 8501372, and 8501373;
 - d) Inorganic Analysis Data Sheets for samples MC9518, MC9519, MC9520, MC9521, MC9522, MC9523, MC9524, MC9525, MC9526, MC9527, MC9528, and MC9529;
 - e) two hand drawn maps of the C&D Recycling Site.
90. Letter to Mr. Harold Byer, U.S. EPA, from Mr. Stephen McMahon, Mr. Richard C. Romer, and Mr. Garth Glenn, NUS Corporation, re: Nonsampling Site Reconnaissance Summary Report, 1/10/85. P. 100433-100450. A well information sheet and the report are attached.
91. C&D Recycling Site data package, 1/10/85. P. 100451-100466. Eight Water or Waste Quality Reports and seven Water and Wastewater Reports are attached.
92. Letter to Ms. Laura Boornazian, U.S. EPA, from Mr. Richard J. Sichler, PADER, re: Information on the quality of ground water around the C&D Site, 1/24/85. P. 100467-100468.
93. C&D Recycling Site data package cover sheet, 2/28/85 - 3/21/85. P. 100469-100509. Eighteen Water or Waste Quality Reports, 17 Water and Wastewater Quality Reports, and a handwritten note are attached.
94. Letter to Mr. and Mrs. Rohrbach from Mr. Richard J. Sichler, the Bureau of Water Quality Management, re: Sample results, 3/5/85. P. 100510-100545. Sample results are attached.

95. Memorandum to Mr. William McDonnell, PADER, from Mr. Richard J. Sichler, PADER, re: Sampling techniques and ground water contamination, 3/13/85. P. 100546-100546.
96. Letter to Mr. Joseph Brenner, C&D Recycling Inc., from Mr. William McDonnell, PADER, re: Conditions for lead removal, 3/13/85. P. 100547-100548.
97. Memorandum to Ms. Laura Boornazian from Chris Fritz, re: Samples from the fall of 1984, 3/25/85. P. 100549-100555. The following are attached:
 - a) grab soil samples;
 - b) off-site private well samples;
 - c) on-site well and Sulima well samples;
 - d) two drawings depicting soil sampling locations and surrounding private residences.
98. Uniform Hazardous Waste Manifests for C&D Recycling, Inc., 4/4/85. P. 100556-100561.
99. Potential Hazardous Waste Site Inspection Report for C&D Recycling, 4/4/85. P. 100562-100567.
100. Record of Communication to Ms. Laura Boornazian, U.S. EPA, from Mr. Emil Evancho, Foster Township, re: C&D Recycling removal actions, 4/9/85. P. 100568-100568.
101. Report: Final Letter Report on Hydrogeologic Assessment, prepared by NUS Corporation, 4/15/85. P. 100569-100627.
102. Resident Sampling Program Results, 4/16/85. P. 100628-100628.
103. C&D Recycling Site data package cover sheet, 4/16/85 - 4/29/85. P. 100629-100689. Nineteen Water or Waste Quality Reports and 20 Water and Wastewater Reports are attached.
104. Memorandum to Mr. William F. McDonnell, PADER, from Mr. Christopher Fritz and Mr. John Mellow, PADER, re: C&D Recycling, Inc. on-site well water sample analysis, 4/19/85. P. 100690-100690. A Water and Wastewater Report is attached.
105. Memorandum to Mr. William F. McDonnell, PADER, from Mr. Theodore O. Geary, PADER, re: C&D Recycling proposed resampling, 5/2/85. P. 100691-100692.

106. Letter to Mr. John Hollick, Foster Township Board of Supervisors, from Mr. David J. Lamereaux, PADER, re: Update of specific requirements imposed upon C&D Recycling, 5/14/85. P. 100693-100694.
107. Memorandum to the Bureau of Litigation, from Mr. John J. Leskosky, PADER, re: Chronology of C&D Recycling, 5/29/85. P. 100695-100696.
108. C&D Recycling Site data package cover sheet, 5/29/85. P. 100697-100699. An Inspection Report and transmittal letter are attached.
109. Memorandum to Mr. Keith Kearns, PADER, from Mr. William F. McDonnell, PADER, re: Emergency evaluation of potential and existing ground water contamination, 6/11/85. P. 100700-100701.
110. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: Resident monitoring program, 6/21/85. P. 100702-100704.
111. List of insect species found at Mill Hopper Run and the pond downstream of C&D Recycling, 6/28/85. P. 100705-100705.
112. U.S. EPA Maintenance Forms for C&D Recycling, 6/28/85. P. 100706-100710.
113. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John Mellow, PADER, re: Resident monitoring program, 7/1/85. P. 100711-100711.
114. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: Proposed ground water monitoring, 7/2/85. P. 100712-100712.
115. Letter to Mr. Jerome Lehman, PADER, from Mr. Joseph S. Tomalauage, Weston Consultants, re: Weston's Work Plan for the C&D Recycling Site, 7/8/85. P. 100713-100720. The Work Plan is attached.
116. C&D Recycling Site data package cover sheet, 7/8/85. P. 100721-100752. The following are attached:
 - a) a transmittal letter from The Foster Township Board of Supervisors;
 - b) a map of the C&D Site;
 - c) a map legend;

d) 14 Chemical Analysis Reports.

117. Letter to Ms. Jane K. Sulima from L.G. Lewallen, AT&T, re: Processable material used at the C&D site, 7/10/85. P. 100753-100753.
118. Memorandum to Mr. William McDonnell, PADER, from Mr. Edward P. Kupsky, PADER, re: Aquatic biology investigation, 7/10/85. P. 100754-100755.
119. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: C&D Recycling proposed ground water monitoring, 7/15/85. P. 100756-100757.
120. C&D Recycling Site data package cover sheet, 7/17/85 - 8/7/85. P. 100758-100801. Five Laboratory Reports, 23 PADER Special Analyses, and nine Water or Waste Quality Reports are attached.
121. C&D Recycling Site data package cover sheet, 7/18/85- 7/22/85. P. 100802-100886. Seventeen Water or Waste Quality Reports, 17 Laboratory Reports, and handwritten notes are attached.
122. Letter to Mr. Joseph Tomalavage, Roy F. Weston Inc., from Mr. Stephen U. Lester, Citizen's Clearinghouse for Hazardous Wastes, Inc., re: Aerial photography and monitoring wells, 7/19/85. P. 100887-100888.
123. Letter to Mr. Jerome Lehman, PADER, from Mr. Joseph S. Tomalavage, Roy F. Weston Inc., re: The results of Task 1 -- Aerial photo interpretation of Weston's work plan for the preliminary assessment of the C&D Recycling Site, 7/24/85. P. 100889-100894. A trace location figure and an aerial photograph interpretation table are attached.
124. Memorandum to Mr. Keith Kerns, PADER, to Mr. Jerome J. Lehman, PADER, re: Monitoring wells progress report, 7/30/85. P. 100895-100895.
125. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: Pond samples, 7/30/85. P. 100896-100898.
126. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: Residential sampling, 7/30/85. P. 100899-100901.

127. Letter to Mr. Jerome Lehman, PADER, from Mr. Joseph S. Tomalavage, Roy F. Weston Inc., re: Water level and well depth information on the domestic wells in the vicinity of C&D Recycling, 7/31/85. P. 100902-100904. Water level and well depth information is attached.
128. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: Proposed groundwater monitoring, 8/2/85. P. 100905-100906.
129. Letter to Mr. Jerome Lehman, PADER, from Mr. David B. Back and Mr. Joseph S. Tomalavage, Roy F. Weston Inc., re: Results of Task 2-Monitor Well Installation and Task-3-Soil Sampling of Weston's work plan for the preliminary assessment of the C&D Recycling site, 8/15/85. P. 100907-100931. Well results are attached.
130. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: Pond samples, 8/19/85. P. 100932-100932.
131. Letter to Mr. Jerome Lehman, PADER, from Mr. Joseph S. Tomalavage, Roy F. Weston Inc., re: Corrected Page 4 and Figure 2 for insertion into the letter report of 8/15/85, 8/20/85. P. 100933-100935. Page 4 and Figure 2 are attached.
132. Letter to Mrs. Sharon Rohrbach from Mr. Jerome J. Lehman, PADER, re: Aquatic biology survey, 8/21/85. P. 100936-100936.
133. C&D Recycling Site data package cover sheet, 8/26/85. P. 100937-100946. The following are attached:
 - a) handwritten garden soil results;
 - b) three PADER Special Analyses Reports;
 - c) four Laboratory Reports.
134. Letter to Township Secretary from Mr. David J. Lamereaux, PADER, re: Update of activities concerning the C&D Recycling Site, 9/6/85. P. 100947-100948.
135. C&D Recycling Site data package cover sheet, 9/11/85 - 11/6/85. P. 100949-101025. The following are attached:
 - a) handwritten field notes;
 - b) 30 PADER Special Analyses Reports;
 - c) 14 Water or Waste Quality Reports;
 - d) 16 PADER Laboratory Reports.

136. Letter to Mr. Myron Brenner, C&D Recycling, Inc., from Mr. Dale G. Williams, PADER, re: Waste processing facility, 9/12/85. P. 101026-101026.
137. C&D Recycling Site data package cover sheet, 9/12/85. P. 101027-101031. Two Special Analyses Reports and two Laboratory Reports are attached.
138. Memorandum to Mr. David J. Lamereaux, PADER, from Mr. Jerome J. Lehman, PADER, re: Residents' well samples, 10/3/85. P. 101032-101032.
139. Memorandum to Mr. Jerome Lehman, PADER, from Mr. John S. Bent, PADER, re: Well samples, 10/18/85. P. 101033-101033.
140. Memorandum to Mr. James W. Chester, PADER, from Mr. Jerome J. Lehman, PADER, re: C&D Recycling status update, 11/7/85. P. 101034-101038.
141. Letter to Mr. Floyd D. Kefford, PADER, from Ms. Jane K. Sulima, re: Unfiltered and filtered split-samples of the Sulima well, 11/27/85. P. 101039-101039.
142. C&D Recycling Site data package cover sheet, 12/3/85 - 12/16/85. P. 101040-101133. The following are attached:
 - a) 50 PADER Special Analyses Reports;
 - b) 21 Water or Waste Quality Reports;
 - c) 21 PADER Laboratory Reports;
 - d) handwritten results of residential well sampling.
143. Memorandum to Mr. William F. McDonnell, PADER, from Mr. John S. Mellow, Mr. Christopher J. Fritz, and Mr. Jerome J. Lehman, PADER, re: C&D Recycling ground water monitoring, 12/18/85. P. 101134-101140.
144. Letter to Mr. Floyd Kefford, PADER, from Ms. Jane Sulima, re: Questions on well samples, 12/20/85. P. 101141-101141.
145. Letter to Mr. Richard Watman, U.S. EPA, from Mr. Ronald F. Klinikowski, PADER, re: Review of field trip reports, 12/23/85. P. 101142-101142.

146. Letter to The Honorable Raphael Musto, Senate of Pennsylvania, from Mr. Jerome J. Lehman, PADER, re: Sample results from monitoring wells on the C&D Recycling property, 12/30/85. P. 101143-101143.
147. Letter to Ms. Jane Sulima from Mr. Jerome J. Lehman, PADER, re: Sample results from monitoring wells on the C&D Recycling property, 12/30/85. P. 101144-101144. The sample results are attached.
148. Memorandum to Mr. Dale G. Williams, PADER, from Mr. John S. Mellow, PADER, re: Ground water monitoring, 1/8/86. P. 101145-101148.
149. Letter to Mrs. Jane Sulima, from Mr. Jerome J. Lehman, PADER, re: Copies of monitoring well samples, 1/10/86. P. 101149-101150.
150. Letter to Mr. James Chester, PADER, from Mr. Thomas M. Tigue, Pennsylvania House of Representatives, re: Questions on and requests for well monitoring, 1/20/86. P. 101151-101152.
151. Letter to Mrs. Jane Sulima from Mr. Jerome Lehman, PADER, re: Ground water flow, bedrock, and rainfall data, 2/11/86. P. 101153-101155.
152. Letter to Mr. Floyd Kefford, PADER, from Ms. Jane K. Sulima, re: C&D Recycling lab analyses, 2/11/86. P. 101156-101156.
153. Letter to Mr. Mark Carmon, PADER, from Ms. Jane K. Sulima, re: Request for written confirmation of 3/10/86 meeting time, 2/19/86. P. 101157-101157.
154. Letter to Mr. Mark Carmon and Mr. David Lamereaux, PADER, from Ms. Jane K. Sulima, Better Informed Community, re: Concerns to be addressed at March 10th meeting, 2/20/86. P. 101158-101159.
155. C&D Recycling Site data package cover sheet, 2/27/86/ - 2/28/86. P. 101160-101258. The following are attached:
 - a) three handwritten desk memoranda;
 - b) 17 Water or Waste Quality Reports;
 - c) 18 PADER Laboratory Reports;
 - d) 19 Sample Inquiries;
 - e) 16 letters transmitting sample results.

156. Letter to The Honorable Thomas M. Tigue, Pennsylvania House of Representatives, from Mr. Mark A. Roller, PADER, re: Response to questions outlined in a January 20th letter, 3/5/86. P. 101259-101261.
157. Letter to Ms. Jane K. Sulima from Mr. Vincent C. White, PADER, re: Concerns about split sample discrepancies, 3/6/86. P. 101262-101264.
158. Report: C&D Recycling Final Field Trip, prepared by NUS Corporation, 3/12/86. P. 101265-101333.
159. Letter to Mr. Mark Roller, PADER, from Mr. Marvin I. Lewis, Better Informed Community, re: March 10th meeting, 3/19/86. P. 101334-101335.
160. Letter to Ms. Jane K. Sulima from Mr. Mark R. Carmon, PADER, re: Radiation testing, 3/24/86. P. 101336-101337.
161. Letter to Mr. Merritt Sheaman from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well sampling, 3/24/86. P. 101338-101339.
162. Letter to Ms. Joanna Russell from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101340-101340.
163. Letter to Mr. Thomas Rock from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101341-101342.
164. Letter to Mr. James A. Frymoyer from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101343-101343.
165. Letter to Mr. Dean Oberst from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101344-101345.
166. Letter to Mr. Ronald Rapczynski from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101346-101346.
167. Letter to Mr. Joseph Evancho from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101347-101348.
168. Letter to Mr. Stephen Drasher from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101349-101350.

169. Letter to Mr. Martin Clarke from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101351-101352.
170. Letter to Mr. Jerry Cawley from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101353-101353.
171. Letter to Mrs. Sophie Martincek from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101354-101355.
172. Letter to Ms. Dolores Reznick from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101356-101356.
173. Letter to Mr. & Mrs. Gary Rohrbach from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101357-101358.
174. Letter to Ms. Jane Sulima from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101359-101359.
175. Letter to Ms. Susan Kapraszsky from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101360-101361.
176. Letter to Mrs. Mildred Bushofsky from Mr. David J. Lamereaux, PADER, re: Laboratory analysis of well samples, 3/24/86. P. 101362-101363.
177. Handwritten note to Mr. Roller from Ms. Jane Sulima, Better Informed Community, re: Transmittal of data, 4/7/86. P. 101364-101367. A cover letter and a Water or Waste Quality Report are attached.
178. Letter to Mr. Marvin I. Lewis from Mr. Mark A. Roller, Office of Environmental Protection, re: Answer to points of previous letter, 4/8/86. P. 101368-101369.
179. Handwritten letter to Mr. Bill McDonald, Bureau of Waste Management, from Mr. Victor A. Gavinski III, re: Concern about water quality, 4/28/86. P. 101370-101371. A map is attached.
180. Letter to The Honorable Mr. James Seif, U.S. EPA, from Mr. Nicholas DeBenedictis, PADER, re: Request for EPA to begin cleanup, 4/30/86. P. 101372-101372.

181. Letter to Mr. Myron Brenner, C&D Recycling, Inc., from Mr. David J. Lamereaux, the Bureau of Solid Waste Management, re: Waste processing facility, 6/17/86. P. 101373-101374.
182. Handwritten letter to Mrs. Nancy Reagan, The White House, from Ms. Jane K. Sulima, re: Request for intervention on behalf of Superfund site victims, 8/25/86. P. 101375-101377.
183. Handwritten letter to Senator Stafford, U.S. Senate, from Mrs. Jane K. Sulima, re: Request for reauthorization of Superfund, 8/25/86. P. 101378-101379.
184. Letter to Mr. Joseph Brenner from Mr. Gary W. Moulder, PADER, re: Information on sample results of on-site monitoring wells at C&D Recycling, 10/17/86. P. 101380-101380.
185. C&D Recycling Site data package cover sheet, 10/21/86. P. 101381-101414. The following are attached:
 - a) a PADER Certification of Laboratory Report;
 - b) eight Water or Waste Quality Reports;
 - c) eight Laboratory Reports.
186. U.S. EPA Maintenance Forms for C&D Recycling, 10/27/86. P. 101415-101420.
187. Letter to Mr. Joseph Brenner from Mr. Gary Moulder, PADER, re: Sample results taken from monitoring wells at C&D Recycling Site, 11/7/86. P. 101421-1001421.
188. Memorandum to Mr. Dick Park, U.S. EPA, from Ms. Geralynn Downes-Valls, U.S. EPA, re: Aerial photographs of the C&D Recycling Site, 2/20/87. P. 101422-101422.
189. Letter to Mr. Harold Byer, U.S. EPA, from Mr. Garth Glenn, Mr. Thomas Fromm, and Ms. Audrey H. Fleisher, U.S. EPA, re: Sampling plan for C&D Recycling, 4/8/87. P. 101423-101426.
190. Trip Report for C&D Recycling Site, prepared by NUS Corporation and Ebasco Services, 4/29/87. P. 101427-101428.

191. Letter to Ms. Gerallyn Valls, U.S. EPA, from Mr. Richard C. Evans, Ebasco Services Incorporated, re: C&D Recycling Trip Report, 5/13/87. P. 101429-101429.
192. Letter to Mr. William Steuteville, U.S. EPA, from Mr. Doug Lorenzen, Bureau of Waste Management, re: Request for testing of home wells in Foster Township and RES Support, 6/26/87. P. 101430-101430.
193. Report: Report for Public Water Supply Permit, prepared by Carbon Engineering Inc., 7/87. P. 101431-101444. A transmittal postcard and sampling results are attached.
194. Report: Field Trip Report of C&D Recycling, prepared by NUS Corporation, 8/21/87. P. 101445-101557. A cover letter is attached.
195. U.S. EPA Potential Hazardous Waste Site Preliminary Assessment, 9/9/87. P. 101558-101561.
196. C&D Recycling Site data package cover sheet, 11/2/87. P. 101562-101584. Soil analysis for the Sulima property is attached.
197. Report: Preliminary Assessment of C&D Recycling, prepared by NUS Corporation, 12/2/87. P. 101585-101593. A cover letter is attached.
198. Letter to Mr. Dave Crownover, PADER, from Mr. Peter Kho, re: Reports for review, 1/7/88. P. 101594-101594.
199. C&D Recycling Site data package cover sheet, 8/9/88. P.101595-101597. A PADER transmittal card and sample results are attached.
200. Letter to Mrs. Jane K. Sulima from Mr. David J. Lamereaux, Bureau of Waste Management, re: Request by Ms. Sulima for information regarding work plans, 11/17/88. P. 101598-101598.
201. C&D Recycling Site data package cover sheet, 5/18/89. P. 101599-101602. A transmittal letter, a Water or Waste Quality Report, and a Laboratory Report are attached.
202. Report: Site Inspection of Mid-Atlantic Coast Delivery Company, prepared by NUS Corporation, 7/14/89. P. 101603-101701. A cover sheet is attached.

203. U.S. EPA Potential Hazardous Waste Site Inspection Report, (undated). P. 101702-101704.
204. Letter to Mr. Douglas Lorenzen, PADER, from Ms. Lorie Acker, re: Transmittal of site inspection reports, (undated). P. 101705-101705.
205. Information on Toxicity of Copper, (undated). P. 101706-101711.
206. C&D Recycling Site data package cover sheet, (undated). P. 101712-101716. A letter containing sampling results of the Sulima well and results of residential well testing are attached.
207. Mineral Analysis Report submitted to U.S. EPA, (undated). P. 101717-101722. A Toxic Metal Level Chart, sample results, and a Foster Township Screening are attached.
208. Report: Hazard Ranking System (HRS) Reference Package, (no author cited), (undated). P. 101723-101904. A cover letter is attached.
209. Invoice Information Package, (undated). P. 101905-102818.
210. Laboratory Testing Information, (undated). P. 102819-102875.
211. Blood test results for Ms. Sharon Rohrbach and Mr. Gary Rohrbach, 10/2/84. P. 102876-102876.
212. Report: Foster Township Zoning Ordinance, prepared by Mr. John R. Varaly, 2/4/86. P. 102877-103002.
213. Report: Analytical Report, Nassau Metals, prepared by Wadsworth/Alert Laboratories, Inc., 10/14/87. P. 103003-103014.
214. Order In the Matter of Midlantic Coast Delivery Systems, Inc., Foster Township, Luzerne County, Unpermitted Storage and Disposal of Hazardous Waste, 8/12/88. P. 103015-103020.
215. Letter to Mr. Joseph Lenahan from The Angeline Elizabeth Kirby Memorial Health Center, re: Water sample testing, 6/22/89. P. 103021-103024. Water testing reports for Caster's Floral & Gift Shop and for Ms. Danielle Sherman are attached.

216. Report: Commonwealth of Pennsylvania 1990 Water Quality Assessment (305(b) Report), prepared by PADER, 4/90. P. 103025-103032.
217. Handwritten notes, re: Soil samples, 6/88. P. 103033-103036. Three handwritten tables of metals in monitoring wells are attached.
218. Report: Occurrence of Coal Deposits and Effects on Water Quality Near the C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by Fred C. Hart Associates, Inc., 9/89. P. 103037-103086.
219. Handwritten notes, re: Chemicals, (undated), P. 103087-103094. Tables 3-35C, 3-37, 3-41, 3-43, Summary of Valid Analytical Results -- On Site Groundwater, are attached.
220. Summary of Soil Sampling Analyses, C&D Recycling Site, (undated). P. 103095-103098. The following are attached:
- a) Summary of Ground Water Analytical Data;
 - b) Summary of Monitoring Well Data Collected During the Remedial Investigation;
 - c) Summary of Residential Well Data Collected During the Remedial Investigation.
221. Map, Distribution of Soil Lead, C&D Recycling, (undated). P. 103099-103101. Two maps entitled "Assumed Distribution of Soil Lead and Actual Distribution of Soil Lead" are attached.
222. Handwritten notes, re: Residential and monitoring wells, (undated). P. 103102-103107.
223. Handwritten table, Concentration of metals in residential wells, (undated). P. 103108-103111. A table of copper and lead concentrations in wells is attached.
224. Handwritten notes, re: Testing for lead at residential wells, (undated). P. 103112-103115.
225. Handwritten notes, re: Concentration of metals in residential wells, (undated). P. 103116-103124.

II. REMEDIAL ENFORCEMENT PLANNING

1. Letter to Ms. Carol Stokes, U.S. EPA, from Mr. Martin D. Cohn, Laputka, Bayless, Ecker & Cohn, re: Background information on C&D Recycling, 2/14/86. P. 200001-200007. A deed dated 7/30/79 between Peoples First National Bank & Trust Company and C&D Recycling is attached.
2. First page of a letter to Ms. Denise Parkinson, Esquire, U.S. EPA, from the Law Offices of Laputka, Bayless, Ecker & Cohn, re: Materials used at C&D Recycling, 6/11/86. P. 200008-200008.
3. Letter to Mr. John Williams, AT&T Nassau Metals Corporation, from Ms. Carol Stokes-Cawley, U.S. EPA, re: Changing EPA Compliance Officer, 10/27/86. P. 200009-200009.
4. Amended Administrative Orders On Consent In the Matter Of: C&D Recycling Site and AT&T Nassau Metals Corporation, Docket Nos. III-87-30-DC and III-87-31-DC, 10/28/87. P. 200010-200055.
5. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: First Project Status Report, 3/30/88. P. 200056-200058. The first progress report is attached.
6. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 2, 4/29/88. P. 200059-200062. The progress report and a contractor statement of qualifications summary are attached.
7. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 3, 5/27/88. P. 200063-200067. The progress report, a location map, and off-site soil sampling notes are attached.
8. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 4, 6/28/88. P. 200068-200071. The progress report and a surficial soil sampling location map are attached.
9. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 5, 7/29/88. P. 200072-200079. The progress report and a domestic well sampling summary for 6/29/88 - 6/30/88 are attached.

10. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 6, 8/26/88. P. 200080-200134. The progress report is attached.
11. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 7, 9/29/88. P. 200135-100137. The progress report and a letter regarding field investigation interim data validation are attached.
12. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 8, 10/31/88. P. 200138-200142. The following are attached:
 - a) the progress report;
 - b) an explanation of summary tables for bedrock samples;
 - c) a list of analytical parameters for bedrock samples;
 - d) a summary of analytical results for bedrock samples.
13. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 9, 11/30/88. P. 200143-200144. The progress report is attached.
14. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 10, 1/3/89. P. 200145-100153. The following are attached:
 - a) the progress report;
 - b) a list of analytical parameters for on-site ground water;
 - c) an explanation of summary tables for on-site ground water for 10/11/88 and 10/12/88;
 - d) a summary of field analyses for on-site ground water for 10/11/88 and 10/12/88.
15. Letter Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 11, 1/31/89. P. 200154-200157. The progress report is attached.

16. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Project Status Report Number 12, 3/2/89. P. 200158-200167. The progress report is attached.
17. Letter to Ms. Donna McCartney, U.S. EPA, from J. T. Chikowski, AT&T, re: Project Status Report Number 13, 4/5/89. P. 200168-200176. The progress report is attached.
18. Letter to Ms. Donna McCartney, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 14, 5/8/89. P. 200177-200179. The progress report is attached.
19. Letter to Ms. Donna McCartney, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 15, 6/7/89. P. 200180-200186. The progress report is attached.
20. Letter to Ms. Donna McCartney, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 16, 6/30/89. P. 200187-200189. The progress report is attached.
21. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 17, 8/7/89. P. 200190-200200. The progress report is attached.
22. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 18, 9/1/89. P. 200201-200213. The progress report is attached.
23. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T re: Project Status Report Number 19, 10/2/89. P. 200214-200218. The progress report is attached.
24. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 20, 11/8/89. P. 200219-200243. The progress report is attached.
25. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 21, 12/14/89. P. 200244-200248. The progress report is attached.

26. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 22, 1/2/90. P. 200249-200253. The progress report is attached.
27. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 23, 2/6/90. P. 200254-200288. The progress report is attached.
28. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 24, 3/6/90. P. 200289-200296. The progress report is attached.
29. C&D Recycling Site Project Status Report Number 25, prepared by William S. Neubeck, 4/1/90. P. 200297-200303.
30. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 26, 5/1/90. P. 200304-200310. The progress report is attached.
31. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 27, 6/5/90. P. 200311-200316. The progress report is attached.
32. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 28, 7/3/90. P. 200317-200318. The progress report is attached.
33. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 29, 8/1/90. P. 200319-200322. The progress report is attached.
34. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 30, 9/10/90. P. 200323-200324. The progress report is attached.
35. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 31, 10/16/90. P. 200325-200327. The progress report is attached.

36. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 32, 11/13/90. P. 200328-200333. The progress report is attached.
37. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 33, 12/5/90. P. 200334-200337. The progress report is attached.
38. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 34, 1/4/91. P. 200338-200342. The progress report is attached.
39. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 35, 2/12/91. P. 200343-200345. The monthly progress report is attached.
40. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 36, 3/21/91. P. 200346-200351. The progress report is attached.
41. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 37, 4/22/91. P. 200352-200354. The progress report is attached.
42. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 38, 5/17/91. P. 200355-200356. The progress report is attached.
43. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 39, 6/13/91. P. 200357-200358. The progress report is attached.
44. Letter to Mr. Michael Towle, U.S. EPA, from J.T. Chikowski, AT&T, re: Project Status Report Number 40, 7/29/91. P. 200359-200361. The progress report is attached.

III. REMEDIAL RESPONSE PLANNING

- ** 1. Report: Draft Community Relations Plan, C&D Recycling Site, prepared by Ebasco Services, 10/1/86.
- 2. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Bruce Moholt, U.S. EPA, re: Toxicologic assessment of C&D Recycling Site, 7/2/87. P. 300000A-300000J. A sample data summary and a site map are attached.
- ** 3. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Bruce Moholt, U.S. EPA, re: A toxicologic assessment for the C&D Recycling Site, 8/2/87. Eight Sample Data Summary Target Compound charts and a sample location map are attached.
- 4. Letter to Mr. Gary Shaffer, PADER, from Ms. Donna McCartney, U.S. EPA, re: Transmittal of the Preliminary Remedial Investigation (RI) Work Plan, 10/87. P. 300001-300001.
- 5. Report: Preliminary Remedial Investigation Work Plan, C&D Recycling Site, prepared by Fred C. Hart Associates, Inc., 10/14/87. P. 300002-300213. Two cover letters and a certified mail receipt are attached.
- 6. Memorandum to Ms. Donna M. McCartney, U.S. EPA, from Mr. Gary F. Shaffer, PADER, re: Preliminary RI Work Plan for the C&D Recycling Site, 11/11/87. P. 300214-300216.
- 7. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. John Scalera, U.S. EPA, re: Quality Assurance Project Plan for the C&D Recycling Site, 11/19/87. P. 300216A-300216Q. A Quality Assurance Project Plan Review is attached.
- 8. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Charles J. Kulp, U.S. Department of the Interior, re: Receipt of the Preliminary RI Work Plan for the C&D Recycling Site, 11/24/87. P. 300217-300217.
- 9. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Comments on the RI Work Plan for the C&D Recycling Site, 12/8/87. P. 300218-300221.
- 10. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Alyce T. Fritz, U.S. EPA, re: Review of the Preliminary Work Plan for the C&D Recycling Site, 12/24/87. P. 300221A-300221B.

11. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna McCartney, U.S. EPA, re: Preliminary RI Work Plan, 1/13/88. P. 300222-300227. A handwritten cover letter and a map are attached.
12. Letter to Mr. Jim Perazzo, Hart Environmental Management Corp., from Ms. Donna M. McCartney, U.S. EPA, re: Files pertaining to the December 1985 residential well sampling event, 1/10/88. P. 300228-300228.
13. Excerpt from the Preliminary Draft of the C&D RI Work Plan with handwritten notes, 2/9/88. P. 300229-300230. A facsimile cover letter is attached.
14. Excerpt from the Preliminary Draft of the C&D Work Plan regarding soil sampling with maps and tables, 2/9/88. P. 300231-300241. A facsimile cover letter is attached.
15. Report: Remedial Investigation Work Plan for C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 2/12/88. P. 300242-300491.
16. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: RI Work Plan at C&D Recycling Site, 2/12/88. P. 300492-300494.
17. Letter to Ms. Donna M. McCartney, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: RI Work Plan for C&D Recycling Site, 2/12/88. P. 300495-300495.
18. U.S. EPA Internal Review of Enforcement Program Documents, RI Work Plan, 2/12/88. P. 300496-300496.
19. Excerpt from RI Work Plan for the C&D Recycling Site, 2/19/88. P. 300497-300510. A cover memorandum is attached.
20. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Comments on the Work Plan, 2/24/88. P. 300511-300514.
21. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: RI Work Plan, 3/2/88. P. 300515-300531. Excerpts from the RI Work Plan and two letters of correspondence are attached.

22. Handwritten note to Ms. Donna McCartney, U.S. EPA, from Ms. Nanci J. Smith, AT&T, re: Letters and Access Agreements, 3/7/88. P. 300532-300567. The letters and Access Agreements are attached.
23. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: RI Work Plan progress summary, 3/10/88. P. 300568-300568.
- ** 24. Report: Final Evaluation Report, Preliminary Remedial Investigation Report, Review of C&D Recycling Site, (no author cited), 3/10/88.
25. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Edler, AT&T, re: Status of access agreements, 3/17/88. P. 300569-300570.
26. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Request for EPA's approval for Hart to perform Remedial Investigation/Feasibility Study (RI/FS) at C&D Recycling, 3/23/88. P. 300571-300571.
27. Letter to Ms. Donna M. McCartney, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: Hart's statement of qualifications and experience, 3/23/88. P. 300572-300694. A statement of qualifications for the RI is attached.
28. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Notification of EPA's approval of Hart as contractor/engineer, 3/29/88. P. 300695-300696.
29. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Status of access agreements for sampling specified in the RI Work Plan, 4/5/88. P. 300697-300698.
30. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: RI Work Plan for C&D Recycling Site, 4/14/88. P. 300699-300699.
31. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Status of the access agreements for sampling specified in the RI Work Plan, 4/18/88. P. 300700-300700.

32. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: RI Work Plan for the C&D Recycling Site, 4/18/88. P. 300701-300701.
33. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Supplements to RI Work Plan, 4/25/88. P. 300702-300702.
34. Letter to Ms. Donna M. McCartney, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: Transmittal of the Health and Safety Plan and Quality Assurance Project Plan with appendices for the RI, 4/24/88. P. 300703-300703.
35. Report: Health and Safety Plan for the Remedial Investigation at the C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 4/25/88. P. 300704-300742.
36. Report: Quality Assurance Project Plan and Data Management Plan for the Remedial Investigation at the C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 4/25/88. P. 300743-300795.
37. Report: Appendices to the Quality Assurance Project Plan for the Remedial Investigation at the C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 4/25/88. P. 300796-301163.
38. U.S. EPA Internal Review of C&D Recycling Enforcement Program Documents: Remedial Investigation (RI), Quality Assurance Project Plan (QAPP) and Appendices, and Health And Safety Plan (HASP), 4/27/88. P. 301164-301164.
39. Memorandum to file from Ms. Donna McCartney, U.S. EPA, re: April 27, 1988 site visit, 5/3/88. P. 301165-301165.
40. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Status of the access agreements for sampling specified in the RI Work Plan, 5/5/88. P. 301166-301166.
41. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. John Scalera, U.S EPA, re: Review of the Quality Assurance Project Plan for the C&D Recycling Site, 5/18/88. P. 301166A-301166Q. The review is attached.

42. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Approval of Final Work Plan documents, 5/24/88. P. 301167-301168.
43. Memorandum to C&D file from Ms. Donna M. McCartney, U.S. EPA, re: May 23, 1988 site visit and meeting, 5/25/88. P. 301169-301169.
44. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Estimated project schedule for initial RI tasks, 6/2/88. P. 301170-301170.
45. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Excerpt from EPA's oversight contractor's work plan regarding C&D Recycling Site, 6/13/88. P. 301171-301171.
46. Field Notes for C&D Recycling prepared by Mr. Paul Wooldridge, Versar Inc., 6/13/88-7/8/88. P. 301172-301198.
47. Report: Site Visit Trip Report for C&D Recycling Facility, prepared by CDM Federal Programs Corporation, 6/15/88. P. 301199-301223. A cover letter is attached.
48. Letter to Mr. Larry Elder, AT&T, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Revised estimated schedule for the initial scope of RI field work at the C&D Recycling Site, 6/20/88. P. 301224-301227. The revised estimated schedule is attached.
49. Remedial Investigation and Feasibility Study Itinerary Sheet, 6/20/88. P. 301228-301228.
50. Handwritten attendance sheet for C&D Recycling Site RI/FS meeting, 6/20/88. P. 301229-301229.
51. Memorandum to C&D file from Ms. Donna M. McCartney, U.S. EPA, re: Request for additional work, 6/24/88. P. 301230-301230.
52. Letter to Mr. Gregg Crystall, U.S. EPA, from Mr. John S. Williams, AT&T, re: Administrative Order on Consent, C&D Recycling Site, U.S. EPA Docket No. III-87-30-DK, 6/28/88. P. 301231-301233.
53. Telephone conversation record of Mr. Gregg Crystall and Ms. Donna McCartney, U.S. EPA, with Mr. Larry Elder, AT&T, re: Request for additional work and other issues or problems, 6/29/88. P. 301234-301234.

54. C&D Recycling Site Analytical Packet, 6/29/88.
P. 301235-301311. The following are attached:
- a) a list of analytical parameters at residential wells;
 - b) valid analytical results for residential well sampling round 1;
 - c) valid analytical results for residential well sampling round 1, semivolatiles compounds;
 - d) valid analytical results for residential well sampling round 1, pesticides and PCB's;
 - e) valid analytical results for residential well sampling round 1, inorganics;
 - f) resident well sampling and field parameter information;
 - g) summary of valid analytical results for residential well sampling round 1;
 - h) Inorganic Analysis Data for Drasher-1;
 - i) Inorganic Analysis Data for Clarke-1;
 - j) Inorganic Analysis Data for Clarke-1A;
 - k) Inorganic Analysis Data for Sulima-1;
 - l) Inorganic Analysis Data for Rohrbach-1;
 - m) Inorganic Analysis Data for Samuelian-1;
 - n) data package summary.
55. Memorandum to Mr. Jim Blasting, Fred C. Hart Associates Inc., from Mr. Larry Kaufman, re: Health and safety site visit to AT&T, 6/30/88. P. 301312-301312.
56. Letter to Mr. John S. Williams, Esquire, AT&T, from Mr. Gregg Crystall, U.S. EPA, re: Administrative Order on Consent, C&D Recycling Site, U.S. EPA Docket No. III-87-30-DC, 7/6/88. P. 301313-301316.
57. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Performance audit checklist, 7/8/88. P. 301317-301321. A draft copy of the Performance Audit Checklist is attached.

58. Rock Core Log, Fred C. Hart Associates Inc., 7/12/88-7/13/88. P. 301322-301324.
59. Rock Core Log, Fred C. Hart Associates Inc., 7/14/88-7/18/88. P. 301325-301331.
60. Rock Core Log, Fred C. Hart Associates Inc., 7/19/88-7/25/88. P. 301332-301349.
61. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Daniel K. Donnelly, U.S. EPA, re: Phenol Report for C&D Recycling, 7/19/88. P. 301350-301357. The Phenol Report is attached.
62. Data Sampling Package, U.S. EPA, 7/19/88 - 7/14/89. P. 301358-302096.
63. Letter to Mr. Jim Blasting, Fred C. Hart Associates Inc., from Mr. Nathan R. Frank, Compuchem Laboratories, re: Inclusion of Quality Assurance (QA) Plan, 7/28/88. P. 302097-302096.
64. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Field Performance Audit, 7/29/88. P. 302097-302101. A finalized version of the Field Performance Audit is attached.
65. Data Sampling Package, U.S. EPA, 7/29/88. P. 302102-302185.
66. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Confirmation of acceptance of M.W. Farmer and Company as tank removal contractor, 8/2/88. P. 302186-302187. The resume of Mr. Michael W. Farmer is attached.
67. Telephone conversation record of D. McCartney with Mr. Mark Brown, Pennsylvania House of Representatives Conservation Committee, re: Update on status of site work, 8/8/88. P. 302188-302188.
68. Memorandum to Donna McCartney from Ms. Diana Baldi, U.S. EPA, re: Inorganic data validation for the C&D Recycling Site, 8/10/88. P. 302189-302212. The inorganic data review is attached.
69. Letter to Mr. Gregg Crystall, U.S. EPA, from Mr. John J. Williams, AT&T Nassau Metals, re: Additional work tasks to be performed at the C&D Recycling Site, 8/11/88. P. 302213-302219.

70. Report: Laboratory Report, prepared by Adirondack Environmental Services, Inc., 8/15/88. P. 302220-302226.
71. Letter to Mr. Larry Elder, AT&T, from Mr. Daniel J. Casey and Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Status of underground storage tanks at C&D Recycling Site, 8/16/88. P. 302227-302229. A Certificate of Non-Hazardous Vessel is attached.
72. Letter to Mr. Larry Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: C&D Recycling Site RI/FS, 8/16/88. P. 302230-302232.
73. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Comments concerning Items 8 and 11 on Field Performance Audit and response to August 2, 1988 telephone conversation questions, 8/16/88. P. 302233-302234. Soil sample analyses changes are attached.
74. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Diana Baldi, U.S. EPA, re: Organic data validation for the C&D Recycling Site, 8/18/88. P. 302235-302286. The organic data review is attached.
75. Letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Update documents on EPA's involvement with C&D Recycling Site and Tonolli Corporation Site, 9/6/88. P. 302287-302287.
76. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. John L. Persico, Fred C. Hart Associates Inc., re: Transmittal of Work Plan, QA Project Plan, Data Management Plan, and Health and Safety Plan, 9/6/88. P. 302288-302288.
77. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Diana Baldi, U.S. EPA, re: Inorganic data validation for the C&D Recycling Site, 9/8/88. P. 302289-302309. The inorganic data review is attached.
78. Report: Oversight Report for C&D Recycling Facility, prepared by CDM Federal Programs Corporation, 9/9/88. P. 302310-302438. A cover letter is attached.
79. Telephone conversation record of Ms. Donna McCartney with Mr. Larry Elder, Mr. Jim Perazzo, and Mr. Jim Blasting, re: Status of RI work, data validation from phase 1 activities, and a meeting to discuss monitoring well placement, 9/12/88. P. 302439-302440.

80. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Diana Baldi, U.S. EPA, re: Inorganic data validation for the C&D Recycling Site, 9/12/88. P. 302441-302473. The inorganic data review is attached.
81. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Sediment samples and storage tank content samples, 9/13/88. P. 302474-302584. Information relating to sediment samples and storage tank samples and a site survey map are enclosed.
82. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Surface water samples, 9/15/88. P. 302585-302660. An Explanation of Summary Tables Surface Water Samples is attached.
83. Letter to Ms. Donna McCartney, U.S. EPA, from James F. Blasting, Fred C. Hart Associates Inc., re: Standard domestic well sampling protocol, 9/16/88. P. 302661-302672. The Standard Domestic Well Sampling Protocol is attached.
84. Letter to Mr. John S. Williams, AT&T Nassau Metals, from Mr. Gregg Crystall, U.S. EPA, re: Clarification of outstanding issues and information, 9/19/88. P. 302673-302675.
85. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Diana Baldi, U.S. EPA, re: Organic data validation for the C&D Recycling Site, 9/20/88. P. 302676-302720. The organic data review is attached.
86. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Information relating to off-site soil samples, 9/20/88. P. 302721-302842. The following are attached:
 - a) a list of analytical parameters: off-site soil samples;
 - b) a summary of valid analytical results: off-site soil samples;
 - c) raw data for off-site soil samples;
 - d) an off-site surface soil sample location map.

87. Report: Interim Data Evaluation Report Bedrock Internal Monitoring Well Proposal for C&D Recycling Site RI, prepared by Fred C. Hart Associates Inc., 9/21/88. P. 302843-302888.
88. Shipping Receipt, 9/22/88. P. 302889-302889.
89. Letter of Transmittal to Ms. Donna McCartney, U.S. EPA, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Sampling data, 9/23/88. P. 302890-302890.
90. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Bruce Moholt, U.S. EPA, re: Supplementary report of well samples near the C&D Recycling Site, 9/23/88. P. 302890A-302890B. A memorandum is attached.
91. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Diana Baldi, U.S. EPA, re: Total organic carbon (TOC) data validation for the C&D Recycling Site, 9/26/88. P. 302891-302912. The TOC data review is attached.
92. Letter to Mr. Dave Stewart, Viar and Company, from Mr. Chuck Sands, U.S. EPA, re: Review and rejection of information, 9/26/88. P. 302913-302926. Information supporting the rejection is attached.
93. Letter to Mr. Gregg Crystall, U.S. EPA, from Mr. John S. Williams, AT&T Nassau Metals, re: Positions held by AT&T regarding the C&D Recycling Site, 9/27/88. P. 302927-302927.
94. Letter to Mr. Merritt Sheaman from Ms. Donna M. McCartney, U.S. EPA, re: Permission for water sampling, 9/27/88. P. 302928-302941. Nine response forms, a location map, and a letter regarding well testing are enclosed.
95. Letter of Transmittal to Ms. Paula Luborsky, U.S. EPA, from S.F. Verschel, Fred C. Hart Associates Inc., re: Rock Core Logs, 10/5/88. P. 302942-302942.
96. Report: Draft Preliminary Health Assessment for C&D Recycling, prepared by the Agency for Toxic Substance and Disease Registry (ATSDR), 10/17/88. P. 302943-302946.
97. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Donna McCartney, U.S. EPA, re: Request for review of comments on the C&D Recycling Site RI/FS, 10/17/88. P. 302946A-302946A.

98. Letter to Mr. Gregg Crystall, U.S. EPA, from Mr. John S. Williams, AT&T Nassau Metals, re: Information on Interim Data Evaluation (IDE), 10/18/88. P. 302947-302949.
99. Letter to Mr. Larry Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: C&D Recycling Site RI/FS 10/19/88. P. 302950-302951.
100. Letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: C&D Recycling Site RI/FS, 10/21/88. P. 302952-302952.
101. Letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Geophysical logs taken on the existing wells at C&D Recycling Site, 10/28/88. P. 302953-302954.
102. Letter to Mr. Larry Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Information on latest C&D Recycling Site issues, 11/2/88. P. 302955-302955.
103. Letter to Mr. Wesley Gamble, Fred C. Hart Associates Inc., from Mr. Paul Wooldridge, Versar Inc., re: Tables providing cross reference information on split samples, 11/2/88. P. 302956-302956.
104. Handwritten letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: EPA letter sent to citizens and their technical people on the Nov. 15 meeting, 11/2/88. P. 302957-302957.
105. Letter to Ms. Donna M. McCartney, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: C&D Recycling Site RI/FS Consent Order, U.S. EPA Docket Number III-87-30-DC, 11/4/88. P. 302958-302958.
106. Report: Preliminary Feasibility Study Work Plan for C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 10/4/88. P. 302959-302997.
107. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Paul Dahlgren, CH2M Hill, re: The interim report prepared by Fred C. Hart Associates Inc. concerning the C&D Recycling Site, 11/8/88. P. 302997A-302997I.
108. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Residential well sampling near the C&D Recycling Site, 11/9/88. P. 302997AA-302997CC.

109. Attendance list for November 10, 1988 meeting, 11/10/88. P. 302998-303003. A Groundwater Level Fluctuations Graph and two letters regarding C&D Recycling pond samples are attached.
110. Report: Preliminary Health Assessment for C&D Recycling, prepared by ATSDR, 11/15/88. P. 303004-303008.
111. Memorandum to file from Ms. Donna M. McCartney, U.S. EPA, re: September 26, 1988 RI/FS meeting on the monitor well proposal, 11/16/88. P. 303009-303011.
112. Memorandum to file from Ms. Donna M. McCartney, U.S. EPA, re: November 10, 1988 RI/FS Status Update on the C&D Recycling Site, 11/16/88. P. 303012-303012.
113. Letter to Mr. Larry Elder, AT&T, from Mr. Gregg Crystall, U.S. EPA, re: Meeting scheduled for December 14th, 11/17/88. P. 303013-303013.
114. Letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Preliminary Feasibility Study Work Plan, 11/21/88. P. 303014-303014.
115. U.S. EPA Internal Review of Enforcement Program Documents Feasibility Study Work Plan, 11/21/88. P. 303015-303015.
116. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Diana Baldi, U.S. EPA, re: Organic data validation for the C&D Recycling Site, 11/21/88. P. 303016-303103. The organic data review is attached.
117. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. John S. Mellow, PADER, re: Interim Data Evaluation Report/Bedrock Interval Monitoring Well Proposal, 12/2/88. P. 303104-303110.
118. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Residential well data, 12/6/88. P. 303110A-303110C.
119. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Technical review and comment on monitoring network proposal for C&D Recycling Site, 12/12/88. P. 303110AA-303110LL. A hand drawn well diagram is attached.

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120. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Technical review of citizen comments and Interim Data Evaluation Report for C&D Recycling Site, 12/13/88.
 121. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Mark diFelicianantonio, CDM Federal Programs Corporation, re: Field notebook for the C&D Recycling Site, 12/14/88. P. 303111-303111.
 122. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. John Mellow, PADER, re: Preliminary Feasibility Study Work Plan, 12/15/88. P. 303112-303112.
 123. Letter to Mr. Larry Elder, AT&T, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Sulima residence well and tap water testing, 12/19/88. P. 303113-301132. A summary of the valid analytical results are attached.
 124. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. John S. Williams, AT&T Nassau Metals, re: Sulima well water, 12/21/88. P. 303133-303133.
 125. Letter of Transmittal to Ms. Donna McCartney, U.S. EPA, from J.F. Blasting, Fred C. Hart Associates Inc., re: Residential well water distribution inventory, 12/22/88. P. 303134-303159. A copy of the Water Distribution Inventory for five residential wells is attached.
 126. Memorandum to Mr. Gregg Crystall, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Well sampling data from the Sulima residence, 12/28/88. P. 303159A-303159B.
 127. Letter to Mr. Larry Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Comments on monitoring well placement, 1/5/89. P. 303160-303167.
 128. Handwritten memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. John Mellow, PADER, re: Soil samples, 1/9/89. P. 303168-303177. On-site concentration tables for lead, copper, zinc, and nickel are attached.
 129. Memorandum to file from Ms. Donna McCartney, U.S. EPA, re: Sample results of tap water from the Sulima residence, 1/17/89. P. 303178-303178.
 130. Letter to Mr. John Mellow, PADER, from Ms. Donna McCartney, U.S. EPA, re: Documents pertaining to the C&D Recycling Site, 1/20/89. P. 303179-303180. A certified mail receipt is attached.

131. Letter to Ms. Martha Monserrate, CH2M Hill, from Ms. Donna M. McCartney, U.S. EPA, re: Documents pertaining to the C&D Recycling Site, 1/20/89. P. 303181-303182. A certified mail receipt is attached.
132. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Residential well sampling in Freeland, PA, 1/24/89. P. 303183-303185. A sample list is attached.
133. Letter to Mr. Larry Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Monitoring well discussions, 1/25/89. P. 303186-303188. A certified mail receipt is attached.
134. Telephone conversation record of Ms. Annette Lage, U.S. EPA, with Ms. Susan Barrell, re: Water samples from the C&D Recycling Site, 1/25/89. P. 303189-303189.
135. Letter to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Well sampling report for the C&D Recycling Site, 1/25/89. P. 303190-303190.
- ** 136. Letter to Mr. Stephen R. Wassersug, U.S. EPA, from Mr. Bruce Blanchard, U.S. Department of Interior, re: Preliminary Natural Resources Survey of the C&D Recycling Site, 1/25/89.
137. Telephone conversation record of Ms. Annette Lage with Ms. Susan Barrell, re: Samples taken from the C&D Recycling Site, 1/30/89. P. 303191-303191.
138. Letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Well results from the Sulima residence, 1/31/89. P. 303192-303193.
139. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. John S. Mellow, PADER, re: Soil surface water and sediment samples from the C&D Recycling Site, 2/1/89. P. 303194-303196.
140. Letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: RI/FS report for the C&D Recycling Site, 2/9/89. P. 303197-303197.
141. Letter to Mr. Larry Elder, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Information pertaining to the C&D Recycling Site, 2/9/89. P. 303198-303198.

142. Report: Addendum to Interim Data Evaluation Report Monitoring Well Placement and Construction, C&D Recycling Site, Freeland, Pennsylvania, prepared by Fred C. Hart Associates Inc., 2/9/89. P. 303199-303205.
143. Letter to Mr. Ronald Rapczynski from Ms. Laura J. Gavin, CH2M Hill, re: Mix-up of a meeting time, 2/13/89. P. 303206-303206.
144. Letter to Ms. Donna M. McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Information pertaining to monitoring well placement at the C&D Recycling Site, 2/13/89. P. 303207-303212. Information on well construction is attached.
145. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Review of Preliminary FS Work Plan, 2/20/89. P. 303213-303215.
146. Explanation of Compuchem Qualifier Codes for Implementation of EPA's Contract Laboratory Program, 2/21/89. P. 303216-303219.
147. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna McCartney, U.S. EPA, re: Approval for well placement and construction, 2/23/89. P. 303220-303223. A certified mail receipt is attached.
148. Letter to Mr. Larry Elder, AT&T, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: Information related to the RI/FS for the C&D Recycling Site, 2/24/89. P. 303224-303225. Soil sample results are attached.
149. Letter to Mr. Larry A. Elder, AT&T, from Ms. Donna McCartney, U.S. EPA, re: Information package pertaining to the C&D Recycling Site, 3/3/89. P. 303226-303226.
150. Letter to Ms. Donna M. McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Changes in project management organization for the C&D Recycling site, 3/9/89. P. 303227-303227.
151. Letter to Mr. Larry A. Elder, AT&T, from Mr. Williams S. Neubeck, Fred C. Hart Associates Inc., re: Numerical calculations of interval yield values and packer test information, 3/10/89. P. 303228-303231.

152. Letter to Mr. Larry A. Elder, AT&T, from U.S. EPA, re: Comments and replies on the Preliminary FS Work Plan, 3/13/89. P. 303232-303234.
153. Report: Information Summary, Monitor Well Placement, C&D Recycling Site, prepared by U.S. EPA 3/17/89. P. 303235-303288. A cover letter is attached.
154. Chart, Estimated Schedule for RI Implementation, 3/21/89. P. 303289-303289.
155. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Information about tap water at the Sulima residence, 3/24/91. P. 303290-303294. Water sampling notes, a surface mining license, and a letter are attached.
156. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: RI/FS for the C&D Recycling Site, 3/29/89. P. 303295-303297. A certified mail receipt is attached.
157. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Field trip report, 4/6/89. P. 303298-303301.
158. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Field Trip Report for April 1989, 4/6/89. P. 303301A-303301D. Handwritten notes are attached.
159. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Rohrbach well, 4/7/89. P. 303301AA-303301AA.
160. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Residential well sampling in Freeland, PA, 4/17/89. P. 303302-303304. Sample results are attached.
161. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Information sent to residents concerning the C&D Recycling Site, 4/17/89. P. 303305-303305.
162. Letter to Mr. John S. Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Information sent to residents concerning the C&D Recycling Site, 4/17/89. P. 303306-303306.
163. Letter of Transmittal to Ms. Donna M. McCartney, U.S. EPA, from Mr. William S. Neubeck, Fred C. Hart Associates Inc., re: pH meter instruction manual, 4/19/89. P. 303307-303318. The manual is attached.

152. Letter to Mr. Larry A. Elder, AT&T, from U.S. EPA, re: Comments and replies on the Preliminary FS Work Plan, 3/13/89. P. 303232-303234.
153. Report: Information Summary, Monitor Well Placement, C&D Recycling Site, prepared by U.S. EPA 3/17/89. P. 303235-303288. A cover letter is attached.
154. Chart, Estimated Schedule for RI Implementation, 3/21/89. P. 303289-303289.
155. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Information about tap water at the Sulima residence, 3/24/91. P. 303290-303294. Water sampling notes, a surface mining license, and a letter are attached.
156. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: RI/FS for the C&D Recycling Site, 3/29/89. P. 303295-303297. A certified mail receipt is attached.
157. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Field trip report, 4/6/89. P. 303298-303301.
158. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Field Trip Report for April 1989, 4/6/89. P. 303301A-303301D. Handwritten notes are attached.
159. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Rohrbach well, 4/7/89. P. 303301AA-303301AA.
160. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Residential well sampling in Freeland, PA, 4/17/89. P. 303302-303304. Sample results are attached.
161. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Information sent to residents concerning the C&D Recycling Site, 4/17/89. P. 303305-303305.
162. Letter to Mr. John S. Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Information sent to residents concerning the C&D Recycling Site, 4/17/89. P. 303306-303306.
163. Letter of Transmittal to Ms. Donna M. McCartney, U.S. EPA, from Mr. William S. Neubeck, Fred C. Hart Associates Inc., re: pH meter instruction manual, 4/19/89. P. 303307-303318. The manual is attached.

164. Report: C&D Recycling Field Trip Report, prepared by CH2M Hill, 4/21/89. P. 303319-303333.
- ** 165. Memorandum to Mr. Harold Yates, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Newspaper article on C&D Site, 4/27/89.
166. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Documentation on monitoring wells, 4/27/89. P. 303334-303341. Information on well construction methods is attached.
167. Data package on metals samples, 4/27/89. P. 303342-303482.
168. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Scott Voza and Ms. Martha Monserrate, CH2M Hill, re: Trip report on C&D Recycling Site, 5/2/89. P. 303483-303492.
169. Report: Technical Memorandum No. 1, Additional On-Site and Off-Site Soil Sampling Plan for the C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 5/5/89. P. 303493-303506. A cover letter is attached.
170. Letter to Ms. Donna McCartney, U.S. EPA, from Ms. Laura Gavin, CH2M Hill, re: Information on methods used in analyzing well samples, 5/5/89. P. 303507-303519. Test method information is attached.
171. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Removal of material and tanks at the C&D Recycling Site, 5/8/89. P. 303520-303524. A transaction slip, a receipt, and a certification slip are attached.
172. Forwarding slip to Ms. Donna McCartney, U.S. EPA, from Mr. J. Mellow, PADER, 5/9/89. P. 303525-303525.
173. U.S. EPA Internal Review of Enforcement Program Documents, Technical Memorandum No. 1 Additional Soil Sampling Plan, 5/11/89. P. 303526-303526.
174. Two certified mail receipts from U.S. EPA, 5/11/89. P. 303527-303527.
175. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Well sampling protocols for the C&D Recycling Site, 5/15/89. P. 303528-303532. Chemical information and a telephone conversation record are attached.

176. Memorandum to Ms. Martha Monserrate, CH2M Hill, from Ms. Laura Gavin, CH2M Hill, re: Preservatives used for metals samples at the C&D Recycling Site, 5/15/89. P. 303533-303533.
177. Letter of Transmittal to Ms. Donna M. McCartney, U.S. EPA, from Mr. William S. Neubeck, Fred C. Hart Associates Inc., re: C&D Recycling well information, 5/16/89. P. 303534-303568. Nine well logs are attached.
178. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Data information on residential well samples, 5/16/89. P. 303569-303570.
179. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Scott Voza and Ms. Martha Monserrate, CH2M Hill, re: Trip report information for the C&D Recycling Site, 5/18/89. P. 303571-303575.
180. Chain of Custody Record, C&D Recycling, 5/24/89. P. 303576-303576.
- ** 181. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Review of Technical Memorandum No. 1, 5/25/89.
182. Letter to Mr. Joseph T. Chikowski, AT&T, from Mr. William S. Neubeck, Fred C. Hart Associates Inc., re: Construction and sampling of a monitoring well at the C&D Recycling Site, 5/31/89. P. 303577-303577.
183. Data Validation Information Packet, Round 4, 6/89. P. 303578-303717.
184. Memorandum to Ms. Colleen Walling and Ms. Donna McCartney, U.S. EPA, from Ms. Terri Boehm, CH2M Hill, re: Residential well sampling, 6/5/89. P. 303718-303720.
185. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Comments on Technical Memorandum No. 1 for the C&D Recycling Site, 6/6/89. P. 303721-303725.
186. Letter to Mr. John Mellow, PADER, from Ms. Donna McCartney, U.S. EPA, re: RI/FS and public meeting information for the C&D Recycling Site, 6/6/89. P. 303726-303726.

187. Transmittal note to Ms. Donna McCartney from Mr. William S. Neubeck, Fred C. Hart Associates Inc., re: Information concerning the C&D Recycling Site, 6/7/89. P. 303727-303728.
188. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Soil and water data from the C&D Recycling Site, 6/8/89. P. 303728A-303728E.
189. Report: Feasibility Study Work Plan, C&D Recycling Site, Foster Township, Luzerne County Pennsylvania, prepared by Fred C. Hart Associates Inc., 6/12/89. P. 303729-303798.
190. Memorandum to Ms. Carla Dempsey from Ms. Patricia J. Krantz, U.S. EPA, re: Data review for the C&D Recycling Site, 6/20/89. P. 303799-303874. The data review is attached.
191. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Scott Voza and Ms. Martha Monserrate, CH2M Hill, re: Trip report for the C&D Recycling Site, 6/20/89. P. 303875-303880. Photographs are attached.
192. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Revised soil proposal approval for the C&D Recycling Site, 6/21/89. P. 303881-303882.
- ** 193. Memorandum to Ms. Donna M. McCartney, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Phase 2 soil sampling for the C&D Recycling Site, 6/21/89.
194. Letter to Ms. Chris (sic) Stein, Booz, Allen & Hamilton, from Ms. Donna M. McCartney, U.S. EPA, re: Residential well sampling information, 6/23/89. P. 303883-303883.
195. Letter to Mr. John Mellow, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Residential well sampling information, 6/23/89. P. 303884-303884.
196. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Residential well sampling information, 6/23/89. P. 303885-303885.
197. Letter to Ms. Martha Monserrate, CH2M Hill, from Ms. Donna M. McCartney, U.S. EPA, re: Residential well sampling information, 6/23/89. P. 303886-303886.

198. Memorandum to file from Ms. Donna McCartney, re: C&D Recycling public meeting, 6/27/89. P. 303886A-303886DD. The following are attached:
- a) handwritten meeting notes;
 - b) a meeting summary;
 - c) a newspaper article;
 - d) citizen's questions;
 - e) sample results.
199. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Terri Boehm, CH2M Hill, re: Well and split sampling at the C&D Recycling Site, 6/29/89. P. 303887-303894. The following are attached:
- a) hand-drawn sketch;
 - b) well and split sample information;
 - c) two telephone conversation records;
 - d) a memorandum.
200. Letter to Ms. Donna McCartney U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Waterra inertial pump system use at the C&D Recycling Site, 6/30/89. P. 303895-303915. A letter and an explanation for the use of the pump is attached.
201. Memorandum to file from Ms. Donna M. McCartney, U.S. EPA, re: Additions to the scope for the soil sampling grid for the C&D Recycling Site, 7/7/89. P. 303916-303920. A soil content chart is attached.
202. Letter to Mr. Joe Chikowski, AT&T, from Ms. Donna M. McCartney, U.S. EPA, re: Change of project manager for the C&D Recycling Site, 7/7/89. P. 303921-303921.
203. Memorandum to Mr. Daniel K. Donnelly, U.S. EPA, from Mr. Ronald H. Altman, U.S. EPA, re: Mercury analysis of samples from the C&D Recycling Site, 7/10/89. P. 303922-303922.
204. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Soil sampling at the C&D Recycling Site, 7/10/89. P. 303923-303924.
205. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joseph T. Chikowski, AT&T, re: Work plan revisions for the C&D Recycling Site, 7/12/89. P. 303925-303925.
206. Letter to Mr. Joe Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Monitoring well at the C&D Recycling Site, 7/12/89. P. 303926-303927.

207. Letter to Mr. Michael Towle, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Monitoring well replacement, 7/12/89. P. 303928-303931. A letter regarding a monitoring well is attached.
208. Memorandum to Mr. Daniel K. Donnelly, from E.H. Griffin, B.A. Sammons, P.F. Sosinski, and L.A. Weisberg, U.S. EPA, re: Determination of metals at the C&D Recycling Site, 7/13/89. P. 303932-303936. Results of testing are attached.
209. Letter of Transmittal to Mr. Michael Towle, U.S. EPA, from Mr. Williams S. Neubeck, Fred C. Hart Associates Inc., re: QA/QC review summary sheets, 7/13/89. P. 303937-303984. A data sample package is attached.
210. Report: Analytical Report of Data, prepared by CompuChem, 7/13/89. P. 303985-303987.
211. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Daniel K. Donnelly, U.S. EPA, re: Metals reports for the C&D Recycling Site, 7/13/89. P. 303988-304068. The metals reports are attached.
212. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Dave Seter, U.S. EPA, re: Water quality investigation in vicinity of the C&D Recycling Site, 7/18/89. P. 304068A-304068C.
213. Letter to Ms. Kate Crowley, PADER, from Ms. Donna M. McCartney, U.S. EPA, re: Request for assistance in responding to citizens of Foster Township, 7/18/89. P. 304069-304070.
214. Memorandum to Mr. Bill Steuteville, U.S. EPA, from Ms. Donna McCartney, U.S. EPA, re: Request for removal assessment of soils data, 7/21/89. P. 304070A-304070A.
215. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Martha Monserrate and Ms. Laura Gavin, CH2M Hill, re: Residential well sampling, 7/21/89. P. 304071-304075. Sampling information is attached.
216. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Feasibility Study Work Plan for the C&D Recycling Site, 7/21/89. P. 304076-304076.
- ** 217. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Silver processing at C&D Recycling Site, 7/25/89.

218. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Silver processing at the C&D Recycling Site, 7/25/89. P. 304077-304077.
219. Memorandum to Mr. Gregg Crystall, U.S. EPA, from Mr. Patrick Anderson, U.S. EPA, re: Request for review of residential well data, 7/27/89. P. 304077A-304077A.
220. Memorandum to Mr. Michael T. Towle, U.S. EPA, from Dr. Roy Smith, U.S. EPA, re: Residential well data, 7/28/89. P. 304077AA-304077BB.
221. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Dave Seter, U.S. EPA, re: Potential for trace metals from plumbing in private well supplies, 7/31/89. P. 304077AAA-304077DDD.
222. Report: Technical Memorandum No. 1, Additional On-Site and Off-Site Soil and Sediment Sampling Plan for the C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 8/2/89. P. 304078-304106. A cover letter is attached.
223. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Water analysis for the C&D Recycling Site, 8/2/89. P. 304107-304117. Sampling information from the Wildcat Landfill Site in Delaware is attached.
224. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Information from a Concerned Citizens of Foster Township (CCFT) meeting, 8/8/89. P. 304118-304119.
225. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Information request for Ms. Jane Sulima, 8/9/89. P. 304120-304120.
226. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: Issues and statements printed in an article in the Standard-Speaker, 8/11/89. P. 304121-304123.
227. Data QA Review Package, C&D Recycling, prepared by Skinner and Sherman Laboratories, 8/24/89. P. 304124-304213. A cover letter is attached.
228. Data Validation Round 4, C&D Recycling, 8/25/89. P. 304214-304255. A cover memorandum is attached.

229. Memorandum to Mr. Robert Kramer, U.S. EPA, from Mr. Donald Garofalo, U.S. EPA, re: Photographs of the C&D Recycling Site, 8/25/89. P. 304256-304257.
230. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Field work performed on the Sulima property, 8/25/89. P. 304258-304258.
- ** 231. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Bill Steuteville, U.S. EPA, re: Residential dust sampling assessment, 8/28/89.
232. Memorandum to Mr. Robert Kramer, U.S. EPA, from Mr. Donald Garofalo, U.S. EPA, re: Photographs of the C&D Recycling Site, 8/29/89. P. 304259-304259.
233. Data QA Review Package, C&D Recycling, prepared by Chemtech, 9/1/89. P. 304260-304338. A cover letter is attached.
234. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Sampling procedures at the Evancho residence, 9/12/89. P. 304339-304344. A memorandum and a sample table is attached.
- ** 235. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Rohrbach filter, 9/13/89.
236. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Kate Crowley, PADER, re: File review request, 9/22/89. P. 304345-304345.
237. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Revised FS Work plan for the C&D Recycling Site, 9/27/89. P. 304346-304347.
238. Report: C&D Recycling Site Residential Well Sampling Summary Report, prepared by CH2M Hill, 9/28/89. P. 304348-304383.
239. Letter to Mr. Joe Chikowski, AT&T, from Mr. Michael Towle and Ms. Donna M. McCartney, U.S. EPA, re: FS Work Plan for the C&D Recycling Site, 10/2/89. P. 304484-304486.
240. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Scott Voza and Ms. Martha Monserrate, CH2M Hill, re: Trip report for the C&D Recycling Site, 10/5/89. P. 304487-304490. A hand-drawn sketch is attached.

241. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Implementation of a sampling program or a data analysis program to address causes of levels of inorganics in residential wells, 10/12/89. P. 304491-304492.
242. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Geological information for the C&D Recycling Site, 10/18//89. P. 304493-304493.
- ** 243. Memorandum to Mr. Hal Yates, U.S. EPA, from Mr. Al Peterson, U.S. EPA, re: Public interviews, 11/13/89-11/15/89.
244. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: FS Work Plan approval, 11/22/89. P. 304494-304494.
245. Memorandum to Mr. Alan Cimorelli, U.S. EPA, from Mr. Thomas Casey, U.S. EPA, re: Potential copper and lead deposition at C&D Recycling Site, 12/1/89. P. 304494A-304494I.
246. Report: Feasibility Study Work Plan, C&D Recycling Site, Foster Township, Luzerne County Pennsylvania, prepared by Fred C. Hart Associates Inc., 12/9/89. P. 304495-304563.
247. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joseph Chikowski, AT&T, re: FS Work Plan revisions, 12/5/89. P. 304564-304565.
248. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Dioxin data from the C&D Recycling Site, 12/11/89. P. 304565A-304565C. A facsimile sheet and a summary of analytical results are attached.
249. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Martha Monserrate and Mr. Tom McLaughlin, CH2M Hill, re: Summary of the C&D Recycling Site sampling events 12/15/89. P. 304566-304573.
250. Report: Preliminary Draft Remedial Investigation Report for C&D Recycling Site, prepared by Fred C. Hart Associates Inc. 1/29/90. P. 304574-305087. A cover letter is attached.
251. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Draft Remedial Investigation Report, 1/30/90. P. 305088-305088.

252. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: Schedule extension for Preliminary Draft Endangerment Assessment, 2/6/90. P. 305089-305091. An estimated schedule for proposed FS tasks is attached.
253. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Revised Feasibility Study Work Plan, 2/7/90. P. 305092-305093.
254. Memorandum to Mr. Patrick Anderson, U.S. EPA, from Ms. Karen Wolper, U.S. EPA, re: Referral of oversight responsibility to Remedial, 2/26/90. P. 305093A-305093A.
255. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Claudia P. Walters, U.S. EPA, re: On site and residential ground water sampling, 2/26/90. P. 305093AA-305093AA.
256. Letter to Mr. Abraham Ferdas, U.S. EPA, from Dr. Kandiah Sivarajah, Pennsylvania Department of Health, re: Confirmation of the provision by EPA to the Department of Health of the RI/FS, the Ecological Assessment (EA) and other information essential for the completion of the Health Assessment, 2/27/90. P. 305094-305095.
257. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Dave Seter, U.S. EPA, re: Comments on the Draft RI Report, 3/6/90. P. 305095A-305095A.
258. Memorandum to Mr. Michael Towle, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: RI Report review comments, 3/6/90. P. 305095AA-305095SS.
259. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Ronald Preston, U.S. EPA, re: Review of the Draft RI Report, 3/8/90. P. 305095AAA-305095AAA.
260. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: RI review comments, 3/12/90. P. 305095AAAA-305095BBBB.
261. Telephone conversation record of J. McCreary, U.S. EPA, with Mr. Peter Chapman, U.S. EPA, re: Sampling information, 3/21/90. P. 305096-305096.

262. Letter to Dr. Kandiah Sivarajah, Pennsylvania Department of Health, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Remedial Investigation, 3/22/90. P. 305097-305097.
263. PADER Preliminary Comments on C&D Remedial Investigation, 3/24/90. P. 305098-305104. A cover letter is attached.
264. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Remedial Investigation Report, 3/27/90. P. 305105-305129. C&D Recycling Site Preliminary Draft RI Report comments are attached.
265. Report: Preliminary Draft Risk Assessment Report on C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 3/30/90. P. 305130-305539. A cover letter is attached.
266. Report: Addendum to the Preliminary Draft Remedial Investigation Report--Dioxin/Furan Analysis of Ash, prepared by Fred C. Hart Associates Inc., 4/90. P. 305540-305559.
267. Memorandum to Mr. Mike Towle, U.S. EPA, from Pei-Fung Hurst, U.S. EPA, re: Available toxicity information for Polycyclic Aromatic Hydrocarbons (PAH), 4/2/90. P. 305560-305561.
268. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Risk Assessment, 4/3/90. P. 305562-305562.
269. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Risk Assessment Report, 4/3/90. P. 305563-305563.
270. Letter to Ms. Martha Monserrate from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Risk Assessment Report, 4/3/90. P. 305564-305564.
271. Memorandum to Ms. Donna Abrams from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Risk Assessment and Remedial Investigation Reports, 4/4/90. P. 305565-305565.
272. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Release of Draft RI Report, 4/9/90. P. 305565A-305565A.

273. Letter of Transmittal to Mr. Michael Towle, U.S. EPA, from Mr. William Neubeck, Fred C. Hart Associates Inc., re: Remedial Investigation, 4/12/90. P. 305566-305566.
- ** 274. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Response to public comment on the Draft RI Report, 4/17/90.
275. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Preliminary Draft Remedial Investigation Report, 4/17/90. P. 305567-305641. Applicable or Relevant and Appropriate Requirements (ARAR) for clean-up response and remedial actions in Pennsylvania are attached.
276. Letter to Dr. Kandiah Sivarajah, Pennsylvania Department of Health, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft RI Addendum, 4/17/90. P. 305642-305642.
277. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft RI Addendum, 4/17/90. P. 305643-305643.
278. Memorandum to Mr. Roy Smith and Mr. Robert Davis, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft RI Addendum, 4/17/90. P. 305644-305644.
279. Data Package, C&D Recycling Site, 4/20/90. P. 305645-305718. A cover letter is attached.
280. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: RI/FS schedule, 4/23/90. P. 305719-305719.
281. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Transmittal of a list of potential ARARs for the C&D Recycling Site, 4/23/90. P. 305720-305720.
282. Remedial Investigation information for C&D Recycling Site prepared by Fred C. Hart Associates Inc., 4/30/90. P. 305721-305730. A letter of transmittal is attached.
283. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft RI Report, 5/1/90. P. 305731-305769. Comments submitted by Mr. John Mellow of PADER on the Preliminary Draft RI Report and a copy of Mr. Michael Towle's letter of March 27, 1990 are attached.

- ** 284. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Martha Monserrate, CH2M Hill, re: Comments on the Risk Assessment Report, 5/4/90. A list of major concerns and a memorandum are attached.
285. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Comments on the Risk Assessment Report, 5/4/90. P. 305769A-305769E.
286. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Dave Seter, U.S. EPA, re: Comments on the Risk Assessment Report, 5/7/90. P. 305769AA-305769AA.
287. Memorandum to Mr. Patrick Anderson, U.S. EPA, from Ms. Karen Wolper, U.S. EPA, re: Oversight responsibilities, 5/9/90. P. 305769AAA-305769AAA.
288. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Ronald Preston, Ms. Alyce Fritz, and Mr. Robert Davis, U.S. EPA, re: Review of the Endangerment Assessment, 5/10/90. P. 305769AAAA-305769BBBB.
289. Letter to Mr. Mike Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Preliminary Draft Risk Assessment Report, 5/11/90. P. 305770-305774.
290. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Susan McDowell, U.S. EPA, re: Review of the Risk Assessment Report, 5/14/90. P. 305774A-305774A.
291. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Remedial Investigation Report, 5/21/90. P. 305775-305775.
292. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Addendum to Preliminary Draft RI Report, 5/21/90. P. 305776-305776.
293. Letter to Ms. Cynthia Clark Metzger, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Addendum to Preliminary Draft RI Report, 5/21/90. P. 305777-305777.
294. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft RI Report, 5/21/90. P. 305778-305780.
295. Letter to Ms. Sharon M. Evans, Laputka, Bayless, Ecker, & Cohn, from Ms. Cecil Rodrigues, U.S. EPA, re: Potential liability for contamination of the Davis field, 5/24/90. P. 305780A-305780I. An off site location map and six tables are attached.

- ** 296. Letter to Mr. Ronald J. Davis from Mr. Cecil Rodrigues, U.S. EPA, re: Potential liability for new owner of Davis Field, 5/24/90. Sampling results are attached.
297. Memorandum to File from Mr. Michael Towle, U.S. EPA, re: Documents removed from furnace, 5/31/90. P. 305781-305781.
298. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: February 1990 sampling results, 5/31/90. P. 305782-305782.
299. Memorandum to Mr. Michael Towle, U.S. EPA, from Ms. Stevie Wilding, U.S. EPA, re: Review of the Dioxin RI Report, 6/4/90. P. 305782A-305782A.
300. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Risk Assessment Report, 6/11/90. P. 305783-305793. Regional toxicologist's comments and comments from the public are attached.
301. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Addendum to Draft RI Report, 6/14/90. P. 305794-305794.
302. Memorandum to Dr. Roy Smith from Mr. Michael Towle, U.S. EPA, re: Public comments on the Risk Assessment, 6/14/90. P. 305795-305795.
303. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Addendum to the Preliminary Draft RI Report, 6/14/90. P. 305796-305796.
304. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Preliminary Draft RI Report--Dioxin/Furan Analysis of Ash, 6/20/90. P. 305797-305798.
305. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Lewis K. Fellersen, U.S. EPA, re: Air Division's review of the C&D Recycling preliminary Risk Assessment, 6/25/90. P. 305798A-305798C. The review is attached.
306. Report: EPA Response To Public Comments From Clean Water Fund And Disposal Safety Inc., prepared by U.S. EPA, 7/2/90. P. 305799-305864. A cover letter is attached.
307. Handwritten notes from C&D Recycling Site Risk Assessment Meeting, 7/17/90. P. 305865-305865.

308. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Risk Assessment, 7/20/90. P. 305866-305866.
309. Report: Final Draft Remedial Investigation Report for C&D Recycling Site, prepared by Fred C. Hart Associates Inc., 7/27/90. P. 305867-306510.
310. Letter to Mr. Michael Towle, U.S. EPA, from Mr. William S. Neubeck and Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: Final Draft Remedial Investigation Report, 7/27/90. P. 306511-306512.
311. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, Fred C. Hart Associates Inc., re: C&D Recycling Site soil/sediment sample location map, 8/7/90. P. 306513-306513.
312. Letter to Dr. Kandiah Sivarajah, Pennsylvania Department of Health, from Mr. Michael Towle, U.S. EPA, re: Final Draft Remedial Investigation Report, 8/8/90. P. 306514-306514.
313. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Final Draft Remedial Investigation Report, 8/8/90. P. 306515-306515.
314. Memorandum to Martha Monserrate from Mr. Ron Skabo, re: Corrosion indices, 8/29/90. P. 306516-306518.
315. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Susan McDowell, U.S. EPA, re: Comments to be addressed in the final RI Report, 9/17/90. P. 306518A-306518B.
316. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Comments to be addressed in the final RI Report, 9/24/90. P. 306518AA-306518CC.
317. Memorandum to Mr. Michael Towle, U.S. EPA, from Ms. Donna Abrams, U.S. EPA, re: Final draft RI Report, 9/24/90. P. 306518AAA-306518AAA. A memorandum and the Air Division's review of the C&D Recycling Preliminary Risk Assessment are attached.
318. Report: EPA Response To Public Comments From Concerned Citizens of Foster Township, prepared by U.S. EPA, 10/3/90. P. 306519-306538. A cover letter is attached.

319. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: C&D Recycling historical information, 10/24/90. P. 306539-306540. A handwritten note which refers to several documents related to Lurgan Corporation is attached.
320. Report: EPA Comments On The Final Draft Remedial Investigation Report, prepared by U.S. EPA, 10/25/90. P. 306541-306577. A cover letter is attached.
321. Letter to Mr. Mike Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Final Draft Remedial Investigation Report, 11/20/90. P. 306578-306580.
322. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Information related to the Lurgan Corporation, 11/29/90. P. 306581-306581.
323. Facsimile to Mr. Michael Towle, U.S. EPA, from Mr. Jim Perazzo, McLaren/Hart Environmental Engineering Corporation, re: RFP letter sent to prospective subcontractor test labs for estimates to conduct bench-scale stabilization tests, 12/7/90. P. 306582-306585. A copy of the request for proposal letter is attached.
324. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joseph Chikowski, AT&T, re: Schedule of submittal of Revised Risk Assessment for C&D Recycling, 12/17/90. P. 306586-306588.
325. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, McLaren/Hart Environmental Engineering Corporation, re: Review of background information regarding furnace operation at C&D Recycling, 12/19/90. P. 306589-306596.
- ** 326. Report: Lead and Other Constituents in the Water of the Mauch Creek Formation in Central-Eastern Pennsylvania Including the C&D Recycling Superfund Site in Luzerne County, prepared by U.S. EPA, 1991. A memorandum and a manuscript routing sheet are attached.
327. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrologic review of the RI Report, 1/10/91. 306556A-306556B.
328. Memorandum to Mr. Michael Towle, U.S. EPA, from Dr. Roy L. Smith, re: Review of blood, vegetable, soil, and hair data for C&D Recycling Site, 1/11/91. P. 306596AA-306596BB.

329. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, McLaren/Hart Environmental Engineering Corporation, re: Proposed remediation goals for the C&D Recycling Site, 1/17/91. P. 306597-306605.
330. Memorandum to Mr. Michael Towle, U.S. EPA, from Dr. Roy L. Smith, re: Comments on C&D Recycling Site draft remediation goals, 2/5/91. P. 306605A-306605D. Two charts showing blood lead concentrations are attached.
331. Report: Final Draft, Human Health Risk Assessment Report, C&D Recycling Site, Foster Township, Luzerne County Pennsylvania, prepared by McLaren/Hart Environmental Engineering Corporation, 2/7/91. P. 306606-307186. A cover letter is attached.
332. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Joseph Kunz, U.S. EPA, re: Assistance from Air Programs Branch, 2/12/91. P. 307186A-307186A. A memorandum regarding past C&D Recycling burning practices is attached.
333. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Revised Risk Assessment Report for the C&D Recycling Site, 2/12/91. P. 307187-307187.
334. Excerpt from Risk Assessment Report, 3/4/91. P. 307188-307270. A transmittal letter is attached.
335. Report: Final Draft, Remedial Investigation Report, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by McLaren/Hart Environmental Engineering Corp., 3/8/91. P. 307271-307642. A letter is attached.
336. Report: Final Draft Remedial Investigation Report, C&D Recycling Site, Appendices A-H, prepared by McLaren/Hart Environmental Engineering Corporation, 3/8/91. P. 307643-307907.
337. Memorandum to Mr. Michael Towle, U.S. EPA, from Dr. Roy L. Smith, U.S. EPA, re: Final Draft Risk Assessment, 3/18/91. P. 307907A-307907B.
338. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Meeting concerning analytical results of ground water sampling at the C&D Recycling Site, 3/19/91. P. 307908-307909.
339. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Request for chemical and location specific ARARs, 3/19/91. P. 307910-307910.

340. Letter to Mr. Robert Stroman and Dr. Kandiah Sivarajah, PADER, from Mr. Michael Towle, U.S. EPA, re: Remedial Investigation and Risk Assessment Reports for the C&D Recycling Site, 3/20/91. P. 307911-307911.
- ** 341. Telecopier Cover Letter to Mr. Mike Towle, U.S. EPA, from Mr. John Mellow, PADER, re: C&D Risk Assessment review, 3/22/91. A letter is attached.
342. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Chemicals causing concern at the C&D Recycling Site, 3/25/91. P. 307912-307912.
- ** 343. Memorandum to file from Mr. Mike Towle, U.S. EPA, re: Risk Assessment meeting summary, 3/26/91. A meeting attendance list is attached.
344. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Final Draft Risk Assessment Report for the C&D Recycling Site, 3/29/91. P. 307913-307915.
345. Report: Applicable or Relevant and Appropriate Requirements (ARARs) for Cleanup Response and Remedial Actions in Pennsylvania, prepared by PADER, 4/91. P. 307916-307981. A cover letter and a memorandum are attached.
346. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Final Draft Risk Assessment Report for the C&D Recycling Site, 4/3/91. P. 307982-308030. The following are attached:
- a) EPA comments;
 - b) EPA's response to Clean Water Fund (CWF) comments;
 - c) Clean Water Fund comments;
 - d) EPA's response to Dr. Barbara Bass' comments;
 - e) Dr. Bass' comments;
 - f) EPA's response to Mrs. Rohrbach's comments;
 - g) Mrs. Rohrbach's comments;
 - h) EPA's response to Mr. Lewis's comments;
 - i) Mr. Lewis's comments;
 - j) a position statement.

347. Report: Preliminary Draft Ecological Risk Assessment, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by McLaren/Hart Environmental Engineering Corporation, 4/24/91. P. 308031-308129. A cover letter is attached.
348. Memorandum to Ms. Anita Miller and Ms. Diane E. Wehner, U.S. EPA, from Mr. Edwin B. Erickson, U.S. EPA, re: Notification of Federal Natural Resource Trustees, 5/91. P. 308129A-308129E.
349. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Robert Davis and Mr. Ronald Preston, U.S. EPA, re: Review of the Preliminary Draft Ecological Risk Assessment Report, 5/91. P. 308129AA-308129BB.
350. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Final Draft Remedial Investigation Report for the C&D Recycling Site, 5/1/91. P. 308130-308133.
351. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, The Environmental Resources Management Group (ERM), re: Plumbing and electrical drawings for the C&D Recycling Site, 5/6/91. P. 308134-308134.
352. Letter of transmittal to Mr. Michael Towle, U.S. EPA, from Mr. Chuck Harmon, Fred C. Hart Associates Inc., re: Letters and responses pertinent to the Ecological Assessment requested by Mr. Joseph Chikowski, 5/9/91. P. 308135-308149. Eight letters regarding the conducting of an EA of the C&D Recycling Site are attached.
353. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Joseph W. Kunz, U.S. EPA, re: Comments on the air emissions and air dispersion modeling for the Risk Assessment Report, 5/10/91. P. 308149A-308149D. The comments on the Risk Assessment are attached.
354. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Comments on the Risk Assessment report for the C&D Recycling Site, 5/13/91. P. 308150-308151.
355. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Joseph W. Kuntz, U.S. EPA, re: Risk Assessment Report and information on safe lead levels in soil, 5/23/91. P. 308151A-308151A. A background information sheet and lead data information sheets are attached.

356. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Charles R. Harman, McLaren/Hart Environmental Engineering Corporation, re: Impacts on animals from exposure to lead near the C&D Recycling Site, 6/11/91. P. 308152-308153.
357. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Draft Ecological Risk Assessment Report for the C&D Recycling Site, 6/19/91. P. 308154-308157.
358. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Draft Ecological Risk Assessment Report for the C&D Recycling Site, 7/5/91. P. 308158-308158.
359. Report: Preliminary Draft Feasibility Study, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by Environmental Resources Management Northeast, 7/19/91. P. 308159-308484. A cover letter is attached.
360. Report: Preliminary Draft Feasibility Study, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, Volume II, Appendices, prepared by Environmental Resources Management Northeast, 7/19/91. P. 308485-308624.
361. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Draft Feasibility Study for the C&D Recycling Site, 7/22/91. P. 308625-308625.
362. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Risk Assessment for the C&D Recycling Site, 7/22/91. P. 308626-308629. Comments are attached.
363. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrogeologic review of C&D Recycling Site Preliminary Draft Feasibility Study, 8/13/91. P. 308629A-308629A.
364. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Robert S. Davis, U.S. EPA, re: C&D Recycling Site Draft Feasibility Study, 8/13/91. P. 308629AA-308629AA.
- ** 365. Memorandum to Mr. Michael Towle, U.S. EPA, from Dr. Roy Smith, U.S. EPA, re: Feasibility Study comments, 8/26/91.

366. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Douglas Donor, U.S. EPA, re: Resource Conservation and Recovery Act Program's comments on the C&D Recycling Draft Feasibility Study, 8/29/91. P. 308629AAA-308629DDD. An excerpt from the Federal Register is attached.
367. Letter to Mr. Michael Towle, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: RI/FS monthly report, 9/5/91. P. 308630-308632. A project status report is attached.
368. Letter to Mr. Mike Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Preliminary Draft Feasibility Study, 9/17/91. P. 308633-308645. A memorandum and sampling results are attached.
369. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Stephen Romanow, CH2M Hill, re: C&D Recycling Feasibility Study review, 9/20/91. P. 308646-308646.
370. Letter to Mr. Michael Towle, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: RI/FS monthly report, 9/23/91. P. 308647-308648. A project status report is attached.
371. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, Environmental Resources Management Northeast, re: Transmittal of Technical Memorandum No. 2, 10/17/91. P. 308649-308664. Technical Memorandum No. 2, Additional Soil Characterization, is attached.
372. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Additional comments on the Preliminary Draft Feasibility Study, 10/18/91. P. 308665-308678.
373. Letter to Mr. Michael Towle, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Monthly progress report, 10/23/91. P. 308679-308680. A project status report is attached.
374. Letter to Mr. Joseph Chickowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Transmittal of additional comments on the Preliminary Draft Feasibility Study, 10/23/91. P. 308681-308681.
375. Letter to Mr. Mike Towle, U.S. EPA, from Mr. James Burd, CH2M Hill, re: Work plan amendment for soil sampling, 10/21/91. P. 308682-308704. A sample location map is attached. (** A Contract Pricing Proposal, a Cost Estimate, and Details of Work Plan Tasks have been considered Confidential Business Information and have been removed from this document).

376. Letter to Mr. Donald Gerson, Hickory Hills West, from Mr. Michael Towle, U.S. EPA, re: Confirmation of permission to sample soil at Hickory Hills West, 11/4/91. P. 308705-308705.
377. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Feasibility Study, 11/20/91. P. 308706-308723. An information sheet on ARARs, a chapter from an EPA publication, and Appendix D are attached.
378. Certified mail receipt from EPA to Hart Environmental Management Corporation, (undated). P. 308724-308724.
379. Quality Assurance/Quality Control (QA/QC) Review of EP Toxicity Data, (undated). P. 308725-308725.
380. QA/QC Review of Volatiles Data, (undated). P. 308726-308726.
381. Estimated Project Schedule, AT&T Nassau Metals/C&D Recycling Site, (undated). P. 308727-308727.
382. Table, Oral Reference Doses (RfDs) for PAHs (undated). P. 308728-308731.
383. Letter to Ms. Gerallyn Valls, U.S. EPA, from Mr. Richard C. Evans, Ebasco Services Incorporated, re: Transmittal of trip report, 5/13/87. P. 308732-308737. The trip report is attached.
384. Memorandum to Mr. Stanley Mather, NUS Corporation, from Ms. Haia Roffman, NUS Corporation, re: Comments on the RI work plan, 11/4/87. P. 308737A-308737C.
385. Letter to Mr. Jeff Orient, NUS Corporation, from Ms. Donna McCartney, U.S. EPA, re: Review of the RI Draft Evaluation Report, 2/10/88. P. 308738-308740.
386. Report: Final Evaluation Report, Review of Preliminary Remedial Investigation Work Plan, prepared by NUS Corporation, 3/10/88. P. 308741-308759. A cover letter is attached.
387. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Rusty Anderson, U.S. EPA, re: Problems evident with data, 2/13/89. P. 308760-308768. The following are attached:
- a) Table 1: Sample Cross-Reference;
 - b) Table 2: SDG Number-Station Location;

- c) Notes on Inorganic Data Validation;
 - d) three Data Deficiency/Qualification Summary tables;
 - e) a Residential Well Samples table.
388. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Rusty Anderson, U.S. EPA, re: Inorganic data validation revision of Table 2, SDG Number Station Location, 3/14/89. P. 308769-308770. A revised copy of table 2 is attached.
389. Memorandum to Mr. Skip Ellis, U.S. EPA, from Ms. Claudia P. Walters, CH2M Hill, re: Comments on the revised validation report, 3/20/89. P. 308771-308792. The following are attached:
- a) a memorandum regarding action level notification;
 - b) a memorandum regarding revisions to removal action levels;
 - c) a DPO report;
 - d) a summary of data qualifiers after data validation;
 - e) a glossary for data qualifiers;
390. Memorandum to Ms. Donna McCartney and Ms. Claudia Walters, U.S. EPA, from Mr. Rusty Anderson, U.S. EPA, re: Transmittal of tables, 3/30/89. P. 308793-308811. The following are attached:
- a) Table 1A: Data Summary, Total Metals;
 - b) Table 1B: Data Summary, Dissolved Metals;
 - c) Table 2A: Data Summary with Qualification Flags, Total Metals;
 - d) Table 2B: Data Summary with Qualification Flags, Dissolved Metals.
391. Report: Letter Report, Indexed Site Operational Documents, prepared by CDM Federal Programs Corporation, 12/4/89. P. 308812-308834.

392. Report: Health and Safety Plan, prepared by CDM Federal Programs Corporation, 3/14/91. P. 308835-308852. A cover letter and a photograph are attached.
393. Data Package, Soil Samples, C&D Recycling Site, (no author cited), 11/91. P. 308853-309210.
394. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Eileen Mahoney and Mr. James A. Perazzo, McLaren/Hart, re: Submittal of the Final Draft Assessment Report, 11/18/91. P. 309211-309212.
395. Report: Final Draft Human Health Risk Assessment Report, prepared by McLaren/Hart Environmental Engineering Corporation, 11/18/91. P. 309213-309603.
396. Report: Appendices, Final Draft Human Health Risk Assessment Report, prepared by McLaren/Hart Environmental Engineering Corporation, 11/18/91. P. 309604-309816.
397. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Transmittal of the monthly progress report, 11/20/91. P. 309817-309818. Project Status Report Number 44 is attached.
398. Memorandum to Mr. Jeffrey Alper, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Classification of waste, 11/26/91. P. 309818A-309818B.
399. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Request for review of the Final Draft Risk Assessment, 12/5/91. P. 309819-309819.
400. Letter to Ms. Elisabeth Freed, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Risk Assessment and review of the Preliminary Draft FS, 12/5/91. P. 309820-309820.
401. Report: Draft Health Assessment for C&D Recycling, prepared by Pennsylvania Department of Health, 12/9/91. P. 309821-309853. A transmittal memorandum is attached.
402. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Laura J. Gavin, CH2M Hill, re: Surface soil split sampling analytical results, 12/10/91. P. 309854-309880. The following are attached:
- a) an Explanation of Qualifiers;

- b) Inorganic Analysis Data Sheet for sample numbers 3-22;
 - c) a memorandum regarding surface soil sampling;
 - d) a Surface Soil Sample Location map;
 - e) a Soil Sample Designations table.
403. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. David M. Friedman, U.S. EPA, re: Information related to the regulatory status of ash from the incineration of telephone cable and insulation, 12/16/91. P. 309880A-309880B.
404. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Wells to be cleaned up or monitored, 12/16/91. P. 309881-309881.
405. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Transmittal of the monthly progress report, 12/20/91. P. 309882-309884. Project Status Report Number 45 is attached.
406. Letter to Mr. Joe Chikowski, AT&T, from Mr. John Ianonne and Mr. James A. Perazzo, Environmental Resources Managements-Northeast, re: Transmittal of the revised Final Draft FS and Technical Memorandum No. 3, 12/30/91. P. 309885-309885.
407. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Review of the Final Draft Risk Assessment, 1/7/92. P. 309885A-309885B.
408. Report: Final Draft Feasibility Study Report, Volume I, prepared by Environmental Resources Management-Northeast, 1/10/92. P. 309886-310252. A cover letter is attached.
409. Report: Final Draft Feasibility Study Report, Volume II, Appendices, prepared by Environmental Resources Management-Northeast, 1/10/92. P. 310253-310397.
410. Report: Technical Memorandum No. 3: Supplemental Evaluations and Information In Support of Final Draft Feasibility Study, prepared by Environmental Resources Management-Northeast, 1/10/92. P. 310398-310429.
411. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Charles R. Harman, McLaren/Hart Environmental Engineering Corporation, re: Transmittal of the Final Draft Ecological Risk Assessment, 1/10/92. P. 310430-310431.

412. Report: Final Draft Ecological Risk Assessment, prepared by McLaren/Hart Environmental Engineering Corporation, 1/10/92. P. 310432-410535.
413. Memorandum to Mr. Bruce Rundell, Mr. Ray Smith, Mr. Robert Davis, Ms. Susan McDowell, and Ms. Patricia Flores, U.S. EPA, from MR. Michael Towle, U.S. EPA, re: Transmittal of the Feasibility Study and the draft Proposed Plan, 1/14/92. P. 310536-310536.
414. Memorandum to Mr. Michael Towle and Mr. Pat Anderson, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Recommended changes to the Risk Assessment, 1/15/92. P. 310536A-310536B.
415. Memorandum to Mr. Bruce Rundell, Mr. Robert Davis, and Ms. Susan McDowell, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Ecological Assessment, 1/15/92. P. 310537-310537.
416. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Transmittal of the monthly progress report, 1/21/92. P. 310538-310540. Project Status Report Number 46 is attached.
417. Memorandum to Mr. Jack Kelly, ATSDR, from Mr. Michael Towle, U.S. EPA, re: Comments on the Draft Health Assessment, 1/22/92. P. 310540A-310540B.
418. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrologic review of the Proposed Plan, 1/23/92. P. 310540AA-310540DD.
419. Facsimile transmittal sheet to Mr. Michael Towle, U.S. EPA, from Mr. J. Chikowski, AT&T, re: Transmittal of a deed restriction for C&D and a Record of Decision (ROD) for the Gould Lead Site, 1/28/92. P. 310541-310546. The deed restriction is attached.
420. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael, Towle, U.S. EPA, re: Final approval of the RI, 1/29/92. P. 310547-310548.
421. Memorandum to Mr. Patrick R. Anderson, U.S. EPA, from Mr. Joseph W. Kunz, U.S. EPA, re: Review of the draft FS and Proposed Plan, 1/31/92. P. 310548A-310548A. The review is attached.
422. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Robert S. Davis, U.S. EPA, re: Review of the Ecological Assessment, 2/6/92. P. 310548AA-310548BB.

423. Memorandum to Mr. M. Towle, U.S. EPA, from Mr. Roy Smith, U.S. EPA, re: Comments on the FS, 2/6/92. P. 310548AAA-310548AAA.
424. Facsimile transmittal sheet from Environmental Resources Management-Northeast, re: Correlation of EPA and AT&T sample locations, 2/16/92. P. 310549-310549.
425. Letter to Mr. Michael Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Acceptance by PADER of well abandonment, 2/18/92. P. 310550-310552. An excerpt from a Public Water Supply Manual prepared by PADER is attached.
426. Memorandum to Mr. Jack Kelly, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Comments on ATSDR blood lead evaluation in Foster Township, 2/19/92. P. 310552A-310552A.
427. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Transmittal of the monthly progress report, 2/19/92. P. 310553-310554. Project Status Report Number 47 is attached.
428. Memorandum to Mr. Robert Allen, Mr. Patrick Anderson, Ms. Carrie Dietzel, Ms. Elisabeth Freed, Mr. Seth Low, Mr. Cecil Rodrigues, Mr. Bruce Rundell, Mr. Peter Schaul, and Mr. Roy Smith, U.S. EPA, and Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Draft Proposed Plan, 2/21/92. P. 310555-310555.
- ** 429. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrologic review of the Proposed Plan, 2/28/92.
430. Report: Technical Information Summary, Ground Water, prepared by U.S. EPA, 3/92. P. 310556-310588.
431. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Douglas A. Donor, U.S. EPA, re: Comments on the Proposed Plan, 3/2/92. P. 310588A-310588RRRR. A fact sheet regarding Treatment Standards and the Federal Register are attached.
432. Facsimile transmittal sheet to Mr. Michael Towle, U.S. EPA, from Mr. John Mellow, PADER, re: Definition of a perennial stream, 3/3/92. P. 310589-310590. The definition is attached.

- ** 433. Memorandum to Mr. Michael Towle, U.S. EPA, from Ms. Elisabeth Freed, U.S. EPA, re: Comments on the Risk Assessment, 3/6/92. A facsimile transmittal sheet is attached.
- ** 434. Memorandum to Mr. Michael Towle, U.S. EPA, from Ms. Elisabeth Freed, U.S. EPA, re: Comments on the Proposed Plan, 3/11/92.
435. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Koumudi A. Ketkar, CH2M Hill, re: Discrepancies found in soil sampling data for lead, 3/12/92. P. 310591-310594. Two lead results tables are attached.
436. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Transmittal of the monthly progress report, 3/13/92. P. 310595-310596. Project Status Report Number 48 is attached.
437. Memorandum to Mr. M. Towle, U.S. EPA, from Mr. Roy Smith, U.S. EPA, re: Comments on the Proposed Plan, 3/16/92. P. 310596A-310596A.
438. Memorandum to Mr. R. Smith, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Clarification of information in the Risk Assessment, 3/18/92. P. 310596AA-310596AA.
439. Memorandum to Mr. M. Towle, U.S. EPA, from Mr. Roy Smith, U.S. EPA, re: Reply to a memorandum regarding the Risk Assessment, 3/18/92. P. 310596AAA-310596AAA.
440. Report: Technical Memorandum #4, Final Human Health Risk Assessment Report, prepared by McLaren/Hart Environmental Engineering Corporation, 3/18/92. P. 310597-310641. A cover letter is attached.
441. Report: A Phase IA Archeological Survey of the C&D Recycling Property, prepared by John Milner Associates, Inc., 3/18/92. P. 310642-310687. A cover letter is attached.
442. Facsimile transmittal sheet to Mr. Mike Towle, U.S. EPA, from Mr. Kevin A. Sanders, CH2M Hill, re: Transmittal of data calculations. 3/19/92. P. 310688-310689. The data results are attached,
443. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James Burd, CH2M Hill, re: Comparison of analytical results, 3/20/92. P. 310690-310692.

444. Report: Draft Results Report, Technical Memorandum No. 2, Additional Soil Characterization, prepared by Environmental Resources Management-Northeast, 3/23/92. P. 310693-310716. A cover letter is attached.
445. Letter to Mr. Joseph Chikowski, AT&T, from Mr. John Ianonne, Environmental Resources Management-Northeast, re: Identification of RODs for on-site treatment and/or disposal, 3/23/92. P. 310717-310721. A list of EPA On-Site Treatment and/or Disposal of Soil and Sediment for RODs is attached.
446. Facsimile transmittal sheet to Mr. Mike Towle, U.S. EPA, from Mr. John Mellow, PADER, re: Wetland criteria, 3/25/92. P. 310722-310726. Information about wetlands is attached.
- ** 447. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Alice Ludington, U.S. EPA, re: Follow-up to questions raised at a meeting, 3/25/92. A facsimile transmittal sheet, information on other sites, and a memorandum regarding the 23rd Remedy Delegation Report are attached.
448. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Missing documents, 3/27/92. P. 310727-310727.
449. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Information on cable composition, 3/27/92. P. 310728-310728.
450. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, Environmental Resources Management-Northeast, re: Transmittal of soil analytical data, 3/27/92. P.310729-310798. The data is attached.
451. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Evaluation of siting criteria for residual waste landfills, 3/27/92. P. 310799-310802.
452. Memorandum to Mr. Robert Davis, Mr. Stan Bumble, and Ms. Susan McDowell, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Comments on the Ecological Assessment, 3/30/92. P. 310802A-310802C.
453. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Transmittal of site background information 3/30/92. P.310803-310875. The following are attached:
- a) five topographic maps;
 - b) four cross section diagrams and topographic maps of the cross sectioned areas;

- c) a map of the site;
- d) a geologic map;
- e) a geologic interpretation graph;
- f) two elevation tables;
- g) three monitoring well elevation figures and tables;
- h) two groundwater elevation tables;
- i) two monitoring well elevation tables;
- j) 18 water table/piezometric table;
- k) residential well data summary;
- l) a diagram of temperature and pH relationships;
- m) a 24 hour rainfall table;
- n) nine copper minerals tables;
- o) ten figures and tables depicting inorganic and organic concentrations in soil and ash.

454. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Response to PADER comments on the Ecological Risk Assessment, 3/30/92. P. 310876-310877.

455. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: EPA approval of the Final Draft Ecological Risk Assessment, 3/30/92. P. 310878-310879.

456. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Kate Crowley, PADER, re: Review of the FS and the Draft Proposed Plan, 3/30/92. P. 310880-310906. The following are attached:

- a) Table I-Cost Estimates for Alternative V;
- b) Table II-Cost Estimates for Alternative IV;
- c) Report: Ground Water Quality Protection Strategy;
- d) an article entitled "Detecting hot spots at hazardous-waste sites, " Chemical Engineering;

- e) an article entitled "Optimal Sampling Geometry for Hazardous Waste Sites," Environmental Science Technology.
457. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Response to comments of Dr. Barbara Bass on the RI/FS, 4/1/92. P. 310906A-310906C.
458. memorandum to file from Mr. Michael Towle, U.S. EPA, re: Emissions from vehicles during remediation, 4/1/92. P. 310907-310914. The pages of handwritten notes and information concerning emissions are attached.
459. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Blood lead value graphs generated by EPA's Lead Uptake Biokinetic Model, 4/1/92. P. 310915-310918. Three Probability Density Function f (blood Pb (lead)) graphs are attached.
460. Facsimile transmittal sheet to Mr. Michael Towle, U.S. EPA, from Mr. John Mellow, PADER, re: Transmittal of missing tables, 4/2/92. P. 310919-301921. The missing tables are attached.
461. Letter to MR. Donald A. Gerson from MR. Michael Towle, U.S. EPA, re: Soil Sampling, 4/3/92. P. 310922-301952. The following are attached:
- a) a letter regarding soil sampling;
 - b) a letter regarding analytical results from soil split sampling;
 - c) Inorganic Analysis Data Sheets for sample numbers 3, 5, 7, 9, 11, 13, 15, 17, 19, and 21;
 - d) a soil sampling location map;
 - e) Soil Sampling Designations table;
 - f) facsimile transmittal sheet;
 - g) a lead sampling results table;
 - h) a note acknowledging the receipt of an envelope;
 - i) a memorandum regarding soil lead cleanup guidance;

- j) an EPA OSWER Directive Initiation Request form;
 - k) guidance information;
 - l) EPA OSWER Directive information;
 - m) a memorandum regarding soil lead cleanup levels;
 - n) an article entitled "Preventing Lead Poisoning In Young Children".
- ** 462. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: C&D employee blood lead data, 4/6/92. Blood lead information is attached.
- ** 463. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Review of the Technical Information Summary, 4/6/92.
464. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Ground water quality information, 4/6/92. P. 310953-311109. The following are attached:
- a) a memorandum regarding pH data from residential wells;
 - b) two summary tables of lead data from residential and monitoring wells;
 - c) two summary tables of copper data from residential and monitoring wells;
 - d) a summary table of alkalinity data from residential wells;
 - e) summary and copy of Manganese Minerals in Pennsylvania;
 - f) article entitled "Regulating Lead: An Update";
 - g) summary and copy of Uranium in Pennsylvania;
 - h) excerpts from Trace Metals and Metal-Organic Interactions in Natural Waters;
 - i) article entitled "Copper Plumbing Surface: An Electrochemical Study";
 - j) comparison tables of packer tests;

- k) article entitled "Understanding Corrosion Control Strategies for Lead";
- l) summary and copy of Ground Water Resources of Lackawanna County, PA;
- m) summary of Geology and Mineral Resources of the Chrimans and Pohopco Mountain Quadrangles, Carbon and Monroe Counties, PA;
- n) summary and copy of Ground Water Resources of the Upper Susquehanna River Basin, Pennsylvania;
- o) summary and copy of Ground Water in Northeast Pennsylvania;
- p) summary and copy of Summary Ground-Water Resources, Luzerne County, PA;
- q) article entitled "A Laboratory Study of the Leaching of Lead from Water Faucets;
- r) article entitled "Lead at the Tap: Sources and Control";
- s) summary of Air Quality Criteria for Lead;
- t) article entitled "Lead and Uranium in Pennsylvania Anthracite".

- ** 465. Pre-Decisional Information, C&D Recycling Site, (no author cited), (undated).
- 466. Information package, On-Site Ground Water QA/QC Summaries & Form I's, 10/88. P. 311110-311169.
- 467. QA/QC Review of Metals Data for CompuChem SDG No. 16789, 5/20/89. P. 311170-311186. 16 Inorganics Analysis data Sheets are attached.
- 468. QA/QC Review of Metals Data for CompuChem SDG No. 17067A, 6/21/89. P. 311187-311202.
- 469. QA/QC Review of Volatiles Data for CompuChem SDG No. 190, 7/14/89. P. 311203-311217. The following are attached:
 - a) six Volatile Organics Analysis Data Sheets;
 - b) QA/QC Review of Volatiles Data for CompuChem SDG No. 167;

- c) two Volatile Organics Analysis Data Sheets;
 - d) QA/QC Review of Volatiles Data for CompuChem SDG No. 17067H;
 - e) four Inorganics Analysis Sheets.
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- 470. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: Review of Technical Memorandum #4, 4/7/92. A memorandum regarding certification of the Human Health Risk Assessment is attached.
 - 471. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Review of the Archeological Assessment, 4/20/92. P. 311218-311218.
 - 472. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Review of the Final Draft Human Health Risk Assessment, 4/20/92. P. 311219-311219.
 - 473. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Review of the Final Draft FS, 4/21/92. P. 311220-311220.
 - 474. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Fulfillment of obligations by AT&T in regard to the Administrative Order on Consent, 4/21/92. P. 311221-311221.
 - 475. Proposed Plan, C&D Recycling Superfund Site, Luzerne County, Pennsylvania, prepared by U.S. EPA, 4/24/92. P. 311222-311261.
 - 476. Mineral Analysis Report, for Dorothy Rock, 12/10/83. P. 311262-311262.
 - 477. Memorandum to Mr. Bruce Molholt from Ms. Donna McCartney, U.S. EPA, re: Request for review of the preliminary work plan, 10/16/87. P. 311263-311264. A memorandum regarding the review is attached.
 - 478. Report: Draft Evaluation Report, Review of Preliminary RI Work Plan, C&D Recycling, prepared by EBASCO Services Incorporated, 11/16/87. P. 311265-311286.
 - 479. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Paula Luborsky, U.S. EPA, re: Recommendations for the RI Work Plan, 11/20/87. P. 311287-311288.
 - 480. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Alyce T. Fritz, U.S. EPA, re: Comments on the RI Work Plan, 11/23/87. P. 311289-311289.

481. Memorandum to Peer Review Group from Ms. Donna M. McCartney, U.S. EPA, re: Meeting to discuss comments on the RI Work Plan, 12/4/87. P. 311290-311290.
482. Handwritten list of documents, C&D Recycling, 5/17/88. P. 311291-311295.
483. Inorganic Analysis Data Sheet, Case No. 164104 14888, 8/10/88. P. 311296-311312. Sixteen Inorganic Analysis Data Sheets are attached.
484. Memorandum to Ms. Donna McCartney, U.S. EPA, from Mr. Bruce Molholt, U.S. EPA, re: Observations of new residential well samples, 9/1/88. P. 311313-311313.
485. Memorandum to Mr. Steve Jarvela, U.S. EPA, from Mr. Gregg Crystall, U.S. EPA, re: Assisting in evaluation of inorganic contamination in well sampling data, 9/12/88. P. 311314-311314.
486. Memorandum to Mr. Roy Smith, U.S. EPA, from Ms. Donna McCartney, U.S. EPA, re: Request for review and toxicological assessment, 9/1/88. P. 311315-311379. A package of well data is attached.
487. Handwritten notes, re: C&D public meeting, 12/14/88. P. 311380-311384.
488. Report of telephone conversation of M. Towle and D. McCartney with Larry Elder, J. Perazzo, J. Balsting, PADER, and J. Mellow, PADER, re: Monitor well placement, 1/20/89. P. 311385-311386.
489. Handwritten record of telephone conversation of Mr. Michael Towle, U.S. EPA, re: Monitoring well installation, 1/24/89. P. 311387-311387.
490. Memorandum to Mr. Roy Smith, U.S. EPA, from Ms. Donna McCartney, U.S. EPA, re: Review of residential well samples, 3/29/89. P. 311388-311388.
491. Handwritten Field Notes, re: Sulima residence well sampling, 4/3/89. P. 311389-311394.
492. Memorandum to Ms. Donna McCartney, U.S. EPA, from Ms. Martha Monserrate, U.S. EPA, re: Preliminary comments on the proposed sampling plan, 5/18/89. P. 311395-311395.
493. Memorandum to Ms. Martha Monserrate from Mr. Paul B. Dahlgren, re: Review of Technical Memorandum No. 1, 5/22/89. P. 311396-311397.

494. Memorandum to Mr. Bill Foster, U.S. EPA, from Ms. Donna M. McCartney, U.S. EPA, re: Drinking water, 5/30/89. P. 311398-311398.
495. Handwritten notes, re: Summary tables of residential well data, rock sampling, and emergency sampling data, 7/7/89. P. 311399-311407.
496. Memorandum to Mr. Steve Jarvella, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Residential well water data, 8/9/89. P. 311408-300408.
497. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Receipt of invoice for oversight costs, 8/17/89. P. 311409-311409.
498. Memorandum to Ms. Tanya Thomas, U.S. EPA, from Ms. Donna McCartney, U.S. EPA, re: AT&T request for cost accounting materials, 8/31/89. P. 311410-311410.
499. Memorandum to Mr. Roy Smith, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Preliminary results of dioxin sampling, 12/11/89. P. 311411-311412. A dioxin worksheet is attached.
500. Excerpts from articles in the Federal Register, re: Metals, 6/1/90-8/19/91. P. 311413-300418.
501. Memorandum to Mr. Bruce Rundell, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Schedule for the RI Report, 11/29/90. P. 311419-311419.
502. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Paul Muraca, U.S. EPA, re: Comments on the final draft RI, 12/10/90. P. 311420-311420.
503. Memorandum to Ms. Marcia Spink, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Request for assistance from the Air Programs Branch in determining the probable area of maximum impact from C&D, 12/27/90. P. 311421-311422.
504. Memorandum to Ms. Patricia I. Flores, U.S. EPA, from Mr. Thomas A. Casey, U.S. EPA, re: Re-examination of past burning practices at C&D, 2/4/91. P. 311423-311424.
505. Memorandum to Mr. Roy Smith, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Transmittal of revised the Risk Assessment, 2/12/91. P. 311425-311425.

506. Memorandum to Mr. Bruce Rundell, Mr. Roy Smith, and Ms. Dianne Wehner, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the draft final RI, 3/22/91. P. 311426-311426.
507. Memorandum to Mr. Joseph Kunz, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Request for review of the RI and RA, 4/2/91. P. 311427-311427.
508. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrologic review of C&D technical information summary, 4/6/92. P. 311428-311428.
509. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Roy L. Smith, U.S. EPA, re: EPA's comments on the RA, 4/7/92. P. 311429-311431. A memorandum regarding human health risk assessment and a memorandum regarding the certification of the human health risk assessment are attached.
510. Handwritten memorandum to Mr. Mike Towle from Mr. Harry Harbold, re: Review of cost data, 4/9/92. P. 311432-311438. A graph of stabilization costs and cost calculations are attached.
511. Handwritten notes, re: Calculation of pounds of dioxin in ash, 4/23/92. P. 311439-311440. A facsimile cover sheet is attached.
512. Letter to Mr. Mike Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: Wetlands delineation, 4/27/92. P. 311441-311443.
513. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Charles R. Harman, ChemRisk, re: Observations on the presence of possible wetlands at C&D, 5/5/92. P. 311444-311447.
514. Memorandum to Mr. Joe Chikowski, ERM-Northeast, from Mr. Jim Perazzo, ERM-Northeast, re: Comparison of graphite furnace inductively coupled plasma (ICP) analytical methods, 5/7/92. P. 311448-311449.
515. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, ERM-Northeast, re: Estimate of average residual soil lead concentration, 5/7/92. P. 311450-311453. A soil sampling map is attached.

516. Letter to Mr. Michael Towle, U.S. EPA, from Mr. David E. Click, U.S. Department of the Interior, re: Transmittal of report on lead and other chemical constituents in ground water near C&D, 5/20/92. P. 311454-311477. The report is attached.
517. Memorandum to Mr. Mike Towle, U.S. EPA, from Mr. Jeffrey A. Dodd, U.S. EPA, re: Lead results, 6/1/92. P. 311478-311479.
518. Letter to Mr. Paul Kruse, U.S. Department of the Interior, from Mr. Michael Towle, U.S. EPA, re: Participation in negotiations with PRPs, 6/4/92. P. 311480-311481.
519. Letter to Ms. Margo Jackson, National Oceanic and Atmospheric Administration (NOAA), from Mr. Michael Towle, U.S. EPA, re: Participation in negotiations with PRPs, 6/4/92. P. 311482-311483.
520. Memorandum to Mr. Michael Towle from Mr. Robert S. Davis, re: Damage to vegetation, 6/4/92. P. 411484-311484.
521. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Ronald DiCola, AT&T, re: Permission to split samples, 6/4/92. P. 311485-311485.
522. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Request for analytical results of soil, ash, and sediment sampling, 6/16/92. P. 311486-311486.
523. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Comparison of Mr. Richie's affidavit with his deposition, 6/17/92. P. 311487-311684. A memorandum comparing the affidavit and deposition, an affidavit, and a deposition transcript are attached.
524. Facsimile cover sheet to Mr. Michael Towle from Mr. J. Chikowski, AT&T, re: Agreement for access, 6/24/92. P. 311685-311689. The agreement is attached.
525. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Analysis of data, 6/29/92. P. 311690-311701. A response letter and a correspondence control slip are attached.

526. Memorandum to Mr. Charles J. Walters, ATSDR, from Mr. Max M. Howie, ATSDR, re: Transmittal of the Public Health Assessment, 7/27/92. P. 311702-311728. A public notice and 22 transmittal letters for the Health Assessment are attached.
527. Letter to Ms. Laura Janson, U.S. EPA, from Mr. Max M. Howie, ATSDR, re: Transmittal of the Public Health Assessment, 7/27/92. P. 311729-311729.
528. Letter to Mr. David E. Click, U.S. Geological Survey, from Mr. Peter W. Schaul, U.S. EPA, re: Review of the administrative report on lead and other chemicals in ground water near C&D, 7/31/92. P. 311730-311736. Comments on the report and two maps are attached.
529. Facsimile transmittal memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Laura Gavin, CH2M Hill, re: Surface soil sampling, 8/4/92. P. 311737-311765. A package of surface soil sampling data is attached.
530. Letter to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the draft Record of Decision (ROD), 8/5/92. P. 311766-311766.
531. Letter to Mr. Joseph Healey, B.E.S. Environmental Specialists, from Mr. Joe Chikowski, AT&T, re: Tour of the C&D Site, 8/6/92. P. 311767-311767.
532. Memorandum to Mr. Michael Towle, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrologic review of C&D Recycling ROD, 8/10/92. P. 311768-311768.
533. Memorandum to Mr. Jack Kelly, ATSDR, from Mr. Michael Towle, U.S. EPA, re: Review of the Health Assessment, 8/12/92. P. 311769-311770.
534. Memorandum to Mr. Charles Walters, ATSDR, from Mr. Michael Towle, U.S. EPA, re: EPA's technical conclusion concerning ground water contamination, 8/13/92. P. 311771-311771.
535. Facsimile transmittal of letter to Mr. Mike Towle, U.S. EPA, from Mr. John S. Mellow, PADER, re: PADER's review of the draft ROD, 8/18/92. P. 311772-311779. A facsimile cover sheet is attached.
536. Handwritten telephone log of Mr. Bill Beubeck with Mr. Mike Towle, U.S. EPA, re: Review of residential well data, 8/24/92. P. 311780-311780.

537. Letter to The Honorable Raphael J. Musto, Commonwealth of Pennsylvania Senate, from Ms. Fay K. Geegee, Department of Health, re: Transmittal of Mr. Towle's comments on the Health Assessment, 8/27/92. P. 311781-311787. A letter and two memoranda regarding the Health Assessment are attached.
538. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, ERM-Northeast, re: Calculation of lead concentrations in air resulting from vehicle traffic, 8/28/92. P. 311788-311800. Two memoranda with lead concentration calculations are attached.
539. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, ERM-Northeast, re: Investigation of the on-site drywell at C&D, 8/31/92. P. 311801-311802.
540. Memorandum to Mr. Mike Towle, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, re: Inorganic data validation report for case number 18269, 8/31/92. P. 311803-311841.
541. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Cecil Rodrigues, U.S. EPA, re: Transmittal of the EPA's response to interrogatories, 9/4/92. P. 311842-311874. The United States Environmental Protection Agency Answers to the Plaintiffs, Sharon Rohrbach, et al. Interrogatories is attached.
542. Memorandum to Mr. Joseph Chikowski, Mr. Henry Cole, Mr. Ronald Davis, Mr. Donald Gerson, Ms. Sharon Rohrbach, Ms. Jane Sulima, and Foster Township Supervisors, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the inorganic data validation report, 9/11/92. P. 311875-311875.
543. Memorandum to Mr. Mike Towle from Mr. Harry Harbold, re: Operation and maintenance calculations, 9/15/92. P. 311876-311898.
- a) O&M calculations;
 - b) a transmittal memorandum;
 - c) a memorandum regarding drum disposal cost estimate;
 - d) excerpts from unit price books;
 - e) a printout from a data base.

544. Letter to Mr. John Mellow, PADER, from Mr. Mike Towle, U.S. EPA, re: Soil sampling results, 9/15/92. P. 311899-311985. The soil sampling results are attached.
545. Letter to Mr. Thomas C. Voltaggio, U.S. EPA, from Mr. Joseph Chikowski, AT&T, re: Summary of AT&T's understanding of PADER's position on the remedy's compliance with state ARARs, 9/24/92. P. 311986-311987.
546. Letter to Mr. Joseph T. Chikowski, AT&T, from Mr. Ed Shoener, PADER re: Clarification of the state's position on the remedy's compliance with state ARARs, 9/25/92. P. 311988-311990. A facsimile cover sheet is attached.
547. Exhibit I, Analysis and Approval Documents Related to the Wastes Disposed of at the Lexington County Landfill, (undated). P. 311991-312060.
548. Data Package for soil samples, 7/9/92. P. 312061-312368.
549. Corrected Data Summary Table, June 1992 Results, 8/6/92. P. 312367-312412.

IV. REMOVAL RESPONSE PROJECTS

1. Report: Incoming Spill Report, 9/7/84. P. 400001-400001.
2. U.S. EPA Pollution Report #1, C&D Recycling Corporation Site, 9/26/84. P. 400002-400003.
3. Letter to Dr. David Stiller, Sandy Valley Farms, from Mr. Jay Rodstein, U.S. EPA, re: Ground water information regarding the C&D Recycling Corporation Site, 11/19/84. P. 400004-400004.
4. Memorandum to Mr. Gerald Heston, U.S. EPA, from Mr. Michael Wilson, U.S. EPA, re: Draft sampling plan for the C&D Recycling Site, 11/15/85. P. 400005-400006. The sampling plan sheet is attached.
9. Letter to Mr. and Mrs. Chuck Drasher from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at their home, 7/7/86. P. 400007-400007.
10. Letter to Mr. and Mrs. Frymoyer from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water sample collected at their home, 7/7/86. P. 400008-400008.
11. Letter to Mr. and Mrs. Thomas Rock from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at their home, 7/7/86. P. 400009-400009.
12. Letter to Ms. Jane Sulima from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at her home, 7/7/86. P. 400010-400010.
13. Letter to Ms. Joanna Russell from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water sample collected at her home, 7/7/86. P. 400011-400011.
14. Letter to Mr. and Mrs. Chester Cenzar from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at their home, 7/7/86. P. 400012-400012.
15. Letter to Mr. and Mrs. Martin Clarke from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at their home, 7/7/86. P. 400013-400013.

16. Letter to Mr. and Mrs. Evancho from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at their home, 7/7/86. P. 400014-400014.
17. Letter to Mrs. Sophia Martineek from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at her home, 7/7/86. P. 400015-400015.
18. Letter to Mr. and Mrs. Dean Oberst from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at their home, 7/7/86. P. 400016-400016.
19. Letter to Mr. and Mrs. Ronald Rupczynski from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at their home, 7/7/86. P. 400017-400017.
20. Letter to Mr. and Mrs. Resnick from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of Water samples collected at their home, 7/7/86. P. 400018-400018.
21. Letter to Mrs. Sharon Rohrbach from Mr. Gerald T. Heston, U.S. EPA, re: Analytical results of water samples collected at her home, 7/7/86. P. 400019-400019.
22. Memorandum to Mr. Gerry Heston, U.S. EPA, from Mr. Christopher Whalton, Roy F. Weston Inc., re: Modification of the sampling plan for C&D Recycling, 10/9/86. P. 400020-400020.
23. Letter to Mr. Robert Cornelia, AT&T, from Mr. Stephen R. Wassersug, U.S. EPA, re: Consent Agreement and Order for AT&T Nassau Metals Corporation and the U.S. EPA, 8/31/87. P. 400021-400037. Two letters and the Consent Agreement and Order are attached.
24. Report: Site Security and Erosion and Sedimentation Control Plans, C&D Recycling, Foster Township, Luzerne County, Pennsylvania, prepared by Fred C. Hart Associates Inc., 9/21/87. P. 400038-400053. A cover letter is attached.
25. Memorandum to Mr. William Steuteville, U.S. EPA, from Mr. Gary F. Shaffer, PADER, re: Concerns with the proposed site safety plan for the C&D Recycling Site, 9/29/87. P. 400054-400055.

46. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Start of Monthly inspection measures at C&D Recycling Site, 2/15/88. P. 400157-400164. A monthly inspection and maintenance report is attached.
47. Report: Cable Casing Removal Plan for C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by Fred C. Hart Associates Inc., 3/21/88. P. 400165-400210.
48. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 3/22/88. P. 400211-400219. The report and a map are attached.
49. Letter to Mr. Larry Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: Inspection of the C&D Recycling Site, 3/24/88. P. 400220-400220.
50. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Cable casing removal plan for the C&D Recycling Site, 3/24/88. P. 400221-400221.
51. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 4/8/88. P. 400222-400231. The report and a letter are attached.
52. Letter to Mr. William Steuteville, U.S. EPA, from Mr. Reno P. Ducceschi, PADER, re: Review of the C&D Recycling cable casing removal plan, 4/12/88. P. 400232-400233. A letter is attached.
53. Letter to Mr. Larry A. Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: C&D Recycling cable casing removal work plan, 4/18/88. P. 400234-400235.
54. Letter to Mr. Larry Elder, AT&T, from Ms. Shirlee Schiffman, New Jersey Department of Environmental Protection, re: The transportation of cable casings from the C&D Recycling Site to a New Jersey location, 4/22/88. P. 400236-400237.
55. Letter to Mr. Charles D'Amico, New Jersey Department of Environmental Protection, from Mr. Larry A. Elder, AT&T, re: The transportation of cable casings from the C&D Recycling Site to a New Jersey location, 5/3/88. P. 400238-400238.

26. Letter to Mr Larry Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: Questions and answers about piles of cable casing materials at the C&D Recycling Site, 9/30/87. P. 400056-400057.
27. Memorandum to Mrs. Mary Letzkus, U.S. EPA, from Mr. Bill Steuteville, U.S. EPA, re: The recycling of materials at the C&D Recycling Site, 9/30/87. P. 400058-400060.
28. Letter to Mr. Larry Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: Review of the Work Plan for the removal action at the C&D Recycling Site, 10/6/87. P. 400061-400062.
29. Letter to Mr. Gary Shaeffer, PADER, from Mr. Bill Steuteville, U.S. EPA, re: Comments on the C&D Recycling Site Work Plan, 10/7/87. P. 400063-400063.
30. Letter to Mr. Larry Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: An amendment to the review of the C&D Recycling Site Work Plan, 10/9/87. P. 400064-400064.
31. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Revised copies of the C&D Recycling Site Work Plan, 10/21/87. P. 400065-400065.
32. Report: Site Security and Erosion and Sedimentation Control Plans, C&D Recycling, Foster Township, Luzerne County, Pennsylvania, prepared by Fred C. Hart Associates Inc., 10/22/87. P. 400066-400081.
33. Report: Site Safety Plan for Site Security and Erosion and Sedimentation Control, C&D Recycling, Foster Township, Pennsylvania, prepared by Fred C. Hart Associates Inc., 10/22/87. P. 400082-400118.
34. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Concerns addressed in the C&D Recycling Site Revised Work Plan, 10/22/87. P. 400119-400120.
35. Letter to Mr. William D. Steuteville and Ms. Donna McCartney, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Removal of casing materials from the C&D Recycling Site, 10/22/87. P. 400121-400136. An analytical report and two chain of custody forms are attached.

36. Letter to Mr. Larry Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: Removal of cable casing piles from the C&D Recycling Site, 10/23/87. P. 400137-400139. An Amended Administrative Order on Consent is attached.
37. Letter to Mr. Larry Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: Receipt of the work plan and notification of a press conference concerning the C&D Recycling Site, 10/23/87. P. 400140-400140.
38. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Work on the C&D Recycling Site, 11/24/87. P. 400141-400141.
39. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Confirmation of the completion of work described in the Site Security and Erosion and Sedimentation Control Plan for the C&D Recycling Site, 12/1/87. P. 400142-400142.
40. Report: Final Report for Site Security and Erosion and Sedimentation Control Activities, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by Larry A. Elder, AT&T, 12/9/87. P. 400143-400148. A map and a cover letter are attached.
41. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Visitation to and assessment of work done at the C&D Recycling Site, 12/30/87. P. 400149-400150.
42. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Removal of cable casings from the C&D Recycling Site, 1/29/88. P. 400151-400151.
43. Letter to Mr. Kurt Witford, New Jersey Department of Environmental Protection, from Mr. Larry A. Elder, AT&T, re: Baling of cable casings at the New Jersey facility, 2/1/88. P. 400152-400153.
44. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Reconstruction of the silt fence at the C&D Recycling Site, 2/2/88. P. 400154-400154.
45. Letter to Mr. Larry Elder, AT&T, from Mr. Bill Steuteville, U.S. EPA, re: A visit to the C&D Recycling Site, 2/5/88. P. 400155-400156.

56. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: The monthly inspection and maintenance report for the C&D Recycling Site, 5/10/88. P. 400239-400246. The report is attached.
57. Letter to Mr. Larry A. Elder, AT&T, from Ms. Shirlee Schiffman, New Jersey Department of Environmental Protection, re: The transportation of cable casings from the C&D Recycling Site to a New Jersey location, 5/17/88. P. 400247-400247.
58. Administrative Order on Consent In The Matter of: C&D Recycling Site, Docket No. III-87-31-DC, 6/1/88. P. 400248-400264.
59. Letter to Mr. William Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: The removal of cable casings from the C&D Recycling Site, 6/3/88. P. 400265-400267.
60. Memorandum to Mr. Stephen D. Jarvela, U.S. EPA, from Mr. Gerald T. Heston, U.S. EPA, re: Sampling at the C&D Recycling Site, 6/15/88. P. 400268-400268.
61. Memorandum to Mr. Gerald Heston, U.S. EPA, from Mr. Todd Chocholaty, Roy F. Weston Inc., re: C&D Recycling Site sampling plan, 6/15/88. P. 400269-400274. A residential well map and a sketch of the site are attached.
62. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 6/17/88. P. 400275-400282. The report is attached.
63. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: A storm drain at the C&D Recycling Site, 7/7/88. P. 400283-400287. A map and three drainage diagrams are attached.
64. Letter to Mr. Mark Brown, House Conservation Committee, from Mr. Bruce P. Smith, U.S. EPA, re: Administrative Order on Consent for the C&D Recycling Site, 7/13/88. P. 400288-400288.
65. Letter to Mr. Robert Cornelia, AT&T, from Mr. Stephen R. Wassersug, U.S. EPA, re: Administrative Order on Consent for the C&D Recycling Site, 7/13/88. P. 400289-400289.

66. Letter to Mr. Don Becker, PADER, from Mr. Stephen R. Wassersug, U.S. EPA, re: Administrative Order on Consent for the C&D Recycling Site, 7/13/88. P. 400290-400290.
67. Letter to Mr. John A. McKinney, AT&T, from Ms. Denise Parkinson, U.S. EPA, re: Administrative Order on Consent for the C&D Recycling Site, 7/13/88. P. 400291-400291.
68. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: The monthly inspection and maintenance report for the C&D Recycling Site, 7/27/88. P. 400292-400299. The report is attached.
69. Letter to Mr. Ray Worob, New Jersey Department of Environmental Protection, from Mr. Larry A. Elder, AT&T, re: Transportation of cable casings from the C&D Recycling Site to a New Jersey location, 8/17/88. P. 400300-400300.
70. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: The monthly inspection and maintenance report for the C&D Recycling Site, 8/18/88. P. 400301-400309. The report is attached.
71. Letter to Mr. Larry A. Elder, AT&T, from Mr. William J. Hoffman, New Jersey Department of Environmental Protection, re: Agreement to authorize the baling of cable casings at the Lowenstein Industries, Inc. facility, 8/30/88. P. 400310-400310.
72. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Cable casing removal from the C&D Recycling Site, 9/6/88. P. 400311-400311.
73. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Construction of a washpad at the C&D Recycling Site, 9/9/88. P. 400312-400313. A map is attached.
74. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 9/23/88. P. 400314-400321. The report is attached.
75. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: A summary of air sampling results, 10/12/88. P. 400322-400328. The results are attached.

76. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Air sampling results, 10/14/88. P. 400329-400334. The results and a letter are attached.
77. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site. 10/21/88. P. 400335-400342. The report is attached.
78. Handwritten letter to Mr. Steuteville, U.S. EPA, from Mr. Larry Elder, AT&T, re: Cable casings shipments, 11/3/88. P. 400343-400347. Four shipping orders are attached.
79. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, re: Monthly inspection and maintenance report for the C&D Recycling Site, 11/15/88. P. 400348-400355. The report is attached.
80. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, re: Monthly inspection and maintenance report for the C&D Recycling Site, 12/16/88. P. 400356-400364. The report is attached.
81. Letter to Mr. Larry Elder, AT&T, from Mr. James F. Blasting, Fred C. Hart Associates Inc., re: The testing of well and tap water at the residence of Jane Sulima, 12/19/88. P. 400365-400384. The following are attached:
 - a) a summary of valid analytical results of the water testing at the Sulima residence;
 - b) an explanation of summary tables for the well water samples;
 - c) a list of analytical parameters for the well sample;
 - d) a summary of valid analytical results for the Sulima residential well sampling round;
 - e) an explanation of summary tables for the tap water samples;
 - f) a list of analytical parameters for the tap sample;
 - g) a summary of valid analytical results for the Sulima residence tap water;

- h) two inorganic analysis data sheets;
 - i) a compound list-classical parameters sheet for sample number 205188;
 - j) a pesticide organics analysis data sheet;
 - k) three semivolatile organics analysis data sheets;
 - l) two volatile organics analysis data sheets.
82. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 1/13/89. P. 400385-400392. The report is attached.
 83. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 2/13/89. P. 400393-400401. The report is attached.
 84. Report: Documentation Associated With Cable Casings Removal, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by Mr. Larry A. Elder, AT&T, 3/2/89. P. 400402-400636. A cover letter is attached.
 85. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 3/9/89. P. 400637-400646. The report is attached.
 86. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Larry A. Elder, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 4/19/89. P. 400647-400655. A letter and the report are attached.
 87. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 5/12/89. P. 400656-400665. A letter and the report are attached.
 88. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 6/20/89. P. 400666-400675. A letter and the report are attached.

89. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 7/14/89. P. 400676-400684. A letter and the report are attached.
90. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 8/18/89. P. 400685-400694. A letter and the report are attached.
91. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 9/25/89. P. 400695-400704. A letter and the report are attached.
92. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 10/20/89. P. 400705-400713. A letter and the report are attached.
93. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 11/27/89. P. 400714-400723. A letter and the report are attached.
94. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 12/22/89. P. 400724-400733. A letter and the report are attached.
95. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 1/16/90. P. 400734-400743. A letter and the report are attached.
96. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 2/13/90. P. 400744-400753. A letter and the report are attached.

97. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 3/16/90. P. 400754-400761. A letter and the report are attached.
98. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 4/13/90. P. 400762-400769. A letter and the report are attached.
99. Memorandum to Ms. Karen Wolper, U.S. EPA, from Mr. Patrick Anderson, U.S. EPA, re: Transferral of removal oversight responsibility to Regional Project Manager (RPM) for the C&D Recycling Site, 5/9/90. P. 400770-400770.
100. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for C&D Recycling Site, 5/16/90. P. 400771-400780. A letter and the report are attached.
101. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 6/15/90. P. 400781-400790. A letter and the report are attached.
102. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 7/23/90. P. 400791-400800. A letter and the report are attached.
103. Safety Plan Waiver Form for C&D Recycling Site Assessment, 8/10/89. P. 400801-400964. Two telephone conversation records and a data package are attached.
104. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 9/10/90. P. 400965-400973. A letter and the report are attached.
105. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 10/4/90. P. 400974-400983. A letter and the report are attached.

106. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 11/8/90. P. 400984-400993. A letter and the report are attached.
107. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Erosion and sedimentation control at the C&D Recycling Site, 1/4/91. P. 400994-401002. A letter and the monthly inspection and maintenance report are attached.
108. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 2/1/91. P. 401003-401011. A letter and the report are attached.
109. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 2/20/91. P. 401012-401020. A letter and the report are attached.
110. Letter to Mr. William D. Steuteville, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 3/26/91. P. 401021-401029. A letter and the report are attached.
111. Letter to Mr. Joe Chikowski, AT&T, from Mr. William D. Steuteville, U.S. EPA, re: Inspection of the C&D Recycling Site for correction of site stabilization problems, 4/2/91. P. 401030-401030.
112. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 4/16/91. P. 401031-401038. A letter and the report are attached.
113. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 5/24/91. P. 401039-401047. A letter and the report are attached.
114. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 7/2/91. P. 401048-401056. A letter and the report are attached.

115. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report for the C&D Recycling Site, 7/24/91. P. 401057-401064. A letter and the report are attached.
116. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report, 9/11/91. P. 401065-401073. A letter and the report are attached.
117. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report, 10/23/91. P. 401074-401082. A letter and the report are attached.
118. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Joe Chikowski, AT&T, re: Monthly inspection and maintenance report, 11/15/91. P. 401083-401091. A letter and the report are attached.
119. Letter to Mr. Joe Chikowski, AT&T, from Mr. William D. Steuteville, U.S. EPA, re: Inspection of the C&D Recycling Site for adequacy and maintenance of the erosion and sedimentation control measures, (undated). P. 401092-401092.
120. Pricing Sheet for photographic reproductions, U.S. Department of Agriculture, (undated). P. 401093-401093.
121. Memorandum to Mr. Ed Skernolis, U.S. EPA, from Mr. Jay Rodstein, U.S. EPA, re: Preliminary Assessment of the C&D Recycling Corporation and M.H. Brenner Salvage Yard, (undated). P. 401094-401094.
122. Data package, C&D Recycling Site, (undated). P. 401095-401146.
123. Report: Monthly Inspection and Maintenance Report, prepared by AT&T, 12/20/92. P. 401147-401155. Two cover letters are attached.
124. Report: Monthly Inspection and Maintenance Report, prepared by AT&T, 1/21/92. P. 401156-401164. Two cover letters are attached.
125. Report: Monthly Inspection and Maintenance Report, prepared by AT&T, 2/27/92. P. 401165-401173. Two cover letters are attached.

126. Report: Monthly Inspection and Maintenance Report, prepared by AT&T, 3/25/92. P. 401174-401182. Two cover letters are attached.

V. COMMUNITY/INVOLVEMENT/CONGRESSIONAL CORRESPONDENCE/IMAGERY

1. Record of land purchases in Foster Township, from 4/16/54 - 12/21/73. P. 500001-500003.
2. Proposed Plumbing and Electric Site Plan for Lurgan Corporation, 8/24/66. P. 500004-500004.
3. Proposed Plumbing Plan and Details for Lurgan Corporation, 8/24/66. P. 500005-500005.
4. Newspaper article entitled "DER Responds Again To Burning Issue in Foster," 1981. P. 500006-500006.
5. Newspaper article entitled "No violations found in Foster Twp. burning," Hazelton Standard-Speaker, 4/11/81. P. 500007-500007.
6. Letter to Mr. and Mrs. Sulima from Mr. Richard M. Banyas, Fearnots Volunteer Fire Co., re: A brush fire on the Sulima's property, 5/17/81. P. 500008-500008.
7. Letter to Mrs. Jane Sulima from Mr. Joseph Kunz, Enforcement Policy and State Coordination Section, re: A Freedom of Information Act request regarding the history of the C&D Recycling Company, 4/24/84. P. 500009-500020. The following are attached:
 - a) results of plant inspection conducted by U.S. EPA;
 - b) a Stationary Source Inspection Report;
 - c) a letter dated January 4, 1978;
 - d) a memorandum regarding non-compliance;
 - e) a list of industrial sources in non-compliance.
8. Newspaper article entitled "Foster: Fear C&D new burning plan; action on rec project, zone update," Hazelton Standard-Speaker, 7/3/84. P. 500021-500021.
9. Telephone conversation record of Ms. Laura Boornazian with Ms. Jane Sulima, re: Events and history of the C&D Recycling Site, 9/7/84. P. 500022-500024.
10. Newspaper article entitled "3 DER heads at Foster meeting; citizen tells of lead in well water," Hazelton Standard-Speaker, 9/7/84. P. 500025-500025.

11. Newspaper article entitled "DER hopes to have some answers," The Standard-Speaker, 9/18/84. P. 500026-500026.
12. Newspaper article entitled "Residents told soil lead content much higher than allowed," The Standard-Speaker, 10/8/84. P. 500027-500027.
13. Newspaper article entitled "Meeting Tuesday will discuss lead problem," The Standard-Speaker, 10/25/84. P. 500028-500028.
14. Newspaper article entitled "DER: C&D soil hazardous, but residents' water is safe," The Standard-Speaker, 10/31/84. P. 500029-500029.
15. Newspaper article entitled "Musto may head environmental committee," The Standard-Speaker, 12/3/84. P. 500030-500030.
16. Letter to the Honorable Paul E. Kanjorski, U.S. Congress, from Mr. James M. Seif, U.S. EPA, re: Response to inquiry concerning the safety of the C&D Recycling Site and the surrounding area, P. 500031-500035. A document listing maximum contaminant levels under the Safe Drinking Water Act is attached.
17. Memorandum of telephone call of David DeCosmo, Channel 22, Scranton, taken by MJB, re: Test Results from C&D Recycling, 2/4/85 to 2/19/85. P. 500036-500038.
18. Newspaper article entitled "Tests for lead prove negative," The Standard-Speaker, 2/12/85. P. 500039-500039.
19. Newspaper article entitled "Tests continuing on Foster soil, water," The Standard-Speaker, 2/15/85. P. 500040-500040.
20. Newspaper article entitled "Musto meets with EPA, DER on Foster lead," The Standard-Speaker, 2/26/85. P. 500041-500041.
21. Newspaper article entitled "C&D site could make Superfund list," The Standard-Speaker, 3/8/85. P. 500042-500042.
22. Newspaper article entitled "C&D starts removing lead," The Standard-Speaker, 4/5/85. P. 500043-500043.

23. Newspaper article entitled "Arsenic found in C&D wells," The Standard-Speaker, 4/18/85. P. 500044-500044.
24. Newspaper article entitled "EPA: C&D arsenic no threat," The Standard Speaker, 4/19/85. P. 500045-500045.
25. Letter to Chairman of the Board, AT&T, from Mr. and Mrs. Gary Rohrbach, re: Request for information, 5/15/85. P. 500045A-500045A.
26. Newspaper article entitled "Conflicting test results in Foster Twp. concern Musto," The Standard-Speaker, 6/1/85. P. 500046-500046.
27. Letter to Mr. Harold Wagle from Mrs. Jane K. Sulima, re: Request for information, 6/12/85. P. 500046A-500046A.
28. Newspaper article entitled "Don't drink the water, Pond Creek residents told," The Standard Speaker, 6/26/85. P. 400047-500047.
29. Newspaper article entitled "Southbounder," Sunday Independent, 6/30/85. P. 500048-500048.
30. Letter to Mr. Larry Teller, U.S. EPA, from Mr. Paul E. Kanjorski, U.S. Congress, re: Conflicting water quality test results, 7/8/85. P. 500049-400050.
31. Letter to Ms. Jane K. Sulima from Mr. L.G. Lewallen, AT&T, re: Commercial arrangement between AT&T and C&D Recycling, 7/10/85. P. 500050A-500050A.
32. Newspaper article entitled "Foster receives results of independent water well tests," The Standard-Speaker, 8/7/85. P. 500051-500051.
33. Newspaper article entitled "Pond Creek cleanup may be delayed," The Standard-Speaker, 8/19/85. P. 500052-500052.
34. Letter to Mrs. Sharon Rohrbach from Mr. Jerome J. Lehman, Pennsylvania Department of Environmental Resources (PADER), re: Information on an aquatic biology survey colonization near C&D Recycling, 8/21/85. P. 500053-500055. The survey results are attached.

35. Newspaper article entitled "Area dump site may be added to Superfund list," Citizens' Voice, 9/6/85. P. 500056-500056.
36. Newspaper article entitled "Foster site on Superfund list," The Standard-Speaker, 9/6/85. P. 500057-500058.
37. Newspaper article entitled "Keep waste cleanup fight going - Foster residents," The Standard-Speaker, 9/7/85. P. 500059-500059.
38. Newspaper article entitled "Southbounder," Sunday Independent, 9/29/85. P. 500060-500060.
39. Newspaper article entitled "Democrats blast Reagan on waste," The Standard-Speaker, 10/21/85. P. 500061-500062.
40. Newspaper article entitled "Congress plans hearings Wed.," The Standard Speaker, 10/21/85. P. 500063-500063.
41. Newspaper article entitled "Test results find chemical compound at C&D plant," The Standard-Speaker, 10/29/85. P. 500064-500064.
42. Newspaper article entitled "Letters can help get C&D on Superfund list," The Standard Speaker, 11/4/85. P. 500065-500065.
43. Newspaper article entitled "C&D cleanup letters urged," The Standard-Speaker, 11/14/85. P. 500066-500066.
44. Letter to Representative Paul E. Kanjorski, U.S. Congress, from Mr. John Herkalo, Borough of Freeland Pennsylvania, re: Support for placing the C&D Recycling Site on the Superfund clean-up list, 11/15/85. P. 500067-500067.
45. Newspaper article entitled "Citizens, DER urge unity in C&D battle," The Standard-Speaker, 11/20/85. P. 500068-500068.
46. Letter to Ms. Laura Boornazian, U.S. EPA, from Ms. Jane K. Sulima, re: Well analyses and a request for a response, 12/20/85. P. 500069-500073. Three PADER special analyses reports and a laboratory report are attached.
47. Newspaper article entitled "Testing: Wells near C&D safe," The Standard-Speaker, 1/2/86. P. 500074-500074.

48. Newspaper article entitled "Lead Contamination, DER knew about it at C&D site in '66 but did nothing, Foster resident says," The Standard-Speaker, 1/22/86. P. 500075-500075.
49. Handwritten summary of telephone conversation with Mr. Gary Moulder, re: C&D Recycling, 1/22/86. P. 500076-500076.
50. Newspaper article entitled "Tigue wants closer monitoring at C&D," The Standard-Speaker, 1/25/86. P. 500077-500077.
51. Newspaper article entitled "Southbounder," Sunday Independent, 1/26/86. P. 500078-500078.
52. Handwritten letter to Ms. Nanci Sinclair from Ms. Carol Stokes, re: Public meeting on C&D Recycling, 2/27/86. P. 500079-500079.
53. Letter to Mrs. Jane K. Sulima from Ms. Laura A. Boornazian, U.S. EPA, re: Filtered and nonfiltered inorganic samples, 3/4/86. P. 500080-500081.
54. Newspaper article entitled "Tests show Foster water OK, but DER won't say it's safe," The Standard-Speaker, 3/11/86. P. 500082-500082.
55. Newspaper article entitled "Safety of Foster Twp. water remains uncertain," Citizens' Voice, 3/11/86. P. 500083-500083.
56. Newspaper article entitled "EPA to head lead cleanup," The Standard-Speaker, 3/11/86. P. 500084-500084.
57. Telephone conversation record of Ms. Carol Stokes with Ms. Jane Sulima, re: Disintegration of water pipes, 3/17/86. P. 500085-500085.
58. Letter to Ms. Nanci Sinclair, U.S. EPA, from Ms. Jane K. Sulima, Better Informed Community, re: Problems with the water at her residence, 3/25/86. P. 500086-500086.
59. Newspaper article entitled "EPA tests water in Foster," The Standard-Speaker, 4/5/86. P. 500087-500087.
60. Handwritten letter to Ms. Nanci Sinclair, U.S. EPA, from Mr. and Mrs. Gary Rohrbach, re: Request to determine the health risk caused by contaminants at the C&D Recycling plant, 4/5/86. P. 500088-500089.

61. Handwritten letter to Ms. Sinclair from Ms. Katherine Angar, re: Possible connection between physical ailments and contamination from C&D Recycling, 4/5/86. P. 500090-500090.
62. Handwritten letter to Ms. Sinclair from Mr. and Mrs. Thomas Rock, re: Description of physical ailments, 4/5/86. P. 500091-500091.
63. Handwritten letter to Ms. Sinclair from Mr. and Mrs. Joseph Martinak, re: Problems with water pipes, 4/7/86. P. 500092-500092.
64. Handwritten letter to Ms. Sinclair from Ms. Melane Evancho, re: Water problem in Foster Township, 4/7/86. P. 500093-500100.
65. Handwritten letter to Mr. Bill McDonald, PADER, from Mr. Victor A. Gavinski III, re: Quality of water in their home well, 4/24/86. P. 500101-500101.
66. Letter to Mr. James Seif, U.S. EPA, from Mr. Nicholas DeBenedictis, PADER, re: Request for EPA to take lead on the remedial Superfund cleanup of the C&D Recycling Site, 4/30/86. P. 500102-500102.
67. Newspaper article entitled "DER letter on C&D lip service: Foster," The Standard-Speaker, 5/8/86. P. 500103-500103.
68. Letter to C&D Recycling from Mr. Albert J. Slap, Slap, Williams, and Cuker, re: Notice of CERCLA Claim and Citizen Suit: C&D Recycling, Inc., Luzerne County, PA, 8/25/86. P. 500104-500105.
69. Letter to Mr. Don Welsh, U.S. EPA, from Mr. John Heinz, U.S. Senate, re: Review of points raised in a letter from Ms. Jane Sulima, 9/2/86. P. 500106-500108. The letter is attached.
70. Letter to Ms. Carol Stokes-Cawley, U.S. EPA, from Ms. Jane K. Sulima, re: Work plan for the C&D Recycling Site, 9/7/86. P. 500109-500114. A U.S. EPA inorganic analysis data sheet and material safety data sheets are attached.
71. Letter to Senator John Heinz, U.S. Congress, from Mr. James M. Seif, U.S. EPA, re: Response to the concerns of a constituent about the C&D Recycling Site, 10/8/86. P. 500115-500123. Two transmittal memorandums and four letters are attached.

72. Letter to Senator John Heinz, U.S. Congress, from Mr. James M. Seif, U.S. EPA, re: Concerns of a constituent about the C&D Recycling Site, 10/17/86. P. 500124-500124.
73. Letter to Mr. Gary Moulder, PADER, from Ms. Jane K. Sulima, re: Request for copies of the monitoring well sample analyses for the C&D Recycling Site, 10/24/86. P. 500125-500125.
74. Newspaper article entitled "DER testing monitoring wells at C&D site," The Standard-Speaker, 10/24/86. P. 500126-500126.
75. Letter to Mr. Gerald Heston, U.S. EPA, from Ms. Jane K. Sulima, re: Correction of mistakes in relaying results of arsenic and lead readings to Ms. Sulima, 11/11/86. P. 500127-500129. A map and a hand-drawn sketch are attached.
76. Newspaper article entitled "Foster Twp. well unsafe, EPA test shows," The Times News, 11/19/86. P. 500130-500130.
77. Newspaper article entitled "Lynch Finally Gets C&D Data," Sunday Independent, 12/7/86. P. 500131-500131.
78. Newspaper article entitled "Foster OKs \$324,110 budget for '87," The Standard-Speaker, 12/30/86. P. 500132-500132.
79. Letter to Mr. Paul E. Kanjorski, U.S. House of Representatives, from Mr. James M. Seif, U.S. EPA, re: Status of EPA activities in dealing with the C&D Recycling Site, 12/31/86. P. 500133-500135. A transmittal memorandum is attached.
80. Photographs, C&D Recycling, 1/87. P. 500136-500139.
81. Newspaper article entitled "Congressman Pushing EPA," Sunday Independent, 1/11/87. P. 500140-500140.
82. Newspaper article entitled "New governor pledges help in C&D cleanup," The Standard-Speaker, 1/24/87. P. 500141-500141.
83. Letter to Mr. Robert A. Borski, U.S. House of Representatives, from Mr. James M. Seif, U.S. EPA, re: C&D Recycling Site, 1/27/87. P. 500142-500142.

84. Letter to Mr. Don Becker, PADER, from Mr. Bill Steuteville, U.S. EPA, re: Removal order for the C&D Recycling Site, 3/19/87. P. 500143-500143.
85. Letter to Mr. Mark Brown, House Conservation Committee, from Ms. Gerallyn Downes-Valls, U.S. EPA, re: List of parties to whom CERCLA notice letters have been sent, 3/23/87. P. 500144-500144.
86. Newspaper article entitled "Foster woman wonders if water killed her child," The Standard-Speaker, 3/27/87. P. 500145-500145.
87. Memorandum of telephone call of Ms. Sue Snyder, Standard-Speaker, taken by MJB, re: Cleanup of the C&D Recycling Site, 3/27/87. P. 500146-500146.
88. Newspaper article entitled "EPA negotiating for cleanup of C&D site," The Standard-Speaker, 3/31/87. P. 500147-500147.
89. Letter to Ms. Nanci Sinclair, U.S. EPA, from Mr. Mark R. Carmon, PADER, re: Draft Community Relations Plan for the C&D Recycling Site, 4/29/87. P. 500148-500148.
90. Photographs and a handwritten identification log, C&D Recycling, 4/29/87. P. 500149-500160.
91. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Albert J. Slap, Slap, Williams and Cuker, re: Sampling of soil at area residences, 5/28/87. P. 500161-500161.
92. Newspaper article entitled "Final cleanup of former McAdoo toxic waste site slated," Patriot-News, 6/1/87. P. 500162-500162.
93. Handwritten letter to Ms. Nanci Sinclair, U.S. EPA, from Ms. Jane Sulima, re: Space for public meeting, 6/9/87. P. 500163-500164.
94. Newspaper article entitled "More tests sought at C&D Recycling Site," The Standard-Speaker, 6/25/87. P. 500165-500165.
95. Newspaper article entitled "EPA promises probe at C&D," The Standard-Speaker, 6/27/87. P. 500166-500166.
96. Letter to the Honorable Paul E. Kanjorski, U.S. House of Representatives, from Mr. James M. Seif, U.S. EPA, re: Response to an inquiry about the status of EPA activities at the C&D Recycling Site, 7/8/87. P. 500167-500169. A letter is attached.

97. Newspaper article entitled "C&D site on 'Superfund' cleanup list," The Standard-Speaker, 7/22/87. P. 500170-500170.
98. Newspaper article entitled "Firm agrees to start cleanup at C&D site," The Standard-Speaker, 8/26/87. P. 500171-500172.
99. Letter to Ms. Carol Stokes, U.S. EPA, from Ms. Lorraine J. Zwolak, Slap, Williams and Cuker, re: Consent agreement between EPA and AT&T, 8/31/87. P. 500173-500173.
100. Press Release entitled "EPA Enters Consent Order with AT&T for Work at C&D Superfund Site" 9/2/87. P. 500174-500176.
101. Newspaper article entitled "Cleanup to start on toxic Foster land," The Standard-Speaker, 9/3/87. P. 500177-500177.
102. Transcription of television program, News 22, WYOU-TV, Scranton, PA, re: Site improvement work at the C&D Recycling Site, 9/3/87. P. 500178-500178.
103. Transcription of television program, News 22, WYOU-TV, Scranton, PA, re: Site improvement work at the C&D Recycling Site, 9/4/87. P. 500179-500179.
104. Newspaper article entitled "About Time, C&D Recycling Heading Toward Cleanup," Independent, 9/6/87. P. 500180-500180.
105. Newspaper article entitled "Southbounder," Independent, 9/6/87. P. 500181-500181.
106. Newspaper article entitled "AT&T unit agrees to clean up toxic waste," Patriot-News, 9/6/87. P. 500182-500182.
107. Letter to Ms. Lorraine J. Zwolak, Slap, Williams and Cuker, from Ms. Donna M. McCartney, U.S. EPA, re: Transmittal of the Administrative Order on Consent for the C&D Recycling Site, 9/15/87. P. 500183-500183.
108. Newspaper article entitled "News Briefs," The Valley Log, 9/23/87. P. 500184-500184.
109. Letter to Ms. Ann Cardinal, U.S. EPA, from Ms. Jane K. Sulima, re: Freedom of Information Act request, 10/1/87. P. 500185-100185.

110. Newspaper article entitled "Rotzell announces supervisor bid," The Standard-Speaker, 10/30/87. P. 500186-500186.
111. U.S. EPA Press Conference Announcement, re: On-site work at C&D Recycling Site, 11/3/87. P. 500187-500187.
112. Television schedule, "AT&T and the EPA," 11/10/87. P. 500188-500188.
113. Newspaper article entitled "Work begins to contain toxics at C&D Site," The Standard-Speaker, 11/11/87. P. 500189-500189.
114. Newspaper article entitled "New anti-landfill group formed," The Standard-Speaker, 11/15/87. P. 500190-500190.
115. Newspaper article entitled "Concerned Citizens seeking in put on Foster amendment," The Standard-Speaker, 11/15/87. P. 500191-500191.
116. Newspaper article entitled "Southbounder," Sunday Independent, 11/15/87. P. 500192-500192.
117. Newspaper article entitled "C&D cleanup flawed," The Standard-Speaker, 11/25/87. P. 500193-500193.
118. Newspaper article entitled "EPA denies reports of PCP at Foster site," The Standard-Speaker, 11/25/87. P. 500194-500194.
119. Letter to Mrs. Sharon Rohrbach from Ms. Nanci Sinclair, U.S. EPA, re: Status updates for the C&D Recycling Site, 12/4/87. P. 500195-500195.
120. Letter to Mr. Walter Lynch, Foster Twp. Board of Supervisors, from Ms. Nanci L. Sinclair, U.S. EPA, re: Use of the Freeland Borough Building as the official repository for the C&D Recycling Site, 12/9/87. P. 500196-500196.
121. Report: Final Community Relations Plan, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by Ebasco Services, Inc., 12/28/87. P. 500197-500216. A cover letter is attached.
122. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, re: Meeting with EPA about a technical assistance grant, 1/3/88. P. 500217-500217.

123. Report: Soil Analysis for Sulima Property, C&D Recycling Facility, prepared by Applied Geotechnical and Environmental Service Corporation, 1/6/88. P. 500218-500240. A transmittal letter is attached.
124. Letter to Mrs. Sharon Rohrbach from Ms. Nanci L. Sinclair, U.S. EPA, re: April 1987 Field Trip Report for the C&D Superfund Site, 2/2/88. P. 500241-500241.
125. Letter to Ms. Donna McCartney, U.S. EPA, from Ms. Sharon Rohrbach, Concerned Citizens of Foster Township, re: Request to review all agreements between the EPA and AT&T on the C&D Site and to have residential wells sampled on a quarterly basis, 2/10/88. P. 500242-500242.
126. Letter to Ms. Nanci Sinclair, U.S. EPA, from Ms. Sharon Rohrbach, Concerned Citizens of Foster Township, re: Request to review all agreements between the EPA and AT&T on the C&D Site and to have residential wells sampled on a quarterly basis, 2/10/88. P. 500243-500243.
127. Letter to Mr. John Herkalo from Ms. Nanci Sinclair, U.S. EPA, re: C&D Superfund Site Field Trip Report Consent Order and the Community Relations Plan, 2/10/88. P. 500244-500244.
128. Letter to Ms. Sharon Rohrbach from Ms. Nanci L. Sinclair, U.S. EPA, re: Transmittal of site documents and confirmation of a meeting, 2/10/88. P. 500245-500245.
129. Map: C&D Recycling Site, Luzerne County, Pennsylvania, 2/17/88. P. 500246-500246.
130. Letter to Mr. John Herkalo from Ms. Nanci Sinclair, U.S. EPA, re: Statement of Work for the C&D Recycling Site, 2/22/88. P. 500247-500247.
131. Letter to Mrs. Sharon Rohrbach from Ms. Nanci L. Sinclair, U.S. EPA, re: Statement of Work for C&D Superfund Site, 2/22/88. P. 500248-500248.
132. Letter to Ms. Sharon Rohrbach, Concerned Citizens of Foster Township (CCFT), from Ms. Nancy J. Smith, AT&T, re: Information on AT&T, 2/25/88. P. 50249-500250.
133. Letter to Mr. John Herkalo from Ms. Nanci L. Sinclair, U.S. EPA, re: Final Work Plan for the C&D Superfund Site, 3/7/88. P. 500251-500351.

134. Letter to Mrs. Sharon Rohrbach from Ms. Nanci L. Sinclair, U.S. EPA, re: Final work plan for the C&D Site, 3/7/88. P. 500252-500252.
135. Letter to Mrs. Jane Sulima from Ms. Nancy L. Sinclair, U.S. EPA, re: Location of C&D Superfund Site Repository, 3/7/88. P. 500253-500254.
136. Handwritten letter to Mr. Williams from Ms. Jane K. Sulima, re: Transmittal of Access Agreement to her property, 3/8/88. P. 500255-500256.
137. Handwritten letter to Ms. Nanci Sinclair, U.S. EPA, from Ms. Jane Sulima, re: C&D/AT&T Work Plan, 3/14/88. P. 500257-500257.
138. Memorandum to Ms. E. Ann Cardinal, U.S. EPA, from Ms. Nanci Sinclair, U.S. EPA, re: C&D meeting with citizens group, 3/16/88. P. 500258-500258.
139. Letter to Mr. Gerson from Ms. Donna M. McCartney, U.S. EPA, re: Request for access to conduct soil sampling, 3/17/88. P. 500259-500260.
140. Letter to Senator John Heinz, U.S. Senate, from Ms. Jane K. Sulima, re: Comments on the Work Plan, 3/19/88. P. 500261-500264.
141. Letter to Ms. Jane Sulima from Ms. Nanci Sinclair, U.S. EPA, re: Transmittal of missing pages from the Work Plan, 3/20/88. P. 500265-500265.
142. Letter to Ms. Sharon Rohrbach from Ms. Nanci Sinclair, U.S. EPA, re: Transmittal of missing pages from the Work Plan and other information, 3/20/88. P. 500266-500266.
143. Letter to Mr. Mark E. Goldberg, Groen, Laveson, Goldberg & Rubenstone, from Mr. John S. Williams, AT&T, re: Transmittal of the Administrative Order referred to in the Access Agreement, 3/29/88. P. 500267-500267.
144. Letter to Ms. Sharon Rohrbach from Ms. Nanci Sinclair, U.S. EPA, re: Residential well sampling, 4/1/88. P. 500268-500268.
145. Letter to Ms. Jane Sulima from Ms. Nanci Sinclair, U.S. EPA, re: Residential well sampling, 4/1/88. P. 500269-500269.

146. Handwritten letter to Ms. Carey Widman, U.S. EPA, from Ms. Jane K. Sulima, re: Request to review the original bound copy of the C&D Recycling Work Plan, 4/1/88. P. 500270-500270.
147. Handwritten letter to Mr. John Heinz, U.S. Senate, from Ms. Jane K. Sulima, re: Review of the Work Plan, 4/1/88. P. 500271-500271.
148. Letter to Mr. Don Gerson from Mr. Larry A. Elder, AT&T, re: Access Agreement for soil sampling, 4/4/88. P. 500272-500273. A property plan is attached.
149. Newspaper article entitled "Foster resident questions C&D cleanup plan," The Standard-Speaker, 4/4/88. P. 500274-500275.
150. Letter to Mr. Don Gerson, from Mr. Larry A. Elder, AT&T, re: Access Agreement for soil sampling, 4/8/88. P. 500276-500278. A revised access agreement and a reference map are attached.
151. Newspaper article entitled "Foster residents have found friend in Senator Heinz," The Standard-Speaker, 4/8/88. P. 500279-500279.
152. Record of Communication of Ms. Donna McCartney, U.S. EPA, with Mr. Jeff Cox, The Standard-Speaker, re: Request from Senator Heinz's office to answer Ms. Sulima's comments on the RI/FS, 4/8/88. P. 500280-500280.
153. Newspaper article entitled "EPA, concerned citizens working on C&D cleanup," The Standard-Speaker, 4/11/88. P. 500281-500281.
154. Letter to Mrs. Jane Sulima from Ms. Nanci Sinclair, U.S. EPA, re: Acknowledgement of the receipt of questions and statements submitted by Ms. Sulima, 4/12/88. P. 500282-500282.
155. Letter to Mrs. Jane K. Sulima from Mr. Ed Shoener, PADER, re: Update on Superfund actions, 4/13/88. P. 500283-500283.
156. Letter to Responsible Parties, E.P.A., from Mr. Marvin Lewis, re: Comments on the RI Work Plan, 4/13/88. P. 500284-500284.
157. Newspaper letter to the editor entitled "Beaver Brook resident: EPA coverup?," The Standard-Speaker, 4/19/88. P. 500285-500285.

158. Newspaper letter to the editor entitled "C&D 'work plan' raises questions," The Hazelton Standard-Speaker, 4/22/88. P. 500286-500286.
159. Photographs, C&D Recycling Site, 4/27/88. P. 500287-500310.
160. Letter to Mrs. Jane K. Sulima from Ms. Donna M. McCartney, U.S. EPA, re: Response to questions and comments submitted by Ms. Jane K. Sulima, 4/28/88. P. 500311-500322. Information for ordering geologic publications and a letter to Senator Heinz from Ms. Jane K. Sulima are attached.
161. Letter to Senator John Heinz, U.S. Senate, from Mr. James M. Seif, U.S. EPA, re: Response to a request for information, 5/3/88. P. 500323-500339. The request and a copy of EPA's response to the comments and questions are attached.
162. Memorandum to file from Ms. Donna McCartney, U.S. EPA, re: C&D Recycling RI/FS, 5/3/88. P. 500340-500340.
163. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Marvin I. Lewis, re: Comments on the response to Ms. Sulima's 3/19/88 letter, 5/4/88. P. 500341-500345.
164. Record of Communication of N. Sinclair and D. McCartney, U.S. EPA, with Ms. Sharon Rohrbach, CCFT, re: Meeting with CCFT and comments on the Work Plan, 5/5/88. P. 500346-500346.
165. Record of Communication of Mr. Gregg Crystal, Ms. Donna McCartney, and Ms. Nanci Sinclair, U.S. EPA, with Ms. Jane Sulima, re: Response to Work Plan comments submitted by Mr. Marvin Lewis and Ms. Jane Sulima, 5/5/88. P. 500347-500347.
166. Newspaper article entitled "Toxic Waste Problem in Hazelton On Mend, But More Action Needed," Sunday Independent, 5/8/88. P. 500348-500348.
167. Letter to Mr. Mark Brown, House Conservation Committee, from Ms. Donna M. McCartney, U.S. EPA, re: Remedial Investigation Work Plan, 5/9/88. P. 500349-500349.
168. Letter to Mr. John Herkalo from Ms. Nanci Sinclair, U.S. EPA, re: C&D Progress Report, 5/10/88. P. 500350-500350.

169. Letter to Ms. Sharon Rohrbach from Ms. Nanci Sinclair, U.S. EPA, re: C&D progress report, 5/10/88. P. 500351-500351.
170. Letter to Ms. Jane Sulima from Ms. Nanci Sinclair, U.S. EPA, re: C&D progress report, 5/10/88. P. 500352-500352.
171. Newspaper article entitled "Supervisors, citizens will discuss 'monitoring' EPA's C-D clean-up," The Standard-Speaker, 5/11/88. P. 500353-500353.
172. Letter to Ms. Nanci Sinclair, U.S. EPA, from Ms. Sharon Rohrbach, CCFT, re: Comments on the Remedial Investigation Work Plan, 5/15/88. P. 500354-500355.
173. Letter to Ms. Christine Samuelian, CCFT, from Ms. Nancy J. Smith, AT&T, re: CCFT meeting on June 8th, 5/27/88. P. 500356-500356.
174. Transcription of a television program, News 22, WYOU-TV, re: C&D Recycling Site cleanup, 5/30/88. P. 500357-500358.
175. Newspaper article entitled "Survey: Residents vulnerable to waste disposal sitings," The Standard-Speaker, 6/1/88. P. 500359-500359.
176. Handwritten minutes of CCFT meeting by S. Rohrbach, 6/8/88. P. 500360-500361.
177. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Marvin I. Lewis, re: Request for a response to a previous letter on the C&D cleanup and work plan, 6/10/88. P. 500362-500362.
178. Record of Communication of D. McCartney, U.S. EPA, with J. Sulima, re: C&D RI/FS sampling, 6/17/88. P. 500363-500363.
179. Handwritten letter to Ms. Nanci Sinclair, U.S. EPA, from Ms. Jane K. Sulima, re: Request that future meetings be held in a public facility, 6/17/88. P. 500364-500365.
180. Newspaper article entitled "Foster pays for hydrogeologist to check on C&D cleanup plan," The Standard-Speaker, 6/17/88. P. 500366-500366.

181. Handwritten letter to Ms. Donna McCartney, U.S. EPA, from Ms. Jane K. Sulima, re: Request for information, 6/18/88. P. 500367-500384. A PADER Inspection Report for 8/2/79 is attached.
182. Telephone conversation record of D. McCartney, U.S. EPA, with Ms. Sharon Rohrbach, re: Timing of off-site soil sampling, 6/21/88. P. 500385-500385.
183. Letter to Ms. Jane K. Sulima from Ms. Nanci Sinclair, U.S. EPA, re: EPA's public meeting policy, 6/22/88. P. 500386-500386.
184. Newspaper article entitled "Group's suggestions bring more tests at C&D site," The Standard-Speaker, 6/23/88. P. 500387-500387.
185. Letter to Mr. Marvin I. Lewis from Ms. Donna M. McCartney, U.S. EPA, re: Update on the status of EPA's response to initial letter and work plan comments, 6/24/88. P. 500388-500388.
186. Newspaper article entitled "Citizens seeking grant to aid cleanup at C&D," The Standard-Speaker, 6/28/88. P. 500389-500389.
187. Report: An Evaluation and Report for the Foster Township Supervisors of the Preliminary Contaminant Investigation of the Lands Surrounding the C&D site, prepared by Edwin F. Beemer, Jr., Independent Geological Consultant, July/August/1988. P. 500390-500401. A qualifications statement sheet is attached.
188. Appalachian Coal Surveys, Log Heading Hole No's MW-1-MW6, MW-8, 7/6/88-7/7/88. P. 500402-500479.
189. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Jane Sulima, re: Information on wreath factory, 7/8/88. P. 500480-500480.
190. Memorandum to file from Ms. Donna M. McCartney, U.S. EPA, re: 6/8/88 CCFT meeting, 7/12/88. P. 500481-500482.
191. Letter to Mrs. Sharon Rohrbach, CCFT, from Ms. Donna M. McCartney, U.S. EPA, re: C&D Recycling Site RI/FS response to June 8th meeting issues, 7/14/88. P. 500483-500487.
192. Press Release from U.S. EPA Environmental News entitled "EPA Announces Removal of Cable Casings from C&D Superfund Site," 7/18/88. P. 500488-500488.

193. Transcription of a television program, News 22, WYOU-TV, re: C&D Recycling Site cleanup, 7/22/88. P. 500489-500489.
194. Telephone conversation record of D. McCartney, U.S. EPA, with Mr. Joe Martinchek, re: Information on C&D Site history and operations, 7/22/88. P. 500490-500490.
195. Newspaper article entitled "EPA to remove cable at C&D," The Standard-Speaker, 7/25/88. P. 500491-500491.
196. Newspaper article entitled "Casings to be removed from Foster Twp.," Citizens' Voice, 7/25/88. P. 500492-500492.
197. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Progress report on work at C&D Site, 7/27/88. P. 500493-500493.
198. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Progress report on work at C&D Site, 7/27/88. P. 500494-5005494.
199. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Progress report on work at C&D Site, 7/27/88. P. 500495-500495.
200. Letter to Ms. Nanci Sinclair, U.S. EPA, from Ms. Jane K. Sulima, re: Comments on the availability of information to the community, 8/1/88. P. 500496-400497.
201. Letter to Mr. James Seif, U.S. EPA, from Ms. Jane K. Sulima, re: Proposed revisions the C&D Site Work Plan, 8/1/88. P. 500498-500500. Questions and comments are attached.
202. Newspaper article entitled "Bureaucracy slows information on C&D, group's leader says," The Standard-Speaker, 8/3/88. P. 500501-500501.
203. Telephone conversation record of D. McCartney, U.S. EPA, with Ms. Sharon Rohrbach, CCFT, re: Questions from residents concerning on-site activities, 8/4/88. P. 500502-500502.
204. Telephone conversation record of D. McCartney, U.S. EPA, with Mr. Edwin Beemer, CCFT, re: CCFT's request for proposed site work, 8/8/88. P. 500503-500503.

205. Telephone conversation record of D. McCartney, U.S. EPA, with S. Rorhbach, CCFT, re: Request for meeting, 8/9/88. P. 500504-500504.
206. Telephone conversation record of D. McCartney, U.S. EPA, with Mr. Edwin Beemer, re: Claims by citizen's group, 8/10/88. P. 500505-500505.
207. Letter to Ms. Jane K. Sulima from Ms. Nanci Sinclair, U.S. EPA, re: Response to letter of 8/1/88 concerning citizens' meetings, 8/11/88. P. 500506-500506.
208. Letter to Ms. Jane Sulima from Mr. James M. Seif, U.S. EPA, re: Review of documents, 8/15/88. P. 500507-500508.
209. Telephone conversation record of Mr. Bill Draper, U.S. EPA, with D. McCartney, U.S. EPA, re: Ms. Jane Sulima's cancellation of appointment to review files and observation of a tank on the site, 8/15/88. P. 500509-500509.
210. Newspaper article entitled "DER wants Foster site cleaned up," The Standard-Speaker, 8/22/88. P. 500510-500510.
211. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Latest progress report and additional paperwork for C&D Superfund Site, 8/29/88. P. 500511-500511.
212. Letter to Ms. Sharon Rohrbach from Mr. William Draper, U.S. EPA, re: Transmittal of information and material for the C&D Site, 8/29/88. P. 500512-500512.
213. Telephone conversation record of Ms. Donna McCartney with Mr. Dan Ryan, and Chris Fountain, re: Call from Mrs. Sulima, 9/2/88. P. 500513-500513.
214. Telephone conversation record of Ms. Donna McCartney, with Mr. Dan Ryan, re: Call from Mr. Mark Brown, 9/13/88. P. 500514-500514.
215. Newspaper article entitled "Firms to begin hauling casings from C&D site," The Standard-Speaker, 9/15/88. P. 500515-500515.
216. Telephone conversation record of Mr. Bill Draper, U.S. EPA, and D. McCartney, U.S. EPA, re: Pending meeting with CCFT on well placement decision, 9/19/88. P. 500516-500516.

217. Newspaper article entitled "Cable casings will be removed from site," Citizens' Voice, 9/20/88. P. 500517-500517.
218. Telephone conversation record of Ms. Ann Cardinal, Mr. Gregg Crystall, and Ms. Donna McCartney, U.S. EPA, with Ms. Sharon Rohrbach, CCFT, re: Opposition to EPA holding citizen meetings in a public building, 9/22/88. P. 500518-500519.
219. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Transmittal of data qualifying supplement, 9/23/88. P. 500520-500520.
220. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Data qualifying supplement, 9/23/88. P. 500521-500521.
221. Newspaper article entitled "Crews haul casings away from area Superfund site," Times-Leader, 9/25/88. P. 500522-500522.
222. Telephone conversation record of Mr. Marvin Lewis with D. McCartney, U.S. EPA, re: Interest in attending meeting with AT&T, 9/26/88. P. 500523-500523.
223. Letter to Mr. George Pennington from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500524-500525.
224. Letter to Mr. Joseph Martincek from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500526-500527.
225. Letter to Mr. Thomas Rock from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500528-500529.
226. Letter to Mr. Chester Cenzar from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500530-500531.
227. Letter to Mr. Merritt Sheaman from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500532-500533.
228. Letter to Mr. Dean Oberst from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500534-500535.

229. Letter to Ms. Jean Cowley from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500536-500537.
230. Letter to Mr. Joseph Evancho from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500538-500539.
231. Letter to Mr. Ronald Rapezynski from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500540-500541.
232. Letter to Ms. Susan Kapracevsky from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500542-500543.
233. Letter to Maple Lane Trailer Park from Ms. Donna M. McCartney, U.S. EPA, re: Permission to conduct water sampling, 9/27/88. P. 500544-500546. A residential well sampling project response form is attached.
234. Letter to Mr. Edwin F. Beemer, Jr. from Mr. William M. Draper, U.S. EPA, re: Material to be sent at the request of Ms. Sharon Rohrbach, 9/27/88. P. 500547-500547.
235. Letter to Mr. Will Collette, Citizens Clearinghouse for Hazardous Waste, from Mr. William M. Draper, U.S. EPA, re: Transmittal of material per the request of Ms. Sharon Rohrbach, 9/27/88. P. 500548-500548.
236. Letter to Ms. Sharon Rohrbach and Ms. Jane Sulima, from Mr. William Draper, U.S. EPA, re: Transmittal of the Interim Data Evaluation Report/Monitoring Well Proposal, 9/27/88. P. 500549-500549.
237. Newspaper article entitled "EPA To Administer Air Quality Testing At C&D," Independent, 10/2/88. P. 500550-500550.
238. Newspaper article entitled "Foster Township Group Upset With EPA Deadline," Independent, 10/2/88. P. 500551-500551.
239. Letter to Mr. William Draper, U.S. EPA, from Ms. Jane K. Sulima, re: Request for the pH, turbidity, and conductivity readings and a request for all data regarding the monitoring well proposal, 10/7/88. P. 500552-500552.

240. Letter to Ms. Donna McCartney, U.S. EPA, from Ms. Jane K. Sulima, re: Transmittal of engineer's comments and request for information, 10/7/88. P. 500553-500553.
241. Letter to Mr. William Draper, U.S. EPA, from Mr. Marvin I. Lewis, re: Submittal of comments on the Interim Data Evaluation Report/Monitoring Well Proposal, 10/7/88. P. 500554-500557. Comments on the draft proposal dated September 21, 1988 are attached.
242. Newspaper article entitled "Supervisors will urge EPA to hold local meeting on C&D," The Standard-Speaker, 10/12/88. P. 500558-500558.
243. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Jane Sulima, re: CH₂M Hill request for sampling, 10/13/88. P. 500559-500559.
244. Handwritten letter to Ms. Donna McCartney, U.S. EPA, from Ms. Jane K. Sulima, re: Monitoring well proposal, 10/13/88. P. 500560-500560.
245. Telephone conversation record of D. McCartney, U.S. EPA, with Mrs. Cona, re: Residential sampling, 10/14/88. P. 500561-500561.
246. Newspaper article entitled "Foster Township Residents Express," Sunday Independent, 10/16/88. P. 500562-500562.
247. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Rock coring log and technical comments, 10/17/88. P. 500563-500563.
248. Letter to Ms. Jane Sulima from Mr. William Draper, U.S. EPA, re: Rock coring log and technical comments, 10/17/88. P. 500564-500564.
249. Letter to Ms. Sharon Rohrbach from Mr. William Draper, re: Rock coring log and technical comments, 10/17/88. P. 500565-500565.
250. Letter to Mr. William Draper, U.S. EPA, from Mr. Robert P. Lesko, Foster Township Board of Supervisors, re: Meeting about monitoring wells and clean up plans for C&D Site, 10/17/88. P. 500566-500566.
251. Newspaper article entitled "S.O.L.E. II does not endorse Senator Heinz," The Standard-Speaker, 10/18/88. P. 500567-500567.

252. Letter to Ms. Donna McCartney, U.S. EPA, from Ms. Sharon Rohrbach, Concerned Citizens of Foster Township, re: Interim Data Evaluation Report and problems encountered in preparing report, 10/18/88. P. 500568-500570.
253. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Latest monthly status report and lead/dust samples, 10/19/88. P. 500571-500571.
254. Letter to Ms. Sharon Rohrbach from Mr. William Draper, re: Latest monthly status report and lead/dust samples, 10/19/88. P. 500572-500572.
255. Letter to Ms. Jane Sulima from Mr. William Draper, U.S. EPA, re: Latest monthly status report and lead/dust samples, 10/19/88. P. 500573-500573.
256. Letter to Ms. Sharon Rohrbach from Mr. William Draper, U.S. EPA, re: Comments on the monitoring well proposal, 10/21/88. P. 500574-500574.
257. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Comments on the monitoring well placement, 10/21/88. P. 500575-500575.
258. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Comments on the monitoring well locations, 10/21/88. P. 500576-500576.
259. Letter to Ms. Donna McCartney, U.S. EPA, from Ms. Jane K. Sulima, re: Toxicological assessment, 10/22/88. P. 500577-500577.
260. Newspaper article entitled "Citizens: C&D Work Plan a farce," The Standard-Speaker, 10/26/88. P. 500578-500578.
261. Memorandum to Mr. William M. Draper, U.S. EPA, from Ms. E. Ann Cardinal, U.S. EPA, re: October 26th trip report to C&D Site, 10/27/88. P. 500579-500579.
262. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Geophysical logs, 10/27/88. P. 500580-500580.
263. Letter to Ms. Sharon Rohrbach from Mr. William Draper, U.S. EPA, re: Geophysical logs, 10/27/88. P. 500581-500581.

264. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Geophysical logs, 10/27/88. P. 500582-500582.
265. Newspaper article entitled "Citizens Group Wants To Review Latest EPA Report," Sunday Independent, 10/30/88. P. 500583-500583.
266. Newspaper article entitled "Southbounder," 11/88. P. 500584-500584.
267. Letter to Addressees, from Ms. Donna McCartney, U.S. EPA, re: Notification of meeting, 11/1/88. P. 500585-500589. An agenda for the meeting, expected participant list, and a list of available conference rooms are attached.
268. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: RI data, 11/2/88. P. 500590-500590.
269. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: RI data, 11/2/88. P. 500591-500591.
270. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: RI data, 11/2/88. P. 500592-500592.
271. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Latest monthly status report, 11/2/88. P. 500593-500593.
272. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Latest monthly status report, 11/2/88. P. 500594-500594.
273. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Latest monthly status report, 11/2/88. P. 500595-500595.
274. Letter to Mr. Edwin F. Beemer, Jr. from Mr. William M. Draper, U.S. EPA, re: Geophysical logs taken for seven of the monitoring wells at the C&D Site, 11/2/88. P. 500596-500596.
275. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Response to request concerning the technical meeting scheduled for November 15, 11/3/88. P. 500597-500597.

276. Newspaper article entitled "EPA slates meeting on Foster cleanup - Local residents aren't happy with location, time," Hazelton Standard-Speaker, 11/3/88. P. 500598-500598.
277. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Sharon Rohrbach, re: Problems with C&D issues, 11/7/88. P. 500599-500599.
278. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Data qualifiers for C&D Site and sample location maps for on-site and off-site soil samples, 11/7/88. P. 500600-500600.
279. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Data qualifiers for C&D Site and sample location maps for on-site and off-site soil samples, 11/7/88. P. 500601-500601.
280. Letter to Mr. Edwin F. Beemer, Jr., Best Way Printing, from Mr. William M. Draper, U.S. EPA, re: Data qualifiers and sample location maps for on-site and off-site soil samples, 11/7/88. P. 500602-500602.
281. Letter to Mr. Steve Lester, C.C.H.W., from Mr. William M. Draper, U.S. EPA, re: Data qualifiers and sample location maps for on-site and off-site soil samples, 11/7/88. P. 500603-500603.
282. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Data qualifiers and location maps for on-site and off-site soil samples, 11/7/88. P. 500604-500604.
283. Letter to Mr. Edwin F. Beemer, Jr., Best Way Printing, from Mr. William M. Draper, U.S. EPA, re: Technical meeting postponement, 11/7/88. P. 500605-600605.
284. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Technical meeting postponement, 11/7/88. P. 500606-500606.
285. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Technical meeting postponement, 11/8/88. P. 500607-500607.
286. Letter to Mr. Robert P. Lesco from Mr. William M. Draper, U.S. EPA, re: Technical meeting postponement, 11/8/88. P. 500608-500608.

287. Letter to Mr. Marvin Lewis from Mr. William M. Draper, U.S. EPA, re: Technical meeting postponement, 11/8/88. P. 500609-500609.
288. Letter to Mrs. Jane K. Sulima from Ms. Donna McCartney, U.S. EPA, re: Residential sampling, 11/8/88. P. 500610-500610.
289. Newspaper article entitled "EPA postpones meeting to discuss C&D cleanup," The Standard-Speaker, 11/8/88. P. 500611-500611.
290. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Mr. Edwin Beemer, re: Data qualifiers, 11/14/88. P. 500612-500612.
291. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: List of analytical parameters for on-site soil samples, 11/14/88. P. 500613-500613.
292. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Jane Sulima, re: Questions about PB in water, 11/16/88. P. 500614-500614.
293. Letter to Ms. Donna McCartney, U.S. EPA, from Ms. Sharon Rohrbach, Concerned Citizens of Foster Township, re: Request for the chain of custody on certain information, 11/18/88. P. 500615-500616.
294. Memorandum to Mr. Bill Draper, U.S. EPA, from Ms. Donna McCartney, U.S. EPA, re: Documents for C&D Site repository, 11/23/88. P. 500617-500617.
295. Letter to Mr. John Herkalo from Mr. William M. Draper, U.S. EPA, re: Oversight report, 11/28/88. P. 500618-500618.
296. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Oversight report, 11/28/88. P. 500619-500619.
297. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Oversight report, 11/28/88. P. 500620-500620.
298. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Jane Sulima, re: Shape of C&D Site versus soil-sampling grid, 12/7/88. P. 500621-500621.
299. Letter to Mr. John Herkalo, Freeland Borough, from Mr. William M. Draper, U.S. EPA, re: Monthly status report, 12/7/88. P. 500622-500622.

300. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Monthly status report, 12/7/88. P. 500623-500623.
301. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Monthly status report and acknowledgement of receipt of Technical Assistance Grant application, 12/7/88. P. 500624-500624.
302. Newspaper article entitled "CCFT To Meet With EPA, AT&T Wednesday in Philadelphia," Sunday Independent, 12/11/88. P. 500625-500625.
303. Letter to the Honorable Max Plevsky, Pennsylvania House of Representatives, from Mr. Marvin I. Lewis, re: Information and concern about Philadelphia toxic waste sites, 12/12/88. P. 500626-500626.
304. Press Release from U.S. EPA Environmental News entitled "EPA Meets With Citizens To Discuss Work At The C&D Recycling Superfund Site," 12/14/88. P. 500627-500628.
305. Meeting Summary, C&D Recycling Site, 12/14/88. P. 500629-500632. A meeting attendance sheet is attached.
306. Letter to Ms. Sharon Rohrbach, CCFT, from Ms. Donna M. McCartney, U.S. EPA, re: Request for "Chain of Custody" information, 12/15/88. P. 500633-500634.
307. Newspaper article entitled "Foster residents await EPA response," Hazleton Standard-Speaker, 12/15/88. P. 500635-500635.
308. Transcription of television program, News 22, WYOU-TV, re: Clean-up concerns of residents near the C&D Recycling Site, 12/15/88. P. 500636-500636.
309. Handwritten letter to Mr. John Mellow, PADER, from Ms. Jane K. Sulima, re: Thank you for a reply to her comments on monitoring wells, 12/18/88. P. 500637-500638.
310. Handwritten letter to William Draper, U.S. EPA, from Ms. Jane K. Sulima, re: Request for information on cable casings, underground tanks, monitoring wells, and comments and correspondences from the time of the work plan to the present, 12/18/88. P. 500639-500639.
311. Letter to Ms. Marion Sunderman from Mr. William M. Draper, U.S. EPA, re: Air sampling summary for cable casing removal, 12/21/88. P. 500640-500640.

312. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Sampling results from air monitoring, 12/21/88. P. 500641-500641.
313. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Sampling results from air monitoring, 12/21/88. P. 500642-500642.
314. Newspaper article entitled "EPA says it did its best to be fair to residents," The Times Leader, 12/25/88. P. 500643-500643.
315. Newspaper article entitled "We'll get answers, C&D neighbors told," Hazelton Standard-Speaker, 12/31/88. P. 500644-500644.
316. Newspaper article entitled "Charges Fly Back And Forth On Foster Twp. Waste Site," Independent, 1989. P. 500645-500645.
317. U.S. EPA Information Guide, "Home Water Treatment Units (Point of Use/Point of Entry Devices)," 1/89. P. 500646-500653.
318. Telephone conversation record of Ms. Donna McCarthy, U.S. EPA, with Ms. Jane Sulima, re: Residual samplings, 1/4/89. P. 500654-500654.
319. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA re: A letter not received, 1/4/89. P. 500655-500655.
320. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA re: Documents concerning the C&D Recycling Site, 1/9/89. P. 500656-500656.
321. Letter to Ms. Marion Sunderman, Freeland Borough Building, from Mr. William M. Draper, U.S. EPA, re: Documents concerning the C&D Recycling Site, 1/9/89. P. 500657-500657.
322. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Documents concerning the C&D Recycling Site, 1/9/89. P. 500658-500658.
323. Letter to Ms. Jane Sulima from Ms. Donna M. McCartney, U.S. EPA, re: Request for information about the C&D Recycling Site, 1/10/89. P. 500659-500661. A certified mail receipt is attached.

324. Letter from Mr. William M. Draper, U.S. EPA, re: Copy of a meeting summary concerning the C&D Recycling Site, 1/11/89. P. 500662-500662.
325. Telephone conversation record of Ms. D. McCartney and Mr. Bill Draper, U.S. EPA, with Ms. Sharon Rohrbach, re: Request for account of the chain of custody for on-site samples taken at the C&D Recycling Site, 1/11/89. P. 500663-500663.
326. Statement in the Matter of Technical/Informational Meeting, C&D Recycling Site, prepared by Mr. Marvin I. Lewis, 1/16/89. P. 500664-500671. A copy of the meeting minutes is attached.
327. Handwritten comments on the Agency for Toxic Substances and Disease Registry's (ATSDR) Preliminary Health Assessment, prepared by Ms. Jane Sulima, 1/17/89. P. 500672-500675.
328. Handwritten letter to Mr. Gregg Crystall, U.S. EPA, from Ms. Jane K. Sulima, re: Water at her residence in Foster Township, 1/17/89. P. 500676-500676.
329. Newspaper article entitled "Firm Begins Cleanup At Foster Twp. Site,:" Sunday Independent, 1/22/89. P. 500677-500677.
330. Newspaper article entitled "Rotzell offers an open Foster letter," Sunday Independent, 1/22/89. P. 500678-500678.
331. Letter to Ms. Jane Sulima from Ms. Robin A. Cole, U.S. EPA, re: Lead in drinking water, 1/24/89. P. 500679-500686. Four fact sheets and an available treatment process chart are attached.
332. Telephone conversation record of Ms. Donna McCartney with Mr. Searfoss, Foster Twp. Planning Commission, re: Application for rezoning property, 1/30/89. P. 500687-500687.
333. Handwritten letter to Ms. Donna McCartney, U.S. EPA, from Ms. Jane Sulima, re: Information requested concerning the C&D Recycling Site, 1/31/89. P. 500688-500691.
334. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Transmittal of Technical Assistance Grant (TAG) application pages and information on radon, 1/31/89. P. 500692-500692.

335. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Jane Sulima, re: Repository for the C&D Recycling Site, 2/1/89. P. 500693-500693.
336. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Monthly status report #11 for the C&D Recycling Site, 2/6/89. P. 500694-500694.
337. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Monthly status report #11 for the C&D Recycling Site, 2/6/89. P. 500695-500695.
338. Letter to Ms. Marion Sunderman, Freeland Borough Building, from Mr. William M. Draper, U.S. EPA, re: Monthly status report #11 for the C&D Recycling Site, 2/6/89. P. 500696-500696.
339. Handwritten letter to Mr. William Draper, U.S. EPA, from Ms. Jane Sulima, re: Cable removal information at the C&D Recycling Site, 1/7/89. P. 500697-500698.
340. Telephone conversation record of Ms. Donna McCartney with Ms. Sharon Rohrbach, re: Progress report #11 for the C&D Recycling Site, 2/7/89. P. 500699-500699.
341. Letter to Ms. Robin Cole, U.S. EPA, from Mr. Marvin I. Lewis, re: Testing of water at the Sulima residence, 2/7/89. P. 500700-500702.
342. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Deb Oberst, re: Analysis of ground water samples, 2/8/89. P. 500703-500703.
343. Letter to Ms. Jane Sulima from Ms. Donna McCartney, U.S. EPA, re: Request for information concerning tap water samples, 2/9/89. P. 500704-500825. A letter of transmittal and Quality Assurance/Quality Control package are attached.
344. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Documents pertaining to the removal action at the C&D Recycling Site, 2/14/89. P. 500826-500826.
345. Handwritten letter to Ms. Donna McCartney, U.S. EPA, from Mr. Thomas E. Sulima, re: Request for information pertaining to the C&D Recycling Site, 2/15/89. P. 500827-500827.

346. Letter to Mr. and Mrs. Thomas E. Sulima from Ms. Donna McCartney, U.S. EPA, re: Comments on the ATSDR Preliminary Health Assessment, 2/23/89. P. 500828-500829.
347. Letter to Mr. Marvin Lewis from Ms. Donna M. McCartney and Mr. Michael Towle, U.S. EPA, re: Water contamination at the Sulima residence, 2/28/89. P. 500830-500835.
348. U.S. EPA Fact Sheet: Drinking Water Fact Sheet, Cadmium, 3/1/89. P. 500836-500837.
349. U.S. EPA Fact Sheet: Copper, 3/1/89. P. 500838-500839.
350. U.S. EPA Fact Sheet: Lead, 3/1/89. P. 500840-500842.
351. Newspaper article entitled "Foster Twp. Group Seeks Probe of EPA," Independent, 3/5/89. P. 500843-500844.
352. Newspaper article entitled "Neighbor finds fault with report on Superfund site," The Standard-Speaker, 3/6/89. P. 500845-500845.
353. Letter to Ms. Donna McCartney and Mr. Michael Towle, U.S. EPA, from Mr. Marvin I. Lewis, re: Studies conducted by EPA and Fred C. Hart Associates Inc. pertaining to the contamination of water at the Sulima residence, 3/8/89. P. 500846-500850.
354. Letter to the Honorable Paul Kanjorski, U.S. House of Representatives, from Mr. Stanley L. Laskowski, U.S. EPA, re: Concerns and questions pertaining to the C&D Recycling site, 3/9/89. P. 500851-500873. The CCFT questions and the EPA responses are attached.
355. Letter to Ms. Marion Sunderman, Freeland Borough Building, from Mr. William M. Draper, U.S. EPA, re: Documents relating to the C&D Recycling Site, 3/10/89. P. 500874-500874.
356. Letter to Ms. Sharon Rohrbach from Mr. William M. Draper, U.S. EPA, re: Documents relating to the C&D Recycling Site, 3/10/89. P. 500875-500875.
357. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Documents relating to C&D Recycling Site, 3/10/89. P. 500876-500876.

358. Letter to the Editor of the Wilkes-Barre Independent News from Mr. Stanley L. Laskowski, U.S. EPA, re: Response to an article printed in the newspaper, 3/10/89. P. 500877-500878.
359. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Ms. Jane Sulima, re: Comment made in an Independent News article, 3/15/89. P. 500879-500879.
360. Letter to Mr. Marvin Lewis from Ms. Donna McCartney and Mr. Michael Towle, U.S. EPA, re: Correction of an error in a previous letter, 3/16/89. P. 500880-500880.
361. Report: Information Summary, Monitor Well Replacement C&D Recycling Site, prepared by U.S. EPA, 3/17/89. P. 500881-500933.
362. Newspaper article entitled "Suit possible if C&D hurt environment," The Standard-Speaker, 3/18/89. P. 500934-500934.
363. Handwritten letter To Whom It May Concern from Mr. and Mrs. Thomas Sulima, re: Statement made in a newspaper, 3/18/89. P. 500935-500935.
364. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Thomas E. Sulima, re: Questions regarding testing procedures on the Sulima property, 3/18/89. P. 500936-500937.
365. Mailing list for Information Summary for the C&D Recycling Site, 3/20/89. P. 500938-500940.
366. Letter to the Honorable John Heinz, U.S. Senate, from Mr. Stanley L. Laskowski, U.S. EPA, re: Correspondences from citizens concerning the C&D Recycling Site, 3/22/89. P. 500941-500963. Eleven letters and a summary of valid analytical results for the Sulima residence are attached.
367. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Mr. Robert Lesko, Foster Township, re: Concerns with field across from the C&D Recycling Site, 3/23/89 to 3/27/89. P. 500964-500964.
368. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Marvin I. Lewis, re: Information Summary Monitor Well Placement and an attempt to improve EPA and community communications, 3/28/89. P. 500965-500968.

369. Letter to Mr. Steven C. Drasher, Jr., from Ms. Donna M. McCartney, U.S. EPA, re: Sampling of well at his residence, 3/28/89. P. 500969-500969.
370. Memorandum to file from Ms. Donna M. McCartney, U.S. EPA, re: Contact with the Foster Township Supervisor in reference to the C&D Recycling Site, 3/29/89. P. 500970-500970.
371. Telephone conversation record of Ms. Donna McCartney, U.S. EPA, with Mrs. Evancho, re: Data dealing with the C&D Recycling Site, 5/29/89. P. 500971-500971.
372. Handwritten letter to Ms. McCartney from Ms. Jane K. Sulima, re: Information summary concerning the C&D Recycling Site, 4/1/89. P. 500972-500978.
373. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Robert P. Lesko, Foster Township, re: Map of land adjoining the C&D Recycling Site, 4/3/89. P. 500979-500979.
374. Newspaper article entitled "Resident near C&D awaits test results," Standard-Speaker, 4/4/89. P. 500980-500980.
375. Handwritten letter to Mr. Towle, U.S. EPA, from Ms. Jane Sulima, re: Testing done by Hart, 4/10/89. P. 500981-500984.
376. Letter to Mr. and Mrs. Thomas Sulima from Ms. Donna M. McCartney, U.S. EPA, re: Sampling of home well, 4/10/89. P. 500985-500990. Tap water sampling notes, an inorganic analysis data package, and data reporting qualifiers are attached.
377. Letter to Mr. Marvin Lewis from Ms. Donna M. McCartney, U.S. EPA, re: Telephone conversation with Mr. Michael Towle, 4/10/89. P. 500991-500992. A record of the conversation is attached.
378. Letter to Mr. Ron Davis from Ms. Donna M. McCartney, U.S. EPA, re: Concerns about the C&D Recycling Site, 4/11/89. P. 500993-500993.
379. Letter to Senator John Heinz, U.S. Senate, from Mr. Stanley L. Laskowski, U.S. EPA, re: Letter on behalf of Ms. Evancho concerning the C&D Recycling Site, 4/12/89. P. 500994-500999. Two letters are attached.

380. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Concerns of Ms. Jane Sulima about the C&D Recycling Site, 4/14/89. P. 501000-501000.
381. Letter to Ms. Jean Cawley from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501001-501002. The results are attached.
382. Letter to Mr. Chester Cenzar from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501003-501005. The results are attached.
383. Letter to Mrs. Sharon Rohrbach from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501006-501008. The results are attached.
384. Letter to Mr. Thomas Rock from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501009-501011. The results are attached.
385. Letter to Mr. Dean Oberst from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501012-501013. The results are attached.
386. Letter to Mr. Martin Clark from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501014-501016. The results are attached.
387. Letter to Mr. Cona from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501017-501019. The results are attached.
388. Letter to Mr. Charles Drasher from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501020-501022. The results are attached.
389. Letter to Mr. Joseph Evancho from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501023-501025. The results are attached.
390. Letter to Ms. Joanna Russell from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501026-501027. The results are attached.
391. Letter to Mr. Joseph Martincek from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501028-501030. The results are attached.
392. Letter to Mr. George Pennington from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501031-505033. The results are attached.

393. Letter to Mr. Ronald Rapczynski from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501034-501036. The results are attached.
394. Letter to Ms. Christine Samuelian from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501037-501039. The results are attached.
395. Letter to Mr. Merritt Sheaman from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501040-501042. The results are attached.
396. Letter to Mrs. Jane Sulima from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 4/17/89. P. 501043-501045. The results are attached.
397. Handwritten letter to Ms. Donna McCartney, U.S. EPA, from Ms. Jane Sulima, re: Water sampling procedures, 4/18/89. P. 501046-501048.
398. Letter to Mrs. Jane Sulima from Ms. Donna M. McCartney, U.S. EPA, re: Information summary released by EPA, 4/19/89. P. 501049-501049.
399. Handwritten letter to Ms. Donna McCarthy, U.S. EPA, from Mr. Marvin I. Lewis, re: Testing results of Sulima tap, 4/19/89. P. 501050-501050.
400. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Telephone conversation with Mr. Marvin Lewis, 4/24/89. P. 501051-501051.
401. Letter to Mrs. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Ground water studies, 4/24/89. P. 501052-501053.
402. Newspaper article entitled "Bureaucracy slows Foster group's grant," The Standard-Speaker, 4/25/89. P. 501054-501054.
403. Handwritten letter to Ms. Donna McCarthy from Mrs. Jane Sulima, re: Information summary released by U.S. EPA, 4/26/89. P. 501055-501057.
404. Notes on testing of tap water, 4/27/89. P. 501058-501058.
405. Letter to Mr. and Mrs. Thomas Sulima from Mr. Marvin I. Lewis, re: Observations of water samples taken at the Sulima residence, 5/7/89. P. 501059-501060.

406. Memorandum to file from Mr. Michael Towle, re: Telephone conversation with Ms. Jane Sulima, 5/8/89. P. 501061-501061.
407. Letter to Mrs. Jane Sulima from Ms. Donna M. McCartney, U.S. EPA re: Response to request for information concerning the C&D Recycling Site, 5/12/89. P. 501062-501064.
408. Letter to Mr. Robert Lesko, Foster Township Board of Supervisors, from Ms. Donna McCartney, U.S. EPA, re: Map of property adjacent to the C&D Recycling Site and off-site soil samples, 5/12/89. P. 501065-501065.
409. Memorandum to file from Ms. Donna McCartney, U.S. EPA, re: Congressional request for off-site wells, 5/12/89. P. 501066-501066.
410. Letter to Ms. Jane Sulima from Mr. Harold R. Yates, U.S. EPA, re: Monthly progress reports for the C&D Recycling Site, 5/16/89. P. 501067-501067.
411. Letter to Mrs. Sharon Rohrbach, Concerned Citizens of Foster Township, from Ms. Donna M. McCartney, U.S. EPA, re: Data validation report for the C&D Recycling Site, 5/16/89. P. 501068-501068.
412. Letter to Mrs. Sharon Rohrbach from Mr. Paul W. Muraca, U.S. EPA, re: Well water sampling analysis, 5/24/89. P. 501069-501070. The results are attached.
413. U.S. EPA Superfund Update Fact Sheet: C&D Recycling Site, Freeland, Pennsylvania, 6/89. P. 501071-501074.
414. Letter to Ms. Donna McCartney, U.S. EPA, from Mr. Marvin I. Lewis, re: Comments on a previous letter, 6/1/89. P. 501075-501075.
415. Telephone conversation record of DMC, with Ms. Jane Sulima, re: Activities at the C&D Recycling Site, 6/8/89. P. 501076-501076.
416. Telephone conversation record of Mr. Robert Lesko with Ms. Donna M. McCartney, re: Off-site soil sampling at the C&D Recycling Site, 6/13/89. P. 501077-501077.
417. Telephone conversation record of DMC with Ms. Sharon Rohrbach, re: Water samples and public meeting, 6/13/89. P. 501078-501078.

418. Telephone conversation record of Ms. Donna M. McCartney, with Ms. Jane Sulima, re: Water sampling, 6/20/89. P. 501079-501079.
419. Telephone conversation record of Donna M. McCartney, U.S. EPA, with Ms. Jane Sulima, re: Well sampling and public meeting, 6/23/89. P. 501080-501080.
420. Letter to Ms. Jean Cawley from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501081-501083. The results are attached.
421. Letter to Mr. Chester Cenzar from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501084-501086. The results are attached.
422. Letter to Ms. Sharon Rohrbach from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501087-501089. The results are attached.
423. Letter to Mr. Thomas Rock from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501090-501092.
424. Letter to Mr. Dean Oberst from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501093-501095. The results are attached.
425. Letter to Mr. Martin Clarke, from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501096-501098. The results are attached.
426. Letter to Mr. Cona from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501099-501101. The results are attached.
427. Letter to Mr. Stephen Drasher from Ms. Donna McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501102-501104. The results are attached.
428. Letter to Mr. Joseph Evancho from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501105-501107. The results are attached.
429. Letter to Ms. Susan Kapracevsky from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501108-501110. The results are attached.
430. Letter to Ms. Joanna Russell from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501111-501113. The results are attached.

431. Letter to Mr. Joseph Martincek from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501114-501116. The results are attached.
432. Letter to Mr. George Pennington from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501117-501119. The results are attached.
433. Letter to Ms. Christine Samuelian from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501120-501122. The results are attached.
434. Letter to Mr. Merritt Sherman from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501123-501125. The results are attached.
435. Letter to Ms. Jane Sulima from Ms. Donna M. McCartney, U.S. EPA, re: Well water samples, 6/23/89. P. 501126-501128. The results are attached.
436. Telephone conversation record of Mr. Mike Towle with Ms. Jane Sulima, re: Public meeting concerning the C&D Recycling Site, 6/29/89. P. 501129-501129.
437. Newspaper article entitled "Residents wary of EPA's offer for community coordinator at C&D site," Standard-Speaker, 6/29/89. P. 501130-501130.
438. Handwritten letter to Ms. Donna M. McCartney from Ms. Jane Sulima, re: Partial document on the C&D Recycling site, 6/30/89. P. 501131-501131.
439. Newspaper article entitled "Citizens Groups Says Better Relations Key To Solution," Independent, 7/2/89. P. 501132-501133.
440. Telephone conversation record of Ms. Jane Sulima, re: EPA air quality files, 7/3/89. P. 501134-501134.
441. Sample analysis for water of Ms. Sharon Rohrbach, 7/7/89. P. 501135-501135.
442. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Soil sampling at the C&D Recycling Site, 7/10/89. P. 501136-501153. A letter and Technical Memorandum No. 1 are attached.
443. Letter to Mrs. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Monthly meeting of CCFT concerning the C&D Recycling Site, 7/11/89. P. 501154-501154.

444. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Residential well sampling data, 7/14/89. P. 501155-501198. Letters and analytical results are attached.
445. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Residential well sampling data, 7/19/89. P. 501199-501248. Letters and analytical results are attached.
446. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Documents for information repository, 7/21/89. P. 501249-501249.
447. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane Sulima, re: C&D Recycling Report #16, 7/24/89. P. 501250-501251.
448. Letter to distribution from Mr. Michael Towle, U.S. EPA, re: Feasibility Study Work Plan for the C&D Recycling Site, 7/25/89. P. 501252-501252.
449. Newspaper article entitled "Citizens EPA closer on C&D cleanup," The Standard-Speaker, 8/3/89. P. 501253-501253.
450. Memorandum to file from Ms. Donna M. McCartney, U.S. EPA, re: CCFT meeting, 8/7/89. P. 501254-501260.
451. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Marvin I. Lewis, re: Work Plan for the C&D Recycling Site, 8/8/89. P. 501261-501262.
452. Letter to Mrs. Jane K. Sulima from Mr. Michael A. Towle, U.S. EPA, re: Response to letter dated 7/24/89, 8/8/89. P. 501263-501264.
453. Letter to Mr. Joe Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Request for information concerning the C&D Recycling Site, 8/9/89. P. 501265-501265.
454. Letter to Chairman of Mineral Sciences, Penn State University, from Mr. Michael Towle, U.S. EPA, re: Sampling at residences near the C&D Recycling Site, 8/10/89. P. 501266-501266.
455. Letter to Mr. E. W. Biederman, Jr., PENNTAP, from Mr. Michael Towle, U.S. EPA, re: Sampling at residences near the C&D Recycling Site, 8/10/89. P. 501267-501267.

456. Letter to Mrs. Sharon Rohrbach, CCFT, from Mr. Michael Towle and Ms. Donna McCartney, U.S. EPA, re: Public meeting and newspaper article, 8/10/89. P. 501268-501269.
457. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Reports concerning the C&D Recycling Site, 8/11/89. P. 501270-501270.
458. Memorandum to Mr. Dan Ryan, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Meeting with CCFT about the C&D Recycling Site, 8/11/89. P. 501271-501271.
459. Letter to the Honorable John Heinz, U.S. Senate, from Mr. Edwin B. Erickson, U.S. EPA, re: EPA procedures in dealing with the C&D Recycling Site, 8/16/89. P. 501272-501284. Five letters and a memorandum are attached.
460. Handwritten letter to Mr. Michael Towle and Ms. Donna M. McCartney, U.S. EPA, from Ms. Sharon Rohrbach, re: Complaint on progress concerning the C&D Recycling Site, 8/18/89. P. 501285-501286.
461. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Soil sampling procedure conducted on the Sulima property, 8/21/89. P. 501287-501288.
462. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Edwin W. Biederman, Jr., PENNTAP, re: Transmittal of information, 8/22/89. P. 501289-501322. A report entitled: Metals Contamination of Rural Rainwater Cisterns, a report entitled: Environmental Controls at a Secondary Lead Smelter, and four letters are attached.
463. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane Sulima, re: Feasibility Study for C&D Recycling Site, 8/23/89. P. 501323-501324.
464. Report: Jury Trial Demand, prepared by M. Robert J. Sugarman and Mr. John A. Moore, Jr., Sugarman and Associates, 8/31/89. P. 501325-501347.
465. Newspaper article entitled "Freeland Area Residents Sue Over Contamination," Independent, 9/3/89. P. 501348-501348.

466. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Edwin W. Biederman, Jr., PENNTAP, re: Transmittal of abstracts of two articles relating to lead-from-solder problems, 9/7/89. P. 501349-501350. The articles are attached.
467. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Sharon Rohrbach, CCFT, re: Work plan for the C&D Recycling Site, 9/8/89. P. 501351-501352. Comments on the work plan are attached.
468. Letter to distribution from Mr. Michael Towle, U.S. EPA, re: Residential well sampling analytical results, 9/8/89. P. 501353-501405. Letters and results are attached.
469. Telephone conversation record of DMC with Mr. Ron Davis, re: Liability attached to purchase of land near the C&D Recycling Site, 9/11/89. P. 501406-501406.
470. Letter to file from Mr. Michael Towle, U.S. EPA, re: Letter from the Rohrbachs concerning the C&D Recycling Site, 9/13/89. P. 501407-501407.
471. Letter to distribution from Mr. Michael Towle, U.S. EPA, re: Information concerning the C&D Recycling Site, 9/13/89. P. 501408-501408.
472. Letter to Mr. Robert Lesko, Foster Township Board of Supervisors, from Ms. Donna M. McCartney and Mr. Michael Towle, U.S. EPA, re: Soil sampling analytical results, 9/15/89. P. 501409-501412. Results and a site sketch are attached.
473. Letter to Mr. Ron Davis, from Ms. Donna M. McCartney and Mr. Michael Towle, U.S. EPA, re: Soil sampling analytical results, 9/15/89. P. 501413-501416. Results and a site sketch are attached.
474. Report: Fracture Trace Analysis of the C&D Recycling Site, Luzerne County, Pennsylvania, prepared by U.S. EPA, 10/89. P. 501417-501429.
475. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Soil grid for the C&D Recycling Site, 10/5/89. P. 501430-501430.
476. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 19 for the C&D Recycling Site, 10/5/89. P. 501431-501431.

477. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Documents on the C&D Recycling Site, 10/5/89. P. 501432-501432.
478. Telephone conversation record of D. McCartney, with Mr. Robert Lesko, Foster Township Board of Supervisors, re: Off-site soil sampling, 10/10/89. P. 501433-501433.
479. Letter to Dr. John O. Turner, Kirby Memorial Health Center, from Mr. Michael Towle, U.S. EPA, re: Water sample of Rohrbach residence, 10/11/89. P. 501434-501434.
480. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: CCFT meeting concerning the C&D Recycling Site, 10/11/89. P. 501435-501436.
481. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Well sampling on the Sulima property, 10/16/89. P. 501437-501437.
482. Letter to Ms. Donna McCartney, and Mr. Michael Towle, U.S. EPA, from Mr. Marvin I. Lewis, Lewis Engineering Co., re: Documents on the C&D Recycling Site, 10/30/89. P. 501438-501439.
483. Newspaper article entitled "CCFT leader gets national awards," The Standard-Speaker, 11/4/89. P. 501440-501440.
484. Newspaper article entitled "Concerned Citizens Of Foster Township Upset Over Meeting Delay By EPA," Sunday Independent, 11/5/89. P. 501441-501441.
485. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Residential well sampling report, 11/9/89. P. 501442-501442.
486. Newspaper article entitled "EPA may not have on-site rep at C&D," The Standard-Speaker, 11/10/89. P. 501443-501443.
487. Newspaper article entitled "EPA To Review CCFT Contracts This Week," Sunday Independent, 11/12/89. P. 501444-501444.
488. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 20 for the C&D Recycling Site, 11/15/89. P. 501445-501445.

489. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Marvin I. Lewis, re: Project status report No. 20 for the C&D Recycling Site, 11/26/89. P. 501446-501447.
490. Memorandum to Mr. John Mellow, PADER, from Mr. Michael Towle, U.S. EPA, re: Reports on the C&D Recycling Site, 11/29/89. P. 501448-501448.
491. U.S. EPA Fact Sheet: C&D Recycling Site, Freeland, Pennsylvania, 12/89. P. 501449-501452.
492. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Letters concerning the C&D Recycling Site, 12/6/89. P. 501453-501456. A letter is attached.
493. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Information concerning the C&D Recycling Site, 12/11/89. P. 501457-501457.
494. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 21 for the C&D Recycling Site 12/19/89. P. 501458-501458.
495. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 22 for the C&D Recycling Site, 1/4/90. P. 501459-501459.
496. Report: Report of Findings, C&D Recycling Site, prepared by CDM Federal Programs Corporation, 1/8/90. P. 501460-501481. A cover letter is attached.
497. Report: Letter Report C&D Recycling Site, prepared by CDM Federal Programs Corporation, 1/8/90. P. 501482-501490. A cover letter is attached.
498. Information sheet, Disposal Safety, 2/12/90. P. 501491-501991.
499. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Documents concerning the C&D Recycling Site, 2/16/90. P. 501492-501492.
500. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Work Plan for the C&D Recycling Site, 2/26/90. P. 501493-501493.
501. Memorandum to Mr. Steve Amter, U.S. EPA, from Mr. Michael Towle, U.S. EPA, re: Documents concerning the C&D Recycling Site, 3/9/90. P. 501494-501494.

502. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 24 for the C&D Recycling Site, 3/12/90. P. 501495-501495.
503. Newspaper article entitled "Group hopes to see C&D cleanup report," Standard-Speaker, 3/12/90. P. 501496-501496.
504. Letter to Ms. Sharon Rohrbach, CCFT, from Mr. Ed Shoener, PADER, re: Support by citizens for proceedings concerning the C&D Recycling Site, 3/20/90. P. 501497-501497.
505. Letter to Ms. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Remedial Investigation Report, 3/22/90. P. 501498-501498.
506. Letter to Ms. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Remedial Investigation Report, 4/5/90. P. 501499-501499.
507. Newspaper article entitled, "Foster Township Group Irked Over Meeting Snub by AT&T," Sunday Independent, 4/8/90. P. 501500-501500A.
508. Newspaper article entitled "Developments at C&D anger citizens' group," Standard-Speaker, 4/9/90. P. 501501-501501.
509. Letter to Ms. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Risk Assessment Report, 4/9/90. P. 501502-501502.
510. Letter to Mrs. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Remedial Investigation Addendum, 4/17/90. P. 501503-501503.
511. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 25, 4/25/90. P. 501504-501504.
512. Report: Report to S. Rohrbach and the Concerned Citizens of Foster Township, Evaluation of the Draft RI for the C&D Recycling Site, prepared by Mr. Edwin F. Beemer, Jr., 4/30/90. P. 501505-501533.
513. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Documents on the C&D Recycling Site, 5/1/90. P. 501534-501534.

514. Letter to Mr. Joseph Sabel from Mr. Michael Towle, U.S. EPA, re: Drinking water at the C&D Recycling Site, 5/1/90. P. 501535-501035.
515. Report: Preliminary Draft RI Report Comments, prepared by U.S. EPA, 5/2/90. P. 501536-501073. Two certified mail receipts are attached.
516. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Transmittal of analytical data, 5/29/90. P. 501574-501576. A certified mail receipt is attached.
517. Memorandum from Mr. Edwin F. Beemer, Jr., re: Draft Remedial Investigation Report for the C&D Recycling Site, 6/1/90. P. 501577-501577.
518. Letter to Mr. Mike Towle, U.S. EPA, from Dr. Henry S. Cole, Clean Water Fund, re: Comments on the Preliminary Draft Risk Assessment for the C&D Recycling Site, 6/12/90. P. 501578-501612. Three sets of comments and a letter are attached.
519. Letter to Mr. Mike Towle, U.S. EPA, from Mr. John S. Young, The Hampshire Research Institute, re: Comments on the Preliminary Draft Risk Assessment Report for the C&D Recycling Site, 6/13/90. P. 501613-501617. The comments are attached.
520. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Information concerning the C&D Recycling Site, 6/14/90. P. 501618-501618.
521. Excerpt from Partial Hazardous Waste Report, including an article entitled "Public Shut Out At PRP Lead Superfund Sites, Community Advisor Charges," 7/9/90. P. 501619-501619.
522. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Documents relevant to the RI/FS study for the C&D Recycling Site, 8/6/90. P. 501620-501620.
523. Newspaper article entitled "EPA held up money, Foster citizens group says," Standard-Speaker, 8/11/90. P. 501621-501621.
524. Newspaper article entitled "Procedure in Works to Prevent Grant Delays," Sunday Independent, 8/12/90. P. 501622-501622.

525. Letter to Mr. Mike Towle, U.S. EPA, from Mr. Henry S. Cole, Clean Water Fund, re: Report on soil lead concentrations at the C&D Recycling Site, 8/22/90. P. 501622-501629. The report is attached.
526. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Marvin I. Lewis, re: Final draft RI/FS report for the C&D Recycling Site, 9/12/90. P. 501630-501631.
527. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Documents concerning the C&D Recycling Site, 9/14/90. P. 501632-501632.
528. Handwritten comments on the Final Draft RI Report for the C&D Recycling Site, by Ms. Sharon Rohrbach, 10/1/90. P. 501633-501634.
529. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Final Draft RI Report for the C&D Recycling Site, 10/2/90. P. 501635-501638.
530. Comments on the Comprehensive Report of the RI for the C&D Recycling Site, by Mr. Edwin F. Beemer, Jr. 10/3/90. P. 501639-501641.
531. Report: Comments on Final Draft RI Report, C&D Recycling Site, Foster Township, Luzerne County, Pennsylvania, prepared by Clean Water Fund, 10/3/90. P. 501642-501675. A cover letter is attached.
532. Letter to Mr. Joseph Chikowski, AT&T, from Mr. Michael Towle, U.S. EPA, re: Risk Assessment Report for the C&D Recycling site, 10/3/90. P. 501676-501699. Comment responses and two certified mail receipts are attached.
533. Letter to Mrs. Sharon Rohrbach from Mr. Michael Towle, U.S. EPA, re: EPA response to comments on the Risk Assessment Report, 10/16/90. P. 501700-501700.
534. Letter to Mr. Robert Flatko, Foster Township Municipal Building, from Mr. Michael Towle, U.S. EPA, re: Water samples taken from residences near the C&D Recycling Site, 10/17/90. P. 501701-501701.
535. Letter to Mr. Henry Cole, Clean Water Fund, from Mr. Michael Towle, U.S. EPA, re: EPA response to comments on the Risk Assessment Report for the C&D Recycling Site, 10/18/90. P. 501702-501702.

536. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Information concerning the C&D Recycling Site, 10/24/90. P. 501703-501733. The EPA response to comments on the RI report is attached.
537. Letter to the Honorable John Heinz, U.S. Senate, from Mr. Edwin B. Erickson, U.S. EPA, re: Concerns of Mrs. Jane Sulima on the C&D Recycling Site, 10/29/90. P. 501734-501739. Three letters are attached.
538. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Spreadsheets for the C&D Recycling Site, 11/18/90. P. 501740-501751. The spreadsheets are attached.
539. Letter to Mr. Henry Cole, Clean Water Funds, from Mr. Michael Towle, U.S. EPA, re: Technical Assistance Grant for the C&D Recycling Site, 11/19/90. P. 501752-501752.
540. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Information concerning the C&D Recycling Site, 11/19/90. P. 501753-501753.
541. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Teleconference with Dr. Henry Cole and Ms. Sharon Rohrbach, 11/26/90. P. 501754-501754.
542. Memorandum to Information Repository for the C&D Recycling Site from Mr. Michael Towle, U.S. EPA, re: Transmittal of information on the Mid-Atlantic Coast Delivery Company and on Lurgan Corporation, 11/29/90. P. 501755-501755.
543. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 33, 12/10/90. P. 501756-501756.
544. U.S. EPA Fact Sheet, C&D Recycling Site, 12/90. P. 501757-501762.
545. Letter to Mrs. Sharon Rohrbach from Mr. Michael Towle, U.S. EPA, re: Correspondence between EPA and operators of C&D Recycling, 12/10/90. P. 501763-501779. Six letters are attached.
546. Newspaper article entitled "EPA: Lead, copper, dioxins found at C&D site," Hazelton Standard-Speaker, 1/2/91. P. 501780-501780.

547. Newspaper article entitled "Foster neighbors of C&D site wary of federal report," Hazelton Standard-Speaker, 1/5/91. P. 501781-501781.
548. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Information on RI/FS for C&D Recycling Site, 1/18/91. P. 501782-501783. A tentative RI/FS schedule is attached.
549. Letter to Mr. Mike Towle, U.S. EPA, from Dr. Henry S. Cole, Clean Water Fund, re: Comments regarding the responsiveness of EPA, 2/5/91. P. 501784-501785.
550. Letter to Dr. Henry S. Cole, Clean Water Fund, from Mr. Michael Towle, U.S. EPA, re: Revised Risk Assessment Report, 2/12/91. P. 501786-501786.
551. Letter to Mrs. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Revised Risk Assessment Report, 2/12/91. P. 501787-501787.
552. Letter to Mrs. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Revised Risk Assessment Report, 2/12/91. P. 501788-501788.
553. Letter to Dr. Henry S. Cole, Clean Water Fund, from Mr. Michael Towle, U.S. EPA, re: Correspondence of February 5, 1991, 2/19/91. P. 501789-501791.
554. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Information relevant to RI/FS study, 2/20/91. P. 501792-501792.
555. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Appendix B to the Revised Risk Assessment for the C&D Recycling Site, 3/8/91. P. 501793-501793.
556. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Sharon Rohrbach, CCFT, and Dr. Henry S. Cole, Clean Water Fund, re: Concern for full community involvement in site decisions, 3/15/91. P. 501794-501795.
557. General and Specific Comments on the Final Draft for Human Health Risk Assessment Report for C&D Recycling Site submitted by Mr. Marvin I. Lewis, 3/17/91. P. 501796-501797.
558. Letter to Mrs. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Final Draft Remedial Investigation report, 3/20/91. P. 501798-501798.

559. Letter to Mrs. Sharon Rohrbach from Mr. Michael Towle, U.S. EPA, re: Final Draft Remedial Investigation Report, 3/20/91. P. 501799-501799.
560. Handwritten Comments on Final Draft for Human Health Risk Assessment Report submitted by CCFT Task Force, 3/20/91. 501800-501801.
561. Letter to Dr. Henry Cole, Clean Water Fund, from Mr. Michael Towle, U.S. EPA, re: Final Draft Remedial Investigation Report, 3/21/91. P. 501802-501802.
562. Letter to Mr. Mike Towle, U.S. EPA, from Dr. Henry S. Cole, Clean Water Fund, re: Review of the Final Human Health Risk Assessment Report for C&D Recycling Site, 3/25/91. P. 501803-501824. Comments on the Final Human Health Risk Assessment Report and a facsimile copy of the letter are attached.
563. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 36 and summary of February 21, 1991 meeting, 3/26/91. P. 501825-501825.
564. Letter to Dr. Henry S. Cole, Clean Water Fund, from Mr. Michael Towle, U.S. EPA, re: Correspondence of March 15, 1991, 4/1/91. P. 501826-501827.
565. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Telephone conversation between Mr. Towle and Mrs. Sharon Rohrbach, 4/3/91. P. 501828-501828.
566. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Telephone conversation between Mr. Towle and Mrs. Jane Sulima, 4/5/91. P. 501829-501829.
567. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Telephone conversation between Mr. Towle and Mrs. Sharon Rohrbach, 4/5/91. P. 501830-501830.
568. Newspaper article entitled "CCFT Raises Concerns Over AT&T Report," Sunday Independent, 4/14/91. P. 501831-501831.
569. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 37, 4/24/91. P. 501832-501832.
570. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Final Draft RI, 4/26/91. P. 501833-501833. Pages from the Remedial Investigation with handwritten notes are attached.

571. Comments on the Final Draft Remedial Investigation Report for C&D Recycling Site prepared by Ms. Sharon Rohrbach, CCFT Task Force, 4/29/91. P. 501834-501847.
572. Letter to Ms. Sharon Rohrbach, CCFT, from Ms. Francesca DiCosmo, U.S. EPA, re: Preliminary Ecological Risk Assessment, 5/2/91. P. 501848-501848.
573. Letter to Ms. Jane Sulima from Ms. Francesca DiCosmo, U.S. EPA, re: Preliminary Draft Ecological Risk Assessment, 5/2/91. P. 501849-501849.
574. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert A. Falatko, Foster Township Board of Supervisors, re: Concerns and questions about C&D Superfund Site progress reports, 5/7/91. P. 501850-501871. Comments on the Final Draft Human Health Risk Assessment Report and a letter are attached.
575. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Sharon Rohrbach, CCFT Task Force, re: Information relating to C&D Site, 5/15/91. P. 501872-501889. Information relating to the C&D Site and materials processed there are attached.
576. Letter to Mr. Mike Towle, U.S. EPA, from Dr. Henry S. Cole, Clean Water Fund, re: March 8, 1991 version of the Final Draft Remedial Investigation for C&D Site, 5/22/91. P. 501890-501898. Comments on Final Draft RI are attached.
577. Letter to Mr. Raphael Musto, State Senator, from Mr. Michael Towle, U.S. EPA, re: Update on Site Fieldwork, 5/30/91. P. 501899-501901. A copy of Mr. Towle's response to the Foster Township Board of Supervisor's correspondence of May 7, 1991 is enclosed.
578. Letter to Mr. Robert A. Falatko, Foster Township Board of Supervisors, from Mr. Michael Towle, U.S. EPA, re: Response to May 7, 1991 letter on the RI, the Risk Assessment (RA), and the FS, 5/30/91. P. 501902-501933.
579. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Project status report No. 39, 6/17/91. P. 501934-501934.
580. Letter to Dr. Henry Cole, Clean Water Fund, from Mr. Michael Towle, U.S. EPA, re: Copy of the Draft Feasibility Study Report for the C&D Recycling Site, 7/22/91. P. 501935-501935.

581. Letter to Mrs. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Copy of Draft Feasibility Study Report for the C&D Recycling Site, 7/22/91. P. 501936-501936.
582. Letter to Mrs. Sharon Rohrbach, CCFT, from Mr. Michael Towle, re: Copy of the Draft Feasibility Study Report for the C&D Recycling Site, 7/22/91. P. 501937-501937.
583. Memorandum to distribution from Mr. Michael Towle, re: Project status report No. 40, 7/31/91. P. 501938-501938.
584. Newspaper article entitled "Draft C&D cleanup study upsets neighbors," Standard-Speaker, 8/3/91. P. 501939-501940.
585. Comments on the Ecological Risk Assessment from S. Rohrbach, CCFT, 8/7/91. P. 501941-501941.
586. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane Sulima, re: Comments on Preliminary Draft Feasibility Study, 8/7/91. P. 501942-501947.
587. Letter to Congressman Kanjorski, Pennsylvania State Legislature, from Dr. P. Chandra S. Chadaga, re: Preferred cleanup option, 8/12/91. P. 501948-501948.
588. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Harvey Rotzell, Foster Township Board of Supervisors, re: Opposition to Preliminary Draft Feasibility Study 8/21/91. P. 501949-501955.
589. Report: Comments on the Preliminary Draft Feasibility Study, prepared by Barbara F. Bass, 8/21/91. P. 501956-501965.
590. Report: Comments on Preliminary Draft Feasibility Study, prepared by Concerned Citizens of Foster Township Task Force, 8/22/91. P. 501966-501976. A fact sheet on lead, two issues of Rachel's Hazardous Waste News, and three newspaper articles are attached.
591. Letter to Ms. Jane K. Sulima from Ms. Francesca DiCosmo, U.S. EPA, re: Preliminary Draft Feasibility Study, 8/23/91. P. 501977-501978.
592. Report: Comments on the Preliminary Draft Feasibility Study for the C and D Recycling Site, prepared by Mr. Henry S. Cole, Ph.D., Clean Water Fund, 8/27/91, P. 501979-501984.

593. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane Sulima, re: Preliminary Draft Feasibility Study, 9/3/91. P. 501985-501990.
594. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane Sulima, re: Foster Township ordinance, 9/4/91. P. 501991-501996. The ordinance is attached.
595. Report: Comments, Feasibility Study C and D Recycling Site, prepared by Mr. Marvin I. Lewis, 9/6/91. P. 501997-502002. A newspaper article is attached.
596. Handwritten note to Ms. Francesca DiCosmo, U.S. EPA, and Mr. Michael Towle, U.S. EPA, from Mr. James Curtis, Hickory Hills Property Owners Association, re: Thanking staff for their time and effort, 9/9/91. P. 502003-502003.
597. Letter to U.S. EPA from Ms. Sharon Rohrbach, re: Comments on Final RI/FS Report, 9/16/91. P. 502004-502008. A facsimile cover sheet is attached.
598. Report: Consultant's Critique Re: Preliminary Draft of the Feasibility Study, prepared by Mr. Edwin F. Beemer, 9/16/91. P. 502009-502013.
599. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: RI/FS Report, 9/25/91. P. 502014-502014.
600. Handwritten note to Mr. Michael Towle, U.S. EPA, from Mr. Edward J. Sulima, re: C&D cleanup, 9/25/91. P. 502015-502015.
601. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: RI/FS Report information, 10/28/91. P. 502016-502016.
602. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Jean Warge and Mr. Michael Savers, Greenfire Coalition, re: Preferred cleanup alternatives, 10/28/91. P. 502017-502018.
603. Letter from the St. James Episcopal Church Congregation, re: Preferred cleanup alternatives, (undated). P. 5012019-5012019.
604. Memorandum of telephone call of Mr. Dave DiCosmo, Channel 22, re: Water testing, (undated). P. 502020-502020.

605. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Documents pertaining to removal action at the C&D Recycling Site (undated). P. 502021-502021.
606. Letter to Ms. Marion Sunderman, Freeland Borough Building, from Mr. William M. Draper, U.S. EPA, re: Documents pertaining to removal action at the C&D Recycling Site, (undated). P. 502022-502022.
607. Newspaper article entitled "Abandoned plant slated for testings, "Standard-Speaker, (undated.) P. 502023-502023.
608. Newspaper article entitled "Area woman plans to sue C&D firm," Standard-Speaker, (undated). P. 502024-502024.
609. Newspaper article entitled "99 new Superfund sites 21 in reg", "Inquirer, (undated). P. 502025-502026.
610. Newspaper article entitled "Geo Services Explain its EPA Connection," Standard-Speaker, (undated). P. 502027-502027.
611. Newspaper article entitled "Foster, Citizens 'on track' in C&D Matter," (undated). P. 502028-502028.
612. Letter to citizens from Mr. Harold R. Yates, U.S. EPA, re: Information summary on the C&D Recycling Site, (undated). P. 502029-502029.
613. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Cable casing removal information at the C&D Recycling Site, (undated). P. 502030-502030.
614. Statement from Mr. William M. Draper, U.S. EPA, re: Citizen involvement with the C&D Recycling Site, (undated). P. 502031-502031.
615. Letter to Ms. Jane Sulima from Mr. William M. Draper, U.S. EPA, re: Extension of a deadline by EPA, (undated). P. 502032-502032.
616. Handwritten notes, (undated). P. 502033-502034.
617. Partial section of a book entitled Laying Waste, (undated). P. 502035-502041.
618. Letter to Ms. Jane Sulima from Ms. Carol Stokes-Cawley, U.S. EPA, re: Response to a previous letter, (undated). P. 502042-502042.

619. List of names and addresses for CERCLA Claim and Citizen Suit, (undated). P. 502043-502044.
620. Table, Available Treatment Processes, (undated). P. 502045-502045.
621. Site Summary, C&D Recycling Site, (undated). P. 502046-502046.
622. C&D Citizen Hotline Log (undated). P. 502047-502106.
623. Map, C&D Recycling and Surrounding Area, (undated). P. 502107-502107.
624. Grab Soil Sampling Map, (undated). P. 502108-502108.
625. Map, C&D Recycling and Surrounding Area (undated). P. 502109-502109.
626. Site Base Map, (undated). P. 502110-502110.
627. Map, C&D Recycling Site, (undated). P. 502111-502111.
628. Slides C&D Recycling Site, (undated). P. 502112-502113.
629. Letter to Mr. Correale F. Stevens, Pennsylvania House of Representatives, from Mr. Thomas P. Eichler, U.S. EPA, re: Soil sampling in the Foster Township area, (undated). P. 502114-502115.
630. Photographs, C&D Recycling Site, (undated), P. 502116-502132.
631. Fetal autopsy testing results, 1/28/87. P. 502133-502138. An envelope is attached.
632. Letter to Wilkes-Barre Independent News from Mr. Stanley L. Laskowski, U.S. EPA, re: Text of a newspaper article suggesting unwillingness of EPA to communicate with the concerns of citizens, 3/10/89. P. 502139-502141. A newspaper article entitled "Charges Fly Back And Forth On Foster Twp. Waste Site," Wilkes-Barre Independent is attached.
633. Letter to Mr. Robert J. Sugarman, Sugarman & Associates, from Mr. Richard H. Willis, Nelson, Mullins, Riley & Scarborough, re: Arrangement of a date for sampling, 11/5/91. P. 502142-502144.

644. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James Curto, Hickory Hills Property Owners Association, re: Permission granted to EPA to access property for soil sampling, 11/11/91. P. 502145-502145.
645. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Handling of sample material and status of documents requested by Sugarman & Associates, 11/20/91. P. 502146-502147.
646. Letter to Mr. James Curto, Hickory Hills Property Owners Association, from Mr. Michael Towle, U.S. EPA, re: Collection of soil sampling, 11/25/91. P. 502148-502148.
647. Letter to Mrs. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Preliminary Draft Feasibility Study, 11/25/91. P. 502149-502149.
648. Letter to Mr. Donald A. Gerson, Hickory Hills West, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the name and telephone number of the owner of the C&D Recycling Site property, 11/25/91. P. 502150-502150.
649. Letter to Mrs. Sharon Rohrbach, CCFT, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Risk Assessment, 11/28/91. P. 502151-502151.
650. Newsletter, C&D Superfund Site, re: History of and activities concerning the site, prepared by AT&T, 12/91. P. 502152-502155.
651. Letter to Ms. Sharon Rohrbach from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Final Draft Risk Assessment, 12/5/91. P. 502156-502156.
652. Letter to Dr. Henry Cole, Clean Water Fund, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Final Draft Risk Assessment, 12/5/91. P. 502157-502157.
653. Letter to Mrs. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Final Draft Risk Assessment, 12/5/91. P. 502158-502158.
654. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Deborah Oberst, re: Transmittal of resolutions and petitions, 12/7/91. P. 502159-502212. The following are attached:
- a) a letter regarding petitions and other material concerning clean up of the site;

- b) a letter regarding the opposition by Foster Township Board of Supervisors of the Preliminary FS;
 - c) Foster Township Board of Supervisors Resolution No. 4 of 1991;
 - d) a letter regarding clean-up and testing problems;
 - e) Notice of Support by the St. James Episcopalian Church of clean-up measures;
 - f) Hickory Hills Property Owners Association Resolution 1991;
 - g) 46 petitions.
655. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: "Non-valid" sampling taken by AT&T, 12/10/91. P. 502213-502213.
656. Letter to Mr. Thomas Voltaggio, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Request that EPA provide deposition testimony and documents in the litigation of Rohrbach v. AT&T et al., 12/12/91. P. 502214-502224. A U.S. EPA fact sheet, pages from a Request for Admission, and a letter regarding corrections for a letter dated 12/12/91 are attached.
657. Letter to Mrs. Sharon Rohrbach from Mr. Michael Towle, U.S. EPA, re: Review of the second draft FS, 12/13/91. P. 502225-502225.
658. Portion of a deposition of Dr. Rose, prepared by Urban Court Reporting, Inc., 12/17/91. P. 502226-502235.
659. Memorandum to Mr. Robert Allen, AT&T, from Mr. James Curto, Hickory Hills, re: Concerns about the proximity of residential areas to the site, 12/20/91. P. 502236-502243. The following are attached:
- a) an AT&T newsletter;
 - b) an aerial photograph;
 - c) a letter regarding a negative rebuttle to a newsletter;
 - d) comments on a newsletter.

660. Memorandum to distribution from Mr. Michael Towle, U.S. EPA, re: Transmittal of Project Status Reports No. 44 and 45, 12/24/91. P. 502244-502244.
661. Letter to Mr. James Tadesco, Tri-County Sanitation Company, from Mr. William F. McDonnell, PADER, re: Denial of Municipal Waste Phase II Permit Application, 12/26/91. P. 502245-502249.
662. Letter to U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Serving of a deposition subpoena, 1/2/92. P. 502250-502262. The following are attached:
- a) a Subpoena In A Civil Case, case number 89-1268;
 - b) five letters regarding a FOIA requests dated 12/12, 18, 20, 24/91, and 1/2/92;
 - c) a sample cross Reference Table for Sample Identification;
 - d) Summary of Valid Analytical Results, Off-Site Soil--Copper and Lead;
 - e) Summary of Valid analytical Results, Off-Site Soil--Organics.
663. Newspaper article entitled "Foster Super blasts cleanup company," Times Leader, 1/5/92. P. 502263-502263.
664. Handwritten letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Newspaper article concerning an on-site disposal facility at the site, 1/7/92. P. 502264-502266. A newspaper article entitled "DER says 'no' to Foster Twp. landfill plan," Citizens' Voice is attached.
665. Letter to Mr. Mike Towle, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Request for permission to perform on-site sampling, 1/10/92. P. 502267-502267.
666. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Michael Towle, U.S. EPA, re: Transmittal of documents in response to various FOIA requests, 1/15/92. P. 502268-502271.

667. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Susanne I. Giendl, Sugarman & Associates, re: Transmittal of pages of Ms. Sharon Rohrbachs' deposition identifying her blood lead test, 1/13/92. P. 502272-502275. The pages of the deposition are attached.
668. Letter to Mrs. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Transmittal of the FS, 1/14/92. P. 502276-502276.
669. Letter to Mrs. Sharon Rohrbach from Mr. Michael Towle, U.S. EPA, re: Transmittal of the final FS, 1/14/92. P. 502277-502277.
670. Letter to Mrs. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Ecological Assessment, 1/15/92. P. 502278-502278.
671. Letter to Mrs. Sharon Rohrbach from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Final Ecological Assessment, 1/15/92. P. 502279-502279.
672. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re; Lead levels in drinking water, 1/22/92. P. 502280-502285. The following are attached:
- a) a letter regarding sample analysis of residential well water, 5/24/89;
 - b) sample results;
 - c) a letter regarding sample analysis of residential well water, 4/17/89;
 - d) two sample result tables.
673. Facsimile transmittal sheet to Ms. Carol Lenahan from Mr. Mike Towle, U.S. EPA, re: Transmittal of portion of the Federal Register, 1/27/92. P. 502286-502290. The pages of the Federal Register are attached.
674. Letter to Mr. Robert J. Sugarman, Sugarman & Associates, from Mr. Michael Towle, U.S. EPA, re: Clarification of misunderstandings about a telephone conversation and a request for the provision of information concerning the deposition of wastes removed from the site, 1/29/92. P. 502291-502293.
675. Letter to distribution from Mr. Michael Towle, U.S. EPA, re: Information relevant to the RI, 1/31/92. P. 502294-502294.

676. Letter to Mr. Ronald Davis from Mr. Michael Towle, U.S. EPA, re: Future use and development of the Davis property, 2/4/92. P. 502295-502303. An Explanation of Metals Data Qualifiers, four Inorganic Analysis Data Sheets, and two site maps are attached.
678. Letter to Mr. Donald A. Gerson, Hickory Hills West, from Mr. Michael Towle, U.S. EPA, re: Soil sampling at Hickory Hills West, 2/4/92. P. 502304-502311. Four Inorganic Analysis Data Sheets, an Explanation of Qualifiers, and a site map are attached.
679. Letter to Mr. Frank Cona from Mr. Michael Towle, U.S. EPA, re: Transmittal of the Risk Assessment and the FS, 2/6/92. P. 502312-502312.
680. Newspaper article entitled "DER investigating alleged illegal dumping by Foster," Hazelton Standard-Speaker, 2/8/92. P. 502313-502313.
681. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Additional Comments on the RI, 2/11/92. P. 502314-502319. A letter regarding an information request of AT&T is attached. **
682. Newspaper article entitled "Landfill concerns resurface; Foster makes appointments," Hazelton Standard-Speaker, 2/12/92. P. 502320-502320.
683. Letter to Mr. Rotzell, Mr. Falatko, and Ms. Lanahan, Foster Township Board of Supervisors, from Mr. Michael Towle, U.S. EPA, re: Foster Township's position regarding future land use of the site, 2/14/92. P. 502321-502322.
684. Newspaper article entitled "Foster Township to Lose Insurance Coverage," Sunday Independent, 2/23/92. P. 502323-502323.
685. Newspaper article entitled "C&D Cleanup Proposal Irks Residents," Sunday Independent, 3/1/92. P. 502324-502324.
685. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert A. Falatko, Foster Township Board of Supervisors, re: Request for EPA to review its files to determine the extent to which AT&T routinely discharges heavy toxic metals, 3/3/92. P. 502325-502326.

686. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert A. Falatko, Foster Township Board of Supervisors, re: Request for the Draft Proposed Clean-up Plan, 3/3/92. P. 502327-502327.
687. Newspaper article entitled "Cleanup plan cuts Foster Insurance," Hazelton Standard-Speaker, 3/4/92. P. 502328-502329.
688. Newspaper article entitled "Foster Twp. officer cite 3," Hazelton Standard-Speaker, 3/6/92. P. 502330-502330.
689. Newspaper article entitled "Meeting Monday on C&D Cleanup Proposal," Sunday Independent, 3/8/92. P. 502331-502331.
690. Newspaper article entitled "Foster residents see plant 'coverup'," Times Leader, 3/11/92. P. 502332-502332.
691. Newspaper article entitled "Foster supervisors want all contaminants removed," Hazelton Standard Speaker, 3/11/92. P. 502333-502333.
692. Newspaper article entitled "AT&T has 6 cleanup options; only 1 good for Foster," Standard Speaker, 3/11/92. P. 502334-502334.
693. Newspaper article entitled " AT&T defends actions," Times Leader, 3/12/92. P. 502335-502335.
694. Newspaper article entitled "Foster adds loitering, contractor ordinances," Hazelton Standard-Speaker, 3/12/92. P. 502336-502337.
695. Letter to Mr. Harvey Rotzell from Mr. Ronald DiCola, AT&T, re: Insurance coverage for Foster Township, 3/13/92. P. 502338-502338.
696. Letter to Honorable Paul E. Kanjorski, U.S. House of Representatives, from Mr. Edwin B. Erickson, U.S. EPA, re: EPA's plan of action for the site, 3/13/92. P. 502339-502339.
697. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Acquisition of information by AT&T concerning site activities and soil sampling actions, 3/16/92. P. 502340-502345. A memorandum regarding results of a public meeting is attached.

698. Letter to Mr. David Byro, U.S. EPA, from Mr. Harvey Rotzell, Foster Township Board of Supervisors, re: Request for Mr. Stan Lasikowski and Mr. Bruce Smith to be present at a meeting with EPA, 3/17/92. P. 502346-502346.
699. Letter to Mr. Michael Towle and Mr. Patrick Anderson, U.S. EPA, from Mr. Harvey Rotzell, Foster Township Board of Supervisors, re: Request to be included in a meeting between EPA and PADER, 3/17/92. P. 502347-502347.
700. Letter to Mr. Donald A Gerson, Hickory Hills West, from Mr. Michael Towle, U.S. EPA, re: Handwritten response to previous letter dated February 4, 1992, regarding soil sampling, 3/17/92. P. 502348-502349. A facsimile transmittal sheet is attached.
701. Letter to Mr. Harvey Rotzell, Foster Township Board of Supervisors, from Mr. Michael Towle, U.S. EPA, re: Soil samples taken at the site, 3/19/92. P. 502350-502351.
702. Newspaper article entitled "Lawyer says AT&T guilty of coverup at C&D site," Standard-Speaker, 3/19/92. P. 502352-502353.
703. Newspaper article entitled "AT&T disputes coverup claim," (no author cited), 3/19/92. P. 502354-502354.
704. Newspaper article entitled "Tougher cleanup levels urged for C&D site," Hazelton Standard Speaker, 3/19/92. P. 502355-502355.
705. Letter to Mr. Edwin Erickson, U.S. EPA, from Senator Raphael Musto, Senate of Pennsylvania, re: Recommendations concerning the site, 3/23/92. P. 502356-502356.
706. Meeting summary package, re: Information given out at meeting between U.S. EPA and Foster Township, 3/23/92. P. 502357-502485. A handwritten sign-in sheet, a list of demands from Foster Township Supervisors, CCFT, and Foster TAG advisors, and note on the meeting with PADER are attached.
707. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Donald A. Gerson, re: Soil samples collected at Hickory Hills West, 3/25/92. P. 502486-502486.

708. Letter to Mr. Ronald DiCola, AT&T, from Mr. Donald Gerson, re: EPA soil samples collected at Hickory Hills West, 3/25/92. P. 502487-502488.
708. Letter to Mr. John S. Williams, AT&T, from Mr. Donald A. Gerson, re: Impaction of soils of Hickory Hills West property, 3/25/92. P. 502489-502489.
709. Letter to Ms. Marcia D. Mulkey, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Remedial Investigation process, 3/26/92. P. 502490-502491.
710. Newspaper article entitled "Foster supervisors going to Washington to press cleanup claim with EPA," Standard Speaker, 3/28/92. P. 502492-502492.
711. Newspaper article entitled "EPA didn't know Foster meeting was closed session," Standard-Speaker, 4/1/92. P. 502493-502494.
712. "Establishing a Health Based Standard for Lead in Residential Soils," Trace Substances in Environmental Health, prepared by Mr. Patrick L. Reagan and Ms. Ellen K. Silbergeld, 1989. P. 502495-502515.
713. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, McLaren Hart, re: Review of background information regarding furnace operation, 12/19/90. P. 502516-502566. A package of response information is attached.
714. Memorandum to Dr. Panitz, Mr. Richenderfer, and Mr. Schewe, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Analysis of laboratory reports, 12/27/91. P. 502567-502689. Sampling results are attached.
715. Facsimile cover sheet to Mr. Bryan Smith, SMC, J. Williams, J. Wilson, M. Towle, U.S. EPA, and A. Primerano, from S. Giendl, Sugarman & Associates, re: Postponement of sampling, 1/16/92. P. 502690-502690.
716. Facsimile cover sheet to Mr. Bryan Smith, SMC, J. Williams, J. Wilson, M. Towle, U.S. EPA, and A. Primerano, from S. Giendl, Sugarman & Associates, re: Postponement of sampling, 1/30/92. P. 502691-502691.
717. Facsimile cover sheet to Mr. Bryan Smith, SMC, J. Williams, J. Wilson, M. Towle, U.S. EPA, and A. Primerano, from S. Giendl, Sugarman & Associates, re: Rescheduling of sampling, 2/3/92. P. 502692-502692.

718. Facsimile cover sheet to Mr. Michael Towle, Mr. John Williams, and Mr. Andy Primerano, from Ms. Susanne Giendl, Sugarman & Associates, re: Farmhouse sludge sampling, 2/14/92. P. 502693-502694. A letter regarding the sampling is attached.
719. Facsimile cover sheet to Mr. James Richenderfer, Mr. John Williams, and Mr. Mike Towle from Ms. Susanne Giendl, Sugarman & Giendl, re: Water samples, 2/17/92. P. 502695-502695.
720. Facsimile cover sheet to Mr. James Richenderfer and Mr. Michael Towle from Ms. Susanne Giendl, Sugarman & Associates, re: Rescheduling of sampling, 2/20/92. P. 502696-502696.
721. Facsimile cover sheet to Mr. Michael Towle, U.S. EPA, from Mr. Kevin Stack for Mr. Robert Sugarman, Sugarman & Associates, re: Date for on-site sampling, 2/27/92. P. 502697-502697.
722. Facsimile cover sheet to Mr. Michael Towle, U.S. EPA, from Mr. Robert Sugarman, Sugarman & Associates, re: Sampling of the dry well, 2/28/92. P. 502698-502698.
723. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Robert A. Falatko, Foster Township Board of Supervisors, re: Request for draft proposed plan, 3/3/92. P. 502699-502701. A letter requesting copies of all correspondence between EPA and AT&T relating to the C&D Site is attached.
724. Newspaper article entitled "Cleanup plan cuts Foster insurance," Standard-Speaker, 3/4/92. P. 502702-502702. An article entitled "AT&T disputes coverup claims," is attached.
725. Newspaper article entitled "Foster Twp. officer cites 3," Standard-Speaker, 3/6/92. P. 502703-502703.
726. Newspaper article entitled "Foster supervisors want all contaminants removed," 3/11/92. P. 502704-502704.
727. Newspaper article entitled "AT&T has 6 cleanup options; only 1 good for Foster," Standard-Speaker, 3/11/92. P. 502705-502705.
728. Newspaper article entitled "Foster adds loitering contractor ordinances," Standard-Speaker, 3/12/92. P. 502706-502706.

729. Newspaper article entitled "Tri-county hearing may be in May," Standard Speaker, 3/13/92. P. 502707-502707.
730. Newspaper article entitled "Rotzell disputes AT&T claims," Standard Speaker, 3/16/92. P. 502708-502708.
731. Letter to Mr. David Byro, U.S. EPA, from Mr. Harvey Rotzell, Foster Township Board of Supervisors, re: Request for the presence of Stan Laskowski and Bruce Smith at March 23rd meeting, 3/17/92. P. 502709-502709.
732. Letter to Mr. Michael Towle and Mr. Patrick Anderson, U.S. EPA, from Mr. Harvey Rotzell, Foster Township Board of Supervisors, re: Inclusion in meeting between EPA and PADER, 3/17/92. P. 502710-502710.
733. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Questions concerning Technical Assistance Grant (TAG) information, 3/28/92. P. 502711-502712.
734. Newspaper article entitled "Foster Twp. Cleanup Meeting Unproductive," Sunday Independent, 3/29/92. P. 502713-502713.
735. Newspaper article entitled "EPA didn't know Foster meeting was closed session," Standard-Speaker, 4/1/92. P. 502714-502715.
736. Letter to Mr. Edwin Erickson, U.S. EPA, from Ms. Carol Ann Lenahan, Foster Township Board of Supervisors, re: Copy of information given to EPA for the file, 4/2/92. P. 502716-502726. Three letters and sampling results are attached.
737. Newspaper article entitled, "EPA knew meeting was closed, Rotzell charges," Standard-Speaker, 4/4/92. P. 502727-502727.
738. Newspaper article entitled, "C&D cleanup, If it's on-site, state regulations would apply, EPA told," Standard-Speaker, 4/4/92. P. 502728-502728.
739. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Donald A. Gerson, Hickory Hills West, re: ICP calculations compared with furnace calculations, 4/14/92. P. 502729-502736. Two facsimile cover sheets, an amendment to the statement of work, and two site maps are attached.

740. Newspaper article entitled "Foster group, Kanjorski can't agree to meet," Standard-Speaker, 4/15/92. P. 502737-502738.
741. Newspaper article entitled "Superfund: Pouring Money Down a Hole," New York Times, 4/17/92. P. 502739-502739.
742. Newspaper article entitled "Kanjorski, public to talk over more soil tests," Times Leader, 4/19/92. P. 502740-502741.
743. Newspaper article entitled "Meeting Tuesday About C&D Cleanup," 4/19/92. P. 502742-502742.
744. Newspaper article entitled "Meeting Tuesday on C&D cleanup," Standard-Speaker, 4/20/92. P. 502743-502743.
745. Newspaper article entitled "Dioxin present on C&D Recycling site," Standard-Speaker, 4/22/92. P. 502744-502745. An article entitled "Residents press feds on cleanup" is attached.
746. Letter to Mr. Edwin Erickson, U.S. EPA, from Ms. Carol Ann Lenahan, Foster Township Board of Supervisors, re: Surprise of discovery of dioxin, 4/22/92. P. 502746-502750. A response letter is attached.
747. Newspaper article entitled "EPA: contaminated soil at C&D site should be mixed with cement, buried," Standard-Speaker, 4/23/92. P. 502751-502752.
748. Letter from Mr. John E. Kish, re: Preferred alternative for site cleanup, 4/24/92. P. 502753-502754. An envelope is attached.
749. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. James F. Cagglano, Hazelton Pediatric Associates, re: Health of children in the C&D area, 4/27/92. P. 502755-502757. An interoffice route slip is attached.
750. Letter to C&D Recycling, Inc., from Mr. Robert A. Falatko, Foster Township Board of Supervisors, re: Problems with structures on the C&D site, 4/27/92. P. 502758-502759.
751. Letter from Mr Edward M. Rossi, re: Information about a wreath factory near C&D, 4/27/92. P. 502760-502762
752. Newspaper article entitled "EPA: No law prohibits moving dioxin from site," Standard-Speaker, 4/29/92. P. 502763-502763.

753. Newspaper article entitled "Site for meeting disputed," 4/29/92. P. 502764-502764.
754. Letter to Mr. Thomas Voltaggio, U.S. EPA, from Mr. John R. Varaly, Varaly Associates Planning & Engineering Consultants, re: Request for copy of legislation concerning landfills, 4/28/92. P. 502765-502766.
755. Foster Township, Luzerne County, General Soil Sampling Locations, 4/29/92. P. 502767-502768. A topographic map is attached.
756. Letter to Mr. John R. Varaly, Varaly Associates Planning & Engineering Consultants, from Mr. Michael Towle, U.S. EPA, re: Transmittal of requested legislative statutes, 4/29/92. P. 502769-502770.
757. Letter to Mr. Edward Shoener, PADER, from Mr. Jack DeFazio, Michael J. Pasonick, Jr., Inc., re: Request for soil sampling, 4/29/92. P. 502771-502773. The soil sampling location list and a topographic map are attached.
758. Letter to the Editor from Mr. Harvey Rotzell, re: Logistics of the April 8th public meeting, 5/1/92. P. 502774-502774.
759. Letter to U.S. EPA from Mr. James McGinty, re: Opposition to on-site treatment, 5/3/92. P. 502775-502776. An interoffice route slip is attached.
760. Newspaper article entitled "Compromise, EPA, Foster switch meeting on C&D to Freeland school," Standard-Speaker, 5/2/92. P. 502777-502778. A letter regarding displeasure with EPA's press release is attached.
761. Letter from J.K. Sulima, re: Comments on the Proposed Plan, 5/8/92. P. 502779-502781.
762. Written narrative of Ms. Carol Lenahan, re: Future of the C&D Site, 5/8/92. P. 502782-502787. A facsimile cover sheet and CLP laboratory data are attached.
763. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Curt Hules, Low Anthracite Project, re: Opposition to the Proposed Plan, 5/8/92. P. 502788-502788.

764. Letter to Ms. Jane K. Sulima from the Honorable Paul E. Kanjorski, U.S. House of Representatives, re: Ms. Sulima's letter about C&D Recycling, 5/8/92. P. 502789-502789. A newspaper article entitled "Activist sees new use for C&D," Standard Speaker, is attached.
765. Transcript of U.S. EPA Public Hearing, 5/8/92. P. 502790-502969.
766. Commonwealth of Pennsylvania Citation for Harassment, Harvey E. Rotzell, 5/11/92. P. 502970-502970.
767. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Information on a program that would be beneficial to the community near C&D, 5/12/92. P. 502971-502971.
768. Letter from Ms. Sharon Rohrbach, re: Pink water, 5/12/92. P. 502972-502973.
769. Letter to Ms. Carrie Deitzel, U.S. EPA, from Ms. Maryann Soriano, ERA Pocono Resorts Realty, re: Depreciating property value, 5/12/92. P. 502974-502974.
770. Letter to the Honorable William Reilly, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Notification of the filing of a citizens suit against EPA, 5/12/92. P. 502975-502976.
771. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Tipon, re: Support for Ms. Sulima's position on the site, 5/14/92. P. 502977-502978. An envelope is attached.
772. Letter to Mr. Robert J. Sugarman, Sugarman & Associates, from Mr. Michael Towle, U.S. EPA, re: Response to concern over the use of the Rohrbach's well, 5/14/92. P. 502979-502986. A letter regarding lead levels in the well, a letter transmitting analytical results with the results, and a letter regarding review of the results with the results are attached.
773. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Opposition to landfilling at C&D, 5/16/92. P. 502987-502991. An envelope is attached.
774. Letter to Mr. John Mellow, PADER, from Mr. Jack DeFazio, Michael J. Pasonick, Jr., Inc., re: Additional solid sampling, 5/18/92. P. 502992-502992.

775. Letter to Dr. James F. Cagglano, Hazleton Pediatric Associates, from Mr. Patrick Anderson, U.S. EPA, re: Response to concerns for children's health, 5/20/92. P. 502993-502995.
776. Letter to President George Bush from Ms. Jane K. Sulima, re: Off-site disposal directive, 5/22/92. P. 502996-502997. A note regarding above ground monitored containment is attached.
777. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Marvin I. Lewis, re: Appreciation for Mr. Towle's professional conduct, 5/25/92. P. 502998-502999.
778. Letter from Mr. Tom Rock, re: Proof of contamination from C&D Recycling, 5/26/92. P. 503000-503001. An envelope is attached.
779. Letter to Dr. William Roper, ATSDR, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Request for consultation on toxic health hazards from C&D Recycling, 5/27/92. P. 503002-503003.
780. Letter to Mr. John S. Mellow, PADER, from Ms. Jane K. Sulima, re: Above ground monitored containment, 5/28/92. P. 503004-503004.
781. Letter to Mr. Edward Shoener, PADER, from Ms. Jane K. Sulima, re: Biased request for soil samples, 5/28/92. P. 503005-503006. A note regarding public availability of the letter is attached.
782. Letter to Mr. Ronald DiCola, AT&T, from Mr. Harvey Rotzell, Foster Township Board of Supervisors, re: Permission to perform testing for a health risk assessment, 5/28/92. P. 503007-503007.
783. Letter to the Honorable Paul Kanjorski, U.S. House of Representatives, from Mr. Henry S. Cole, Clean Water Fund, re: Recommendations for soil testing, 5/29/92. P. 503008-503011. A site map is attached.
784. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Deborah Oberst, re: Comments on the proposed ROD, 5/28/92. P. 503012-503015. The comments and an envelope are attached.
785. Letter to Mr. Ron DiCola, AT&T, from Ms. Jane K. Sulima, re: Above ground monitored containment, 5/31/92. P. 503016-503018.

786. Letter to the Honorable Paul Kanjorski, U.S. House of Representatives, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Thank you for offer to invoke oversight at C&D, 6/2/92. P. 503019-503019.
787. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Transmittal of new information, 6/2/92. P. 503020-503106. The information package is attached.
788. Letter to Mr. Cecil Rodriguez, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Vague allegations, 6/2/92. P. 503107-503128. A letter regarding the cover-up and a brief in support of cover-up history are attached.
789. Letter to Mr. Harvey Rotzell, Foster Township Board of Supervisors, from Mr. Ronald DiCola, AT&T, re: Access to the C&D Recycling Site, 6/2/92. P. 503129-503135. A note transmitting the letter to Mr. Mike Towle is attached.
790. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Jane K. Sulima, re: Run-off from C&D onto Sulima property, 6/4/92. P. 503136-503142. Three site location maps and an envelope are attached.
791. Letter to Mr. Edward Shoener, PADER, from Mr. Ronald DiCola, AT&T, re: Additional off-site sampling, 6/4/92. P. 503143-503143.
792. Letter to Ms. Jane K. Sulima, re: Soil sampling, 6/5/92. P. 503144-503144.
793. Letter to Mr. Donald Gerson, Hickory Hills West, from Mr. Michael Towle, U.S. EPA, re: Analytical results from soil sampling, 6/5/92. P. 503145-503156. The following are attached:
- a) a facsimile cover sheet;
 - b) C&D Recycling Pb Results;
 - c) an excerpt from The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980;
 - d) an excerpt from the Federal Register, March 8, 1990.

794. Facsimile cover sheet to Mr. Hank Cole from Mr. Mike Towle, U.S. EPA, 6/9/92. P. 503057-503161. Information on transects 1, 2, and 3 and a site location map are attached.
795. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Walter J. Lynch, re: Comments on the Proposed Plan, 6/17/92. P. 503162-503163. An envelope is attached.
796. Handwritten note to Mr. Michael Towle, U.S. EPA, from Mr. Eugene Zejnel and Mr. Kenneth Job, re: Comments on the Proposed Plan, 6/22/92. P. 503164-503167. An envelope is attached.
797. Letter to Mr. Michael Towle, U.S. EPA, from Mr. James A. Perazzo, ERM-Northeast, re: Sample laboratory results, 6/22/92. P. 503168-503289. A package of laboratory results is attached.
798. Handwritten notes, re: Telephone discussion with Marlene Cona, 6/23/92. P. 503290-503290.
799. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Judy F. Dixon-Williams, AT&T, re: Technical comments from AT&T on the Proposed Plan, 6/23/92. P. 503291-503433. A package of information is attached.
800. Letter to Mr. Michael Towle, U.S. EPA, from Mr. Henry S. Cole, Clean Water Fund, re: Comments on the Proposed Plan, 6/23/92. P. 503434-503444. The comments are attached.
801. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Harvey Rotzell, Foster Township Board of Supervisors, re: Objection to the Proposed Plan, 6/24/92. P. 503445-503447. A letter regarding communication between EPA and Foster Township is attached.
802. Comments submitted for the public record regarding the Proposed Plan, 6/24/92. P. 503448-503473. Two sets of comments are attached.
803. Letter to Mr. Michael Towle, U.S. EPA, from Ms. Marloyne Cona, re: Objection to on-site cleanup, 6/24/92. P. 503474-503474.
804. Letter to U.S. EPA from Mr. Robert J. Sugarman, Sugarman & Associates, re: Interim comments on the Proposed Plan, 6/24/92. P. 503475-503479. A facsimile cover sheet is attached.

805. Letter to Mr. Robert Falatko, Foster Township Supervisor, from Mr. Edwin B. Erickson, U.S. EPA, re: Concerns over lead levels in soil, 6/29/92. P. 503480-503491. The following are attached:
- a) a correspondence control slip;
 - b) a facsimile cover sheet;
 - c) a White House correspondence rush slip;
 - d) a White House Office referral slip;
 - e) a White House Correspondence Tracking Worksheet;
 - f) a letter regarding lead poisoning in Hickory Hills West from the White House;
 - g) a letter to the President asking for help in the C&D case;
 - h) a letter regarding results of soil sample collected from Hickory Hills West.
806. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Re-analysis of pre-existing data, 6/29/92. P. 503492-503493.
807. Letter to Mr. Edwin Erickson, U.S. EPA, from Ms. Laura Campbell Dukes, Nelson, Mullins, Riley & Scarborough, re: Review of Mr. Sugarman's legal counsel, 7/2/92. P. 503494-503508. The Final Draft Feasibility Study Report, C&D Recycling Site, a newspaper article entitled "DER official says Rotzell intimidated him," and an interoffice routing slip are attached.
808. Letter to Mr. Donald Zucchi from Mr. Michael Towle, U.S. EPA, re: Response to a request for information, 7/8/92. P. 503509-503519. Two maps and sampling results are attached.
809. Letter to Mr. Harvey Rotzell, Foster Township Supervisors, from Mr. Edwin B. Erickson, re: Communication between EPA and Foster Township, 7/9/92. P. 503520-503521.
810. Memorandum to file from Mr. Michael Towle, U.S. EPA, re: Comment on the Proposed Plan, 7/21/92. P. 503522-503522.

811. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Edwin B. Erickson, U.S. EPA, re: Response to comments on the Proposed Plan, 7/21/92. P. 503523-503531.
812. Stipulation for Compromise Settlement, Sharon Rohrbach, et al., vs. AT&T Nassau Metals Corp. et al., Miscellaneous No. 91-MC-0558, filed 7/21/92. P. 503532-503534.
813. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Lack of good information, 7/24/92. P. 503535-503535.
814. Letter to Mr. Michael Towle, U.S. EPA, and Mr. John Mellow, PADER, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Request for meeting, 7/27/92. P. 503536-503537.
815. Letter to Mr. Barry Johnson, ATSDR, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Modification of the ATSDR report, 8/4/92. P. 503538-503538.
816. Newspaper article entitled "Study claims C&D site not source of lead in wells," Standard-Speaker, 8/8/92. P. 503539-503539.
817. Letter to Ms. Jane Sulima from Mr. Michael Towle, U.S. EPA, re: Response to letter concerning TAG, 8/6/92. P. 503540-503568. A memorandum regarding cleanup for C&D written by Clean Water Action, a memorandum on TAGs, and a memorandum comparing the opinions of EPA with the TAG contractor are attached.
818. Letter to Mr. Robert J. Sugarman, Sugarman & Associates, from Ms. Marcia Mulkey, U.S. EPA, re: RI/FS Work Plan, 8/14/92. P. 503569-503861. A report entitled Data Quality Objectives for Remedial Response Activities, Development Process and a report entitled Data Quality Objectives for Remedial Response Activities, Example Scenario: RI/FS Activities at a Site with Contaminated Soils and Ground Water are attached.
819. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Data supporting the contamination of ground water and its effect on residential wells, 8/14/92. P. 503862-503865.

820. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Kate Crowley for Mr. John S. Mellow, PADER, re: Technical review of the draft ROD, 8/18/92. P. 503866-503871.
821. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Thomas C. Voltaggio, U.S. EPA, re: Response to request for a meeting, 8/25/92. P. 503872-503874. A facsimile cover sheet is attached.
822. Facsimile cover sheet to Mr. Thomas C. Voltaggio, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Preparation for the September 2nd meeting, 8/25/92. P. 503875-503875.
823. Letter to Ms. Lydia Ogden Askew, ATSDR, from Ms. Elaine B. Panitz, Occupational and Environmental Medicine, re: Human and animal health effects due to chronic arsenic and selenium poisoning, 9/1/92. P. 503876-503878.
824. Letter to Ms. Lydia Ogden Askew, ATSDR, from Ms. Jane K. Sulima, re: Questions on the ATSDR Public Health Assessment, 9/7/92. P. 503879-503880.
825. Letter to Ms. Lydia Ogden Askew, ATSDR, from Mr. Thomas E. Sulima, re: Comments on the Health Assessment, 9/7/92. P. 503881-503884.
826. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Suppression of information, 9/8/92. P. 503885-503886.
827. Report: Memorandum controverting "Brief in Support of Cover-Up History at C&D Recycling, Freeland, Pennsylvania, prepared by Nelson, Mullins, Riley & Scarborough, 9/9/92. P. 503887-504218. A transmittal letter and note are attached.
828. Newspaper article entitled "Judge: Civil suit over C&D a 'quagmire'," Standard-Speaker, 9/10/92. P. 504219-504220.
829. Memorandum to Mr. Joseph Chikowski, Mr. Henry Cole, Mr. Ronald Davis, Mr. Donald Gerson, Ms. Sharon Rohrbach, Ms. Jane Sulima, and Foster Township Supervisors, from Mr. Michael Towle, U.S. EPA, re: Transmittal of the inorganic data validation report for soil analytical data from C&D, 9/11/92. P. 504221-504221.

830. Letter to Ms. Lydia Ogden Askew, ATSDR, and Board of Supervisors, Foster Township, from Ms. Elaine B. Panitz, Occupational and Environmental Medicine, re: Update on recently available results, 9/14/92. P. 504222-504224.
831. Letter to Ms. Lydia Ogden Askew, ATSDR, and Board of Supervisors, Foster Township, from Ms. Elaine B. Panitz, Occupational and Environmental Medicine, re: Correction to previous letter, 9/14/92. P. 504225-504225.
832. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Robert Sugarman, Sugarman & Associates, re: Request for emergency response action, 9/15/92. P. 504226-504227.
833. Letter to Ms. Marcia Mulkey, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Critical factors neglected in the decision process, 9/15/92. P. 504228-504230G. A letter regarding a supplementary assessment on the site and nearby residents, a letter regarding a correction to the supplementary assessment, and a letter regarding evaluation of human and animal illnesses in relation to the site are attached.
834. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Thomas C. Voltaggio, U.S. EPA, re: Misunderstanding regarding statements made by EPA concerning soil and ground water contamination, 9/16/92. P. 504231-504231.
835. Memorandum to Mr. Greg Ulirsch, ATSDR, from Mr. Jack Kelly, ATSDR, re: Additional information for the reopening of the Health Assessment comment period, 9/15/92. P. 504232-504233. A routing and transmittal slip is attached.
836. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Cecil Rodrigues, U.S. EPA, re: Need for complete copy of cover-up brief for administrative record, 9/17/92. P. 504234-504234.
837. Letter to Mr. Edwin Erickson, U.S. EPA, from Mr. Ralph McMurry, AT&T, re: ARAR issues, 9/17/92. P. 504235-504236.
838. Newspaper article entitled "C&D Recycling soil may go to Plainfield," The Morning Call, 9/18/92. P. 504237-504237.

839. Newspaper article entitled "Doctor: C&D neighbors should undergo exams," Standard-Speaker, 9/19/92. P. 504238-504238.
840. Letter to Mr. Dan Ryan, U.S. EPA, from Mr. Steve Jordan, Mr. Daniel Ravina, and Mr. Eugene J. Zynel, Borough of Freeland, re: Questions on the proposed alternatives, 9/22/92. P. 504239-504240.
841. Newspaper article entitled "Rotzell, on his own, explains problem with mayor to council," (undated). P. 504241-504241.
842. Memorandum from Mr. Michael Towle, U.S. EPA, re: "Black Book" information, (undated). P. 504242-504255. A site chronology, site background information, and questions from concerned citizens are attached.
843. Letter to Mr. Mike Towle, U.S. EPA, from Ms. Jill B. Frymoyer, re: Effects of C&D on her children, (undated). P. 504256-504257. An envelope is attached.
844. Letter to Mr. Mike Towle, U.S. EPA, from Mr. James A. Frymoyer, re: Effects of C&D on his family, (undated). P. 504258-504259. An envelope is attached.
845. Letter from Sulima, re: Idea for people and industry to work together, (undated). P. 504260-504263.
846. Comments on C&D Final Draft Feasibility Study, prepared by Michael J. Pasonick, Jr., Inc., (undated). P. 504264-504266.
847. Petition, Senior Class of Freeland High School, endorsement of Alternative V, (undated). P. 504267-504267.
848. Letter from Mr. John E. Kish, re: Well in Sandy Valley, (undated). P. 504268-504269. An envelope is attached.
849. Comparison of the Community Plan and the AT&T Plan for C&D Recycling, (undated). P. 504270-504270.
850. Comparison of Median Lead and Copper Levels in Mauch Chunk Formation, Pottsville Formation, Residential Wells, and C&D Site Wells, (undated). P. 504271-504271.
851. Newspaper article entitled "Lawyer says AT&T guilty of coverup at C&D site," Standard-Speaker, (undated). P. 504272-504273.

852. Videotape, C & D Public Meeting, May 8, 1992. (This two tape set can be found at EPA Region III, Philadelphia, PA.)
- ** 853. Letter to Mr. Michael Towle, U.S. EPA, from Mr. J.T. Chikowski, AT&T, re: Information relative to the "Brown" draft report, 10/21/91. The following are attached:
- a) a memorandum regarding operations of AT&T Nassau Metal Corporation;
 - b) a draft copy of the Toxicology Review of Potential Combustion Products of Polymers and Other Hydrocarbons as Air Emissions from operations of AT&T Nassau Metal Corporation;
 - c) a memorandum regarding the Toxicology Review of Potential Combustion Products of Polymers and Other Hydrocarbons as Air Emissions from operations of AT&T Nassau Metal Corporation;
 - d) a letter regarding comments on Dr. John F. Brown's draft report;
 - e) comments on Dr. John F. Brown's report.
854. Letter to Ms. Marcia D. Mulkey, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Lack of Superfund Amendments and Reauthorization Act (SARA) requirements in the remedial investigation process, 3/26/92. P. 504274-504275.
855. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Cecil Rodrigues, U.S. EPA, re: Response to request for documents and other information considered by EPA when publicizing its "conclusions" relating to ground water in the December 1990 Fact Sheet, 4/23/92. P. 504276-504464. A table identifying documents which are contained in the administrative record file and considered by EPA when reaching the "conclusions" in the December 1990 Fact Sheet, a report entitled Technical Information Summary, Ground Water, and the administrative record index are attached.
856. Letter to Ms. Marcia Mulkey, U.S. EPA, from Mr. Robert J. Sugarman, Sugarman & Associates, re: Request for a meeting to discuss documents, 8/20/92. P. 504465-504465.

857. Letter to Mr. Robert Sugarman, Sugarman & Associates, from Mr. Edwin B. Erickson, U.S. EPA, re: Response to Freedom of Information Act (FOIA) request, 9/11/92. P. 504466-504477. The following are attached:
- a) a letter regarding public comments on the Health Assessment;
 - b) a letter regarding ground water contamination;
 - c) a memorandum regarding the review of the Health Assessment;
 - d) a memorandum regarding comments on ATSDR preliminary evaluation of blood lead in Foster Township;
 - e) a memorandum regarding review of the new section added to the draft Health Assessment;
 - f) a memorandum regarding remaining comments on the draft Health Assessment;
 - g) a handwritten note regarding analysis of the blood lead data.
858. Meeting attendance sign-in sheet, 9/11/92. P. 504478-504517. Handwritten notes from the meeting and analytical data results are attached.
859. Letter to Mr. Dan Ryan, U.S. EPA, from Mr. Steven E. Jordan, Mr. Daniel Ravina, and Mr. Eugene J. Zynel, Sr., Borough of Freeland, re: Questions on various aspects of the site, 9/22/92. P. 504518-504519.
860. Letter to Mr. Joseph T. Chikowski, AT&T, from Mr. Ed Shoener, PADER, State ARARs, 9/25/92. P. 504520-504521.
861. Memorandum to file from Mr. Cecil Rodrigues, U.S. EPA, re: Information from September 15, 1992 meeting with AT&T, 9/30/92. P. 504522-504522.
862. Memorandum to file from Mr. Cecil Rodrigues, U.S. EPA, re: Potential conflict of interest, 9/30/92. P. 504523-504525. A memorandum regarding the Office of Government Ethics regulations concerning conflicts of interest and the loss of impartiality is attached.

BIBLIOGRAPHY OF SITE SPECIFIC GUIDANCE DOCUMENTS

1. Guidance For Conducting Remedial Investigations and Feasibility Studies Under CERCLA, prepared by OSWER/OERR, 10/1/88.
OSWER #9355.3-01
2. RI/FS Improvements, prepared by H.L. Longest/OERR, 7/23/87.
OSWER #9355.0-20
3. RI/FS Improvements Follow-Up, prepared by H.L. Longest/OERR, 4/25/88.
OSWER #9355.3-05
4. RI/FS Improvements Phase II, Streamlining Recommendations, prepared by OERR/OWPE, 1/1/89.
OSWER #9355.3-06
5. The Feasibility Study - Development and Screening of Remedial Action Alternatives (Quick Reference Fact Sheet), prepared by OSWER, 11/1/89.
OSWER #9355.3-01FS3
6. The Feasibility Study: Detailed Analysis of Remedial Action Alternatives (Quick Reference Fact Sheet), prepared by OSWER, 3/1/90.
OSWER # 9355.3-01FS4
7. Treatability Studies Under CERCLA: An Overview (Quick Reference Fact Sheet), prepared by OSWER, 12/1/89.
OSWER #9380.3-02FS
8. Interim Guidance On Potentially Responsible Party Participation In Remedial Investigations and Feasibility Studies, prepared by J.W. Porter/OSWER, 5/16/88.
OSWER #9835.1a
9. A Compendium of Superfund Field Operations Methods, prepared by OERR/OWPE, 12/1/87.
OSWER #9355.0-14
10. Data Quality Objectives For Remedial Response Activities: Development Process, prepared by CDM Federal Programs Corporation/OERR/OWPE, 3/1/87.
OSWER #9355.0-7B
11. Field Standard Operating Procedures Manual #4-Site Entry, prepared by OERR/HRSD, 1/1/85.
OSWER #9285.2-01

12. Field Standard Operating Procedures Manual #6-Work Zones, prepared by OERR/HRSD, 4/1/85.
OSWER #9285.2-04
13. Field Standard Operating Procedures Manual #8 Air Surveillance, prepared by OERR/HSCD, 1/1/85.
OSWER #9285.2-03
14. Field Standard Operating Procedures Manual #9-Site Safety Plan, prepared by OERR/HRSD, 4/1/85.
OSWER #9285.2-05
15. Guidelines and Specifications for Preparing Quality Assurance Program Documentation, prepared by ORD/Quality Assurance Management Staff, 6/1/87.
16. Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis (Draft), prepared by EPA Data Review Work Group/R. Bleyler/Viar and Co./Sample Mgmt. Office/HSED, 7/1/88.
17. Laboratory Data Validation Functional Guidelines for Evaluating Organics Analysis (Draft), prepared by R. Bleyler/Viar and Co./Sample Mgmt. Office/EPA Data Review Workgroup/HSED, 2/1/88.
18. Sediment Sampling Quality Assurance User's Guide, prepared by D.S. Barth & T.S. Starks/Univ. of Nev. Las Vegas/Brown, 7/1/85.
EPA/600/4-85/048
19. Soil Sampling Quality Assurance User's Guide, prepared by D.S. Barth & B.J. Mason/U. of Nevada, Las Vegas/Brown K./ORD/EARD, 5/1/84.
EPA 600/4-84/043
20. The Remedial Investigation - Site Characterization and Treatability Studies (Quick Reference Fact Sheet), prepared by OSWER, 11/1/89.
OSWER #9355.3-01FS2
21. Covers for Uncontrolled Hazardous Waste Sites, prepared by C.C. McAeny, et al/ U.S. COE/ J.M. Wes Houthoofd/
HWERL
EPA/540//2-85/002
22. Evaluating Cover Systems for Solid and Hazardous Waste, prepared by R.J. Lutton/U.S.A COE/R.E. Wes Houthoofd/
MERL, 9/1/82.
OSWER #9476.00-1

23. Guidance Manual for Minimizing Pollution from Waste Disposal Sites, prepared by A.L. Tolman, et al/A.W. Martin Associates, Inc./Sanning, 8/1/78.
EPA-600/2-78-142
24. Superfund LDR Guide #1 Overview of RCRA Land Disposal Restrictions (LDRs), prepared by OERR, 7/1/89.
OSWER #9347.3-01FS
25. Superfund LDR Guide #2 Complying With the California List Restrictions Under Land Disposal Restrictions (LDRs), prepared by OERR, 7/1/89.
OSWER #9347.3-02FS
26. Superfund LDR Guide #3 Treatment Standards and Minimum Technology Requirements Under Land Disposal Restrictions (LDRs), prepared by OERR, 7/1/89.
OSWER #9347.3-03FS
27. Superfund LDR Guide #4 Complying With the Hammer Restrictions Under Land Disposal Restrictions (LDRs), prepared by OERR, 7/1/89.
OSWER #9347.3-04FS
28. Superfund LDR Guide #5 Determining when Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions, prepared by OERR, 7/1/89.
OSWER #9347.3-05FS
29. Superfund LDR Guide #6A Obtaining a Soil and Debris Treatability Variance for Remedial Actions, prepared by OERR, 7/1/89.
OSWER #9347.3-06FS
30. Superfund LDR Guide #7 Determining When Land Disposal Restrictions (LDRs) are Relevant and Appropriate to CERCLA Response Actions, prepared by OERR, 12/1/89.
OSWER #9347.3-08FS
31. A Compendium of Technologies Used in the Treatment of Hazardous Waste, prepared by ORD/CERI, 9/1/87.
EPA/625/8-87/014
32. Review of In-place Techniques for Contaminated Surface Soils-Vol. 2: Background Information for In-situ Treatment, prepared by R.C. Sims, et al/JRB Associates/N. Barkley/MERL, 11/1/84.
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33. Review of In-place Treatment Techniques for Contaminated Surface Soils-Vol. 1: Technical Evaluation, prepared by OSWER/OERR/ORD/MER1, 9/19/84.
EPA/540/2-84-001
34. Systems to Accelerate In Situ Stabilization of Waste Deposits, prepared by M. Amdurer, et al/Envirosphere Co./W. Grube/HWERL, 9/1/86.
EPA 540/2-86/002
35. Technology Screening Guide for Treatment of CERCLA Soils and Sludges, prepared by OSWER/OERR, 9/1/88.
EPA 540/2-88/004
36. Treatment Technology Briefs: Alternatives to Hazardous Waste Landfills, prepared by HWERL, 7/1/86.
EPA/600/8-86/017
37. Guide to Treatment Technologies for Hazardous Wastes at Superfund Sites, prepared by RREL, 3/1/89.
EPA/540/2-89/052
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OSWER #9355.4-02
50. Land Disposal Restrictions as Relevant and Appropriate Requirements for CERCLA Contaminated Soils and Debris, prepared by OERR, 6/5/89.
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51. RCRA ARARs: Focus on Closure Requirements (Quick Reference Fact Sheet), prepared by OSWER, 10/1/89.
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52. Treatment Standards and Minimum Technology Requirements Under Land Disposal Restrictions (LDR), prepared by OSWER, 7/1/89.
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53. Guidance on Remedial Actions for Superfund Sites with PCB Contamination, prepared by OERR, 8/1/90.
OSWER #9355.4-01
54. Interim Final Guidance on Removal Action Levels at Contaminated Drinking Water Sites, prepared by OSWER/OERR, 10/6/87.
OSWER #9360.1-01
55. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, prepared by OERR, 9/29/89.
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EPA/540/1-89/001

APPENDIX C

CPFs, Rfds, AND RELATED RISK ASSESSMENT INFORMATION

FINAL DRAFT
HUMAN HEALTH RISK
ASSESSMENT REPORT
C&D RECYCLING SITE
FOSTER TOWNSHIP, LUZERNE COUNTY
PENNSYLVANIA

Prepared for:

AT&T Nassau Metals
Staten Island, New York

Prepared by:

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Lester, Pennsylvania 19113

November 18, 1991

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS

Parameter	USEPA Chronic RfD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RfD	RfDc Basis (absorbed/administered)	RfDc Uncertainty Adjustments ³	RfDc ⁴ Source
Aluminum	oral: 2.9E+0 ¹⁰ inhalation: 2.9E+0 ⁶	NA NA	NA NA	NA NA	NA NA	NA NA	EPA Reg. III IRIS/ECAO IRIS/ECAO
Antimony	oral: 4E-4 inhalation: 4E-4 ⁶	reduced lifespan; altered blood and cholesterol characteristics	UF=1000 MF=1 NA	low NA	admin (water) NA	H, A, L NA	IRIS ¹ IRIS/ECAO/ EPA Reg. III
Arsenic	oral: 1E-3 inhalation: 1E-3 ⁶	keratosis, hyperpigmentation NA	UF=1 MF=NA NA	NA NA	admin NA	NA NA	ECAO IRIS/ECAO/ EPA Reg. III
Barium	oral: 7E-2 inhalation: 1E-4	increased blood pressure fetotoxicity	UF=3 MF=1 UF=1,000 MF=NA	medium NA	admin (drinking water) admin (air)	- NA	IRIS ECAO
Beryllium	oral: 5E-3 inhalation: 5E-3 ⁶	no adverse effects NA	UF=100 MF=1 NA	low NA	admin (water) NA	H, A NA	IRIS IRIS/EPA Reg. III
Cadmium	oral: 5E-4 (water); 1E-3 (food) inhalation: 5E-4 (water) ^{6,8} 1E-3 (food) ^{6,8}	significant proteinuria; renal damage	UF=10 MF=1 NA	high NA	absorbed (food/water) NA	H NA	IRIS/ECAO IRIS/ECAO/ Reg. III
Chromium (III)	oral: 1E+0 inhalation: 5.1E-3 ¹⁰	hepatotoxicity NA	UF=1000 MF=10 NA	low NA	admin (food) NA	A, L NA	IRIS IRIS/EPA Reg. III

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

<u>Parameter</u>	<u>USEPA Chronic RfD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RfD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc⁴ Source</u>
Cobalt	oral: ND	NA	NA	NA	NA	NA	IRIS
	inhalation: ND	NA	NA	NA	NA	NA	IRIS
Chromium (VI) [for soluble salts, e.g., potassium dichromate]	oral: 5E-3	no effects reported	UF=500 MF=1	low	admin (water)	H, A, less than lifetime exposure (fac- tor of 5)	IRIS
	inhalation: 5E-3 ^{6,8}		NA	NA	NA	NA	IRIS/ECAO/ EPA Reg. III
Copper	oral: 1.3 mg/l ⁹ (or 3.7E-2)	local gastrointestinal irritation	NA	NA	NA	NA	ECAO
	inhalation: 1E-2 ¹⁰	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Cyanide	oral: 2E-2	weight loss, thyroid effects, myelin degeneration	UF=100 MF=5	medium	admin (food)	H, A	IRIS
	inhalation: 2E-2 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Lead	oral: no data	CNS effects	NA	NA	NA	NA	IRIS
	inhalation: no data	CNS effects	NA	NA	NA	NA	IRIS
Manganese	oral: 2E-1	CNS effects	UF=100 MF=NA	NA	admin (water)	NA	ECAO
	inhalation: 3E-4	CNS effects	UF=100 MF=NA	NA	admin (occu- pational)	NA	ECAO
Mercury, inorganic	oral: 3E-4	neurotoxicity	UF=1000 MF=NA	NA	admin (food)	NA	ECAO
	inhalation: 8.57E-5	kidney effects	UF=30 MF=NA	NA	absorbed (occup- ational)	NA	IRIS/ECAO

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

<u>Parameter</u>	<u>USEPA Chronic RfD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RfD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc⁴ Source</u>
Mercury, methyl	oral: 3E-4	CNS effects	UF-10 MF-1	medium	absorbed (poisonings)	L	IRIS
	inhalation: 1E-4 ¹⁰	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Mercury, mercurial	oral: 3E-4	kidney effects	UF-1000 MF-NA	NA	oral and parenteral studies	NA	ECAO
	inhalation: 1E-4 ¹⁰	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Nickel	oral: 2E-2	reduced body and organ weight	UF-300 MF-NA	NA	admin (diet)	A	ECAO
	inhalation: 2E-2 ⁶		UF-NA	NA	NA	NA	ECAO/EPA Reg. III
Selenium	oral: 3E-3	hair and nail loss; dermatitis ND ⁷	UF-15 MF-NA	NA	admin (food)	S	ECAO/EPA Reg. III
	inhalation: 1E-3		UF-NA	NA	NA	NA	ECAO
Copper	oral: 3E-3	argyria	UF-2 MF-1	medium	admin (intra- venous)	H	IRIS
	inhalation: 3E-3 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Thallium	oral: 7E-5	increased SGOT & serum LDH levels; alopecia	UF-3,000 MF-NA	NA	admin	NA	ECAO
	inhalation: 7E-5 ⁶		NA	NA	NA	NA	ECAO/EPA Reg. III

TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

Parameter	USEPA Chronic RfD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RfD	RfDc Basis (absorbed/ administered)	RfDc Uncertainty Adjustments ³	RfDc ⁴ Source
Vanadium	oral: 7E-3	none observed	UF=100 MF=NA	NA	admin (drinking water)	NA	ECAO
	inhalation: 7E-3 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Zinc	oral: 2E-1	anemia	UF=10 MF=1	NA	admin (thera- peutic dosage)	S	ECAO
	inhalation: 2E-1 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Zinc Phosphide	oral: 3E-4	reduction of food intake & body weight	UF=10,000 MF=1	low	admin (food)	A, H, S, L	IRIS
	inhalation: 3E-4 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Zinc Cyanide	oral: 5E-2	weight loss, thyroid effects, myelin de- generation	UF=100 MF=5	medium	admin (food)	H, A	IRIS
	inhalation: 5E-2 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Quenaphthene	oral: 6E-2	hepatotoxicity	UF=3000 MF=NA	NA	admin (gavage)	NA	IRIS/ECAO EPA Reg. II
	inhalation: 6E-2 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III/ ECAO
Acenaphthylene	oral: 4E-3	NA	NA	NA	NA	NA	IRIS/ECAO/ EPA Reg. I
	inhalation: 4E-3 ⁶	NA	NA	NA	NA	NA	IRIS/ECAO/ EPA Reg. I

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

Parameter	USEPA Chronic RfD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RfD	RfDc Basis (absorbed/ administered)	RfDc Uncertainty Adjustments ³	RfDc ⁴ Source
Anthracene	oral: 3E-1	NA	NA	NA	NA	NA	IRIS/EPA Reg. III/ECAO
	inhalation: 3E-1 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Benzo(a)anthracene	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Benzo(a)pyrene	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Benzo(b)fluoranthene	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Benzo(k)fluoranthene	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Benzo(g,h,i)perylene	oral: 4E-3	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
	inhalation: 4E-3 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Chrysene	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Dibenzofuran	oral: no data	NA	NA	NA	NA	NA	IRIS/ECAO
	inhalation: no data	NA	NA	NA	NA	NA	IRIS/ECAO
Dibenzo(a,h)anthracene	oral: no data	NA	NA	NA	NA	NA	IRIS/ECAO
	inhalation	NA	NA	NA	NA	NA	IRIS/ECAO

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

Parameter	USEPA Chronic RfD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RfD	RfDc Basis (absorbed/ administered)	RfDc Uncertainty Adjustments ³	RfDc ⁴ Source
Fluoranthene	oral: 4E-2	nephropathy, liver weight & hemato- logical changes	UF=3000 MF=NA	NA	admin (gavage)	NA	IRIS/ECAO/ EPA Reg. III
	inhalation: 4E-2 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Fluorene	oral: 4E-2	hematological changes, decreased RBC	UF=3000 MF=NA	NA	admin (gavage)	NA	IRIS/ECAO/ EPA Reg. III
	inhalation: 4E-2 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Indeno (1,2,3-c,d) pyrene	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Phenanthrene	oral: 2.9E-2	NA	NA	NA	NA	NA	IRIS/ECAO/ EPA Reg. III
	inhalation: 2.9E-2 ⁶	NA	NA	NA	NA	NA	IRIS/ECAO/ EPA Reg. III
Pyrene	oral: 3E-2	renal effects	UF=3000 MF=NA	NA	admin (gavage)	NA	IRIS/ECAO/ EPA Reg. III
	inhalation: 3E-2 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
4,4'-DDT	oral: 5E-4	liver lesions	UF=100 MF=1	medium	admin (diet)	H, A	IRIS/ECAO
	inhalation: 5E-4 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
4,4' DDE	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

<u>Parameter</u>	<u>USEPA Chronic RfD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RfD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc⁴ Source</u>
Bis(2-ethylhexyl) phthalate	oral: 2E-2	increased relative liver weight	UF=1000 MF=1 NA	medium	admin (diet)	H, A, S	IRIS
	inhalation: 2E-2 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Butyl benzyl phthalate	oral: 2E-1	increased liver to body weight & liver to brain weight ratios	UF=1000 MF=1 NA	low	admin (diet)	H ^a , A, S	IRIS
	inhalation: 2E-1 ⁶	NA	NA	NA	NA	NA	IRIS/ECAO/ EPA Reg. I
Di-n-butyl phthalate	oral: 1E-1	increased mortality	UF=1000 MF=1 NA	low	admin	H ^a , H, S	IRIS
	inhalation: 1E-1 ⁶	NA	NA	NA	NA	NA	IRIS/ECAO/ EPA Reg.
Di-n-octyl phthalate	oral: 2E-2	elevated kidney & liver weight, increased SGOT & SGPT	UF=1000 MF=1 NA	NA	admin (diet)	NA	ECAO
	inhalation: 2E-2 ⁶	NA	NA	NA	NA	NA	ECAO/EPA/ Reg. I:1

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

<u>Parameter</u>	<u>USEPA Chronic RfD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RfD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc⁴ Source</u>
Toluene	oral: 3E-1 ¹³	clinical chemistry and hematological parameters	UF=100 MF=1	medium	admin (inhalation)	H, A	IRIS
	inhalation: pending (IRIS); 5.7E-1 (ECAO)	CNS effects, eyes and nose irritation	UF=100 MF=NA	NA	admin (occupational)	NA	IRIS/ECAO
2,3,7,8-TCDD	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
PCBs	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Acetone	oral: 1E-1	increased liver & kidney weight, nephrotoxicity	UF=1000 MF=1	low	admin (gavage)	H ^a , S, A	IRIS
	inhalation: 1E-1 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Phenol	oral: 6E-1 ¹⁴	reduced fetal body weight (in rats)	UF=100 MF=1	low	admin (water/ gavage)	H, A	IRIS/ECAO
	inhalation: 2E-2 ¹⁰	NA	NA	NA	NA	NA	IRIS/EPA Reg. III
Naphthalene	oral: 4E-3 ¹⁵	ocular and internal lesions	UF=10,000	NA	NA	A, S	ECAO
	inhalation: 4E-3 ⁶	NA	NA	NA	NA	NA	IRIS/EPA Reg. III

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

Parameter	USEPA Chronic RfD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RfD	RfDc Basis (absorbed/ administered)	RfDc Uncertainty Adjustments ³	RfDc ⁴ Source
Benzoic Acid	oral: 4E+0	irritation, malaise	UF=1 MF=1	medium	admin (diet)	-	IRIS
	inhalation: 4E+0 ⁶	NA	NA	NA	NA	NA	ECAO
Carbon disulfide	oral: 1E-1	fetal toxicity, malformations	UF=100 MF=1	medium	absorbed	H ^a , A	IRIS
	inhalation: 2.86E-3	NA	NA	NA	NA		ECAO
Chloroform	oral: 1E-2	fatty cyst formation in liver	UF=1000 MF=1	medium	admin	H, A, L	IRIS
	inhalation:						
Methylene Chloride	oral: 6E-2	liver toxicity	UF=100 MF=1	medium	admin (drinking water)	NA	IRIS
	inhalation: 8.57E-1	NA	NA	NA	admin	NA	ECAO
2-Methylnaphth- alene	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
4-Methyl phenol	oral: no data	NA	NA	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	NA	NA	IRIS
Methyl ethyl ketone (2-Butanone)	oral: 5E-2	fetotoxicity	UF=1000 MF=1	medium	admin	S, A, L	IRIS/EC/
	inhalation: 9E-2	CNS	UF=1000 MF=NA	NA	admin	NA	ECAO

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

<u>Parameter</u>	<u>USEPA Chronic RfD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RfD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc⁴ Source</u>
Pentachlorophenol	oral: 3E-2	liver and kidney pathology	UF=100 MF=1	medium	admin (gavage)	A, L	IRIS
	inhalation: 3E-2 ⁶	NA	NA	NA	NA	NA	ECAO
Xylenes	oral: 2E+0	hyperactivity, decreased body weight, increased mortality	UF=100 MF=1	medium	admin (gavage)	H, A	IRIS
	inhalation: 8.57E-2	CNS effects, nose/ throat irritation	UF=100 MF=1	NA	admin	NA	ECAO

Footnotes:

1 - Chronic RfD or RfDc = Chronic Reference Dose.

2 - UF = Uncertainty Factor.

MF = Modifying Factor for EPA verified RfD. This factor represents professional judgement on overall database not specifically addressed by uncertainty adjustments.

3 - Abbreviations for RfDc Uncertainty Adjustment. Factor of 10 used for each adjustment unless indicated otherwise:

H = variation in human sensitivity

A = animal to human extrapolation

S = subchronic to chronic NOAEL (no-observed-adverse-effect-level)

L = extrapolation of NOAEL from LOAEL (lowest-observed-adverse-effect-level)

H* = animal intraspecies extrapolation

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TABLE 4-1

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CHRONIC NON-CARCINOGENIC EFFECTS
(CONTINUED)

Footnotes (Cont'd):

4 - RfDc Source:

IRIS = Integrated Risk Information System, USEPA, January 1990 and October 1990

ECAO = Environmental Criteria and Assessment Office, Health Effects Assessment Summary Tables, Third Quarter FY1990, USEPA, July 1990
OERR 9200.6-303-90-3.

EPA Reg. III = USEPA Region III; values based upon a relative potency approach for PAHs. Unless a USEPA-derived chemical-specific RfD is available, all PAHs with a D weight of evidence based upon USEPA's classification system for potential carcinogens (see Table 4-1) were assigned the RfD_c for naphthalene (personal communication with USEPA Region 3).

5 - Inhalation studies with antimony trioxide in rats (HEAST, July, 1990) provides qualitative evidence of lung cancer; the cancer potency was not estimated.

6 - At the request of USEPA Region III, where inhaled RfD or slope factors are not available, the analogous oral values should be used; the agency recognizes that this is not scientifically correct because of differences in mechanisms of action and toxicity endpoints for oral and inhalation exposures, and that this approach contradicts RAGS guidance.

7 - NA = not applicable or not available.

ND = not determined.

8 - An RfD value for this parameter is pending (IRIS, October, 1990).

9 - Current drinking water standard of 1.3 mg/l. Drinking Water Criteria Document concluded toxicity data was inadequate for calculation of an RfD for copper by USEPA.

10 - Value taken from USEPA Region III Updated Reference Concentration Table; 25 April, 1990; Philadelphia, PA. See Appendix

11 - CNS = central nervous system

12 - The USEPA-derived RfDc for inorganic mercury is based on the RfDc for methyl mercury.

13 - The USEPA-derived RfDc for toluene is based on route-to-route extrapolation.

14 - Developmental effects have been used by USEPA as the basis of calculation for the RfD_c for phenol.

15 - A minor calculation error in estimation of the transformed dose in the 1986 HEEP is corrected here by USEPA. The RfD_c for naphthalene is under review by the USEPA RfD Work Group.

TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Subchronic RfD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RfD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc Source⁴</u>
Aluminum	oral: ND inhalation: ND	NA NA	NA NA	NA NA	NA NA	NA NA	IRIS/ECAO IRIS/ECAO
Antimony	oral: 4E-4 inhalation: 4E-4 ^{5,6}	reduced lifespan; altered blood characteristics cancer	UF=1000 MF=NA ⁴ NA	NA NA	admin (water) NA	NA NA	ECAO ECAO/EPA Reg. III
Arsenic	oral: 1E-3 inhalation: 1E-3 ⁶	keratosis, hyper- pigmentation NA	UF=1 MF=NA NA	NA NA	admin NA	NA NA	ECAO ECAO/EPA Reg. III
Barium	oral: 5E-2 inhalation: 1E-3	increased blood pressure fetotoxicity	UF=100 UF=100	NA NA	admin (drinking water) admin (air)	H, S H, S	ECAO ECAO
Beryllium	oral: 5E-3 inhalation: 5E-3 ⁶	none observed NA	UF=100, MF=NA NA	NA NA	admin (water) NA	NA NA	ECAO ECAO/EPA Reg. III
Cadmium	oral: no data ⁷ inhalation: no data	NA cancer	NA NA	NA NA	NA NA	NA NA	ECAO ECAO
Chromium (III)	oral: 1E+1 inhalation: 5.1E-03 ⁹	hepatotoxicity NA	UF=100, MF=NA NA	NA NA	admin (food) NA	NA NA	ECAO ECAO/EPA Reg. III

TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Subchronic RfD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RfD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc Source⁴</u>
Cobalt	oral: ND	NA	NA	NA	NA	NA	IRIS
	inhalation: ND	NA	NA	NA	NA	NA	IRIS
Chromium (VI) [for soluble salts, e.g., potassium dichromate]	oral: 2E-2	not defined	UF=100, MF=NA	NA	admin (water)	NA	ECAO
	inhalation: 2E-2 ⁶	cancer	NA	NA	NA	NA	ECAO/EPA Reg. III
Copper	oral: 1.3 mg/1 ⁸ (or 3.7E-2)	local gastrointes- tinal irritation	NA	NA	admin	NA	ECAO
	inhalation: 1E-2 ⁹	NA	NA	NA	NA	NA	ECAO
Cyanide	oral: 2E-2	weight loss, thyroid effects, myelin degeneration	UF=500, MF=NA	NA	admin (food)	NA	ECAO
	inhalation: 2E-2 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Lead	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Manganese	oral: 5E-1	reproductive	UF=100, MF=NA	NA	admin (food)	NA	ECAO
	inhalation: 3E-4	central nervous system effects	UF=100, MF=NA	NA	absorbed (occu- pational)	NA	ECAO
Mercury, inorganic	oral: 3E-4	neurotoxicity	UF=1000 MF=NA	NA	admin (food)	NA	ECAO
	inhalation: 8.57E-5	kidney effects	UF=30, MF=NA	NA	absorbed (occu- pational)	NA	ECAO

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Subchronic RfD¹</u> <u>(mg/kg-day)</u>	<u>Reported</u> <u>Health</u> <u>Effects</u>	<u>Uncertainty</u> <u>& Modifying</u> <u>Factors²</u>	<u>Confidence</u> <u>in RfD</u>	<u>RfDc Basis</u> <u>(absorbed/</u> <u>administered)</u>	<u>RfDc</u> <u>Uncertainty</u> <u>Adjustments³</u>	<u>RfDc</u> <u>Source⁴</u>
Mercury, mercurial	oral: 3E-4	kidney effects	UF=1000 MF=NA	NA	oral and paren- teral studies	NA	ECAO
	inhalation: 1E-4 ⁹	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Nickel	oral: 2E-2	reduced body and organ weight	UF=300 MF=NA	NA	admin (diet)	NA	ECAO
	inhalation: 2E-2 ⁶	cancer	NA	NA	NA	NA	ECAO/EPA Reg. III
Selenium	oral: 3E-3	hair & nail loss; dermatitis	UF=15 MF=NA	NA	NA	NA	ECAO
	inhalation: 3E-3 ⁶	ND	NA	NA	NA	NA	ECAO/EPA Reg. III
Silver	oral: 3E-3	argyria	UF=2, MF=NA	NA	admin	NA	ECAO
	inhalation: 3E-3	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Thallium	oral: 7E-4	increased SGOT and serum LDH levels; alopecia	UF=300 MF=NA	NA	admin	NA	ECAO
	inhalation: 7E-4 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Vanadium	oral: 7E-3	none observed	UF=100 MF=NA	NA	admin (drinking water)	NA	ECAO
	inhalation: 7E-3 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

Parameter	USEPA Subchronic RFD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RFD	RfDc Basis (absorbed/administered)	RfDc Uncertainty Adjustments ³	RfDc Source ⁴
Zinc	oral: 2E-1	anemia	UF=10, MF=1	NA	admin (therapeutic dosage)	NA	ECAO
	inhalation: 2E-16	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Zinc Phosphide	oral: 3E-3	reduction of food intake & body weight	UF=1000 MF=1	NA	NA	NA	ECAO
	inhalation: 3E-36	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Zinc Cyanide	oral: 5E-2	weight loss, thyroid effects, myelin degeneration	UF=100 MF=5	NA	NA	NA	ECAO
	inhalation: 5E-26	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Acenaphthylene	oral: 4E-3	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
	inhalation: 4E-36	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Acenaphthene	oral: 6E-1	hepatotoxicity	UF=300 MF=NA	NA	admin (gavage)	NA	ECAO
	inhalation: 6E-16	NA	NA	NA	NA	NA	ECAO/EPA Reg. III

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Subchronic RFD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RFD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc Source⁴</u>
Anthracene	oral: 3E-1	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
	inhalation: 3E-1 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Benzo(a)anthracene	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Benzo(a)pyrene	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Benzo(b)fluoranthene	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Benzo(k)fluoranthene	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Benzo(g,h,i)perylene	oral: 4E-3	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
	inhalation: 4E-3 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Chrysene	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Dibenzofuran	oral: no data	NA	NA	NA	NA	NA	IRIS/ECAO
	inhalation: no data	NA	NA	NA	NA	NA	IRIS/ECAO

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Subchronic RFD¹ (mg/kg-day)</u>	<u>Reported Health Effects</u>	<u>Uncertainty & Modifying Factors²</u>	<u>Confidence in RFD</u>	<u>RfDc Basis (absorbed/ administered)</u>	<u>RfDc Uncertainty Adjustments³</u>	<u>RfDc Source⁴</u>
Dibenzo(a,h)anthracene	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Fluoranthene	oral: 4E-1	nephropathy, liver weight and hemato- logical changes	UF=300 MF=NA	NA	admin (gavage)	NA	ECAO/EPA Reg. III
	inhalation: 4E-16	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Fluorene	oral: 4E-1	hematological changes, decreased RBC	UF=300 MF=NA	NA	admin (gavage)	NA	ECAO/EPA Reg. III
	inhalation: 4E-16	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Indeno (1,2,3-c,d) pyrene	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Phenanthrene	oral: 2.9E-2	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
	inhalation: 2.9E-26	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Pyrene	oral: 3E-1	renal effects	UF=300, MF=NA	NA	admin (gavage)	NA	ECAO/EPA Reg. III
	inhalation: 3E-16	NA	NA	NA	NA	NA	EPA Reg. III
2,4'-DDT	oral: 5E-4	liver lesions	UF=100, MF=NA	NA	admin (diet)	NA	ECAO
	inhalation: 5E-46	NA	NA	NA	NA	NA	ECAO/EPA Reg. III

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

Parameter	USEPA Subchronic RFD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RfD	RfDc Basis (absorbed/administered)	RfDc Uncertainty Adjustments ³	RfDc Source ⁴
4,4'-DDE	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Bis(2-ethylhexyl) phthalate	oral: 2E-2	increased relative liver weight	UF=1000, MF=NA	NA	admin (diet)	NA	ECAO
	inhalation: 2E-2 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Butyl benzyl phthalate	oral: 2E+0	effects on body weight gain, testes, liver kidney	UF=100 MF=NA	NA	admin (diet)	NA	ECAO
	inhalation: 2E+0 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Di-n-butyl phthalate	oral: 1E+0	mortality	UI=100, MF=NA	NA	admin (diet)	NA	ECAO
	inhalation: 1E+0 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Di-n-octyl phthalate	oral: 2E-2	elevated kidney & liver, weight	UF=1000 MF=NA	NA	admin (diet)	NA	ECAO
	inhalation: 2E-2 ⁶	increased SGOT & SGPT	NA	NA	NA	NA	ECAO/EPA Reg. III

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

Parameter	USEPA Subchronic RFD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RFD	RfDc Basis (absorbed/administered)	RfDc Uncertainty Adjustments ³	RfDc Source ⁴
Toluene	oral: 4E-1	central nervous system effects	UF=100, MF=NA	NA	admin (gavage)	NA	ECAO
	inhalation: 5.7E-1	central nervous system effects, eye and nose irritation	UF=100, MF=NA	NA	admin (occupational)	NA	ECAO
2,3,7,8-TCDD	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
PCBs	oral: no data	NA	NA	NA	NA	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Acetone	oral: not available	increased liver and kidney weight, nephrotoxicity	UF=100, MF=NA	NA	admin (gavage)	NA	ECAO
	inhalation: no data	NA	NA	NA	NA	NA	ECAO
Phenol	oral: 6E-1	reduced fetal body weight	UF=100, MF=NA	NA	admin (gavage)	NA	ECAO
	inhalation: 6E-1 ⁶	NA	NA	NA	NA	NA	ECAO/EPA Reg. III
Naphthalene	oral: 4E-3 ¹⁰	ocular and internal lesions	UF=10,000 MF=NA	NA	admin (food)	NA	ECAO
	inhalation: 4E-3 ⁶	NA	NA	NA	NA	NA	ECAO

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

Parameter	USEPA Subchronic RFD ¹ (mg/kg-day)	Reported Health Effects	Uncertainty & Modifying Factors ²	Confidence in RFD	RfDc Basis (absorbed/administered)	RfDc Uncertainty Adjustments ³	RfDc Source ⁴
Benzoic Acid	oral: 4E+0 inhalation: 4E+0 ⁶	irritation, malaise NA	UF=1, MF=1 NA	NA NA	admin (diet) NA	- NA	ECAO/IRIS ECAO/EPA Reg. III
Carbon disulfide	oral: 1E-1 inhalation: 1E-1 ⁶	fetal toxicity, malformations NA	UF=100, MF=1 NA	NA NA	absorbed NA	NA	ECAO/IRIS ECAO/EPA Reg. III
Chloroform	oral: 1E-2 inhalation: 1E-2 ⁶	liver lesions NA	UF=1000 MF=1 NA	NA NA	admin NA	NA NA	ECAO/IRIS ECAO/EPA Reg. III
Methylene Chloride	oral: 6E-2 inhalation: 8.57E-1	liver toxicity NA	UF=100, MF=1 NA	NA NA	NA (drinking water) admin	NA NA	ECAO/EPA Reg. III ECAO
2-Methylnaphthalene	oral: no data inhalation: no data	NA NA	NA NA	NA NA	NA NA	NA NA	ECAO ECAO
4-Methyl phenol	oral: no data inhalation: no data	NA NA	NA NA	NA NA	NA NA	NA NA	ECAO ECAO
Methyl ethyl ketone (2-Butanone)	oral: 5E-1 inhalation: 9E-1	fetotoxicity CNS	UF=100, MF=NA UF=100 MF=NA	NA NA	admin admin	NA NA	ECAO ECAO
Pentachlorophenol	oral: 3E-2 inhalation: 3E-2 ⁶	fetotoxicity NA	UF=100, MF=NA NA	medium NA	admin (gavage) NA	NA NA	ECAO ECAO

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TABLE 4-2

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL SUBCHRONIC NON-CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Subchronic RfD¹</u> <u>(mg/kg-day)</u>	<u>Reported</u> <u>Health</u> <u>Effects</u>	<u>Uncertainty</u> <u>& Modifying</u> <u>Factors²</u>	<u>Confidence</u> <u>in RfD</u>	<u>RfDc Basis</u> <u>(absorbed/</u> <u>administered)</u>	<u>RfDc</u> <u>Uncertainty</u> <u>Adjustments³</u>	<u>RfDc</u> <u>Source⁴</u>
Xylenes	oral: 4E+0	none observed	UF=100, MF=1	NA	admin (gavage)	NA	ECAO
	inhalation: 8.57E-2	CNS effects, nose/ throat irritation	UF=100, MF=1	NA	admin	NA	ECAO

Footnote:

1 - Subchronic RfD or RfDs = Subchronic Reference Dose.

2 - UF = Uncertainty Factor

3 - RfDs Source = Environmental Criteria and Assessment Office, Health Effects Assessment Summary Tables, Third Quarter FY 1990, USEPA, July 1990. OEH 9200.6-303-90.3.

EPA Reg. III = USEPA Region III; values based upon a relative potency approach for PAHs. Unless a USEPA-derived chemical-specific RfD was available all PAHs with a D Weight of Evidence based upon EPA's classification system for potential carcinogens (see Table 4-3) were assigned the RfD_s for naphthalene (personal communication with USEPA Region III).

4 - NA - not applicable or not available.

ND - not determined.

5 - Inhalation studies with antimony trioxide in rats (HEAST, July, 1990) provides qualitative evidence of lung cancer; the cancer potency was not estimated.

6 - At the request of USEPA Region III, where inhaled RfDs or slope factors are not available, the analogous oral values should be used. The agency recognizes that this is not scientifically correct because of differences in mechanisms of action and toxicity endpoints for oral and inhalation exposures, and that this approach contradicts RAGS guidance.

7 - Because of background dietary exposure, an RfD_s was not estimated for cadmium by USEPA.

8 - Current drinking water standard of 1.3 mg/l. Drinking water criteria document concludes toxicity data were inadequate for calculation of an RfD_s for copper by USEPA.

9 - Value taken from USEPA Region III Updated Reference Concentration Table; 25 April 1990; Philadelphia, PA. See Appendix.

10 - A minor calculation error in estimation of transformed dose in 1986 HEEP is corrected here by USEPA.

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Slope Factor (SF)</u> <u>(mg/kg-day)⁻¹</u>	<u>Weight</u> <u>of</u> <u>Evidence¹</u>	<u>Type of cancer</u>	<u>SF Basis²</u> <u>(absorbed/administered)</u>	<u>SF Sources³</u>
Aluminum	oral: no data inhalation: no data	NA NA	NA NA	NA NA	ECAO ECAO
Arsenic	oral: 1.75E+0 (also, 5.0E-5 (ug/l) ⁻¹ proposed) ⁴ inhalation: 5.0E+1 ⁵ 1.5E+1 (incorporates absorption factor)	A A	skin lung, respiratory tract	ingestion (water) inhalation (occupational)	IRIS IRIS
Antimony	oral: no data inhalation: no data	NA NA ¹²	NA lung	NA NA	IRIS ECAO
Barium	oral: no data inhalation: no data	NA NA	NA NA	NA NA	IRIS IRIS
Beryllium	oral: 4.3E+0 inhalation: 8.4E+0	B2 B2	leukemia, lung, bone lung	admin (water/injection) admin (intratracheal instillation)	IRIS IRIS
Cadmium	oral: insufficient data inhalation: 6.1E+0	ND B1	NA lung, trachea	NA inhalation (occupational)	IRIS/ECAO IRIS
Chromium (III)	oral: no data inhalation: no data	ND ND	NA NA	NA NA	IRIS/ATSDR IRIS/ATSDR
Chromium (VI)	oral: not available inhalation: 4.1E+1	ND A	NA lung	NA inhalation (occupational)	IRIS IRIS
Cobalt	oral: no data inhalation: no data	NA NA	NA NA	NA NA	IRIS IRIS

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Slope Factor (SF) (mg/kg-day)⁻¹</u>	<u>Weight of Evidence¹</u>	<u>Type of cancer</u>	<u>SF Basis² (absorbed/administered)</u>	<u>SF Sources³</u>
Copper	oral: not available	D	NA	admin (gelatin)	IRIS
	inhalation: not available	D	NA	NA	IRIS
Cyanide	oral: not available	D	NA	NA	IRIS
	inhalation: not available	D	NA	NA	IRIS
Lead	oral: not available	B2	renal tumors	admin (food, water); sub- cutaneous	IRIS
	inhalation: not available	B2	NA	NA	IRIS
Manganese	oral: not available	D	NA	admin (injection/gavage)	IRIS
	inhalation: not available	D	NA	NA	IRIS
Mercury	oral: not available	D	NA	admin (food)	IRIS
	inhalation: not available	D	NA	NA	IRIS
Nickel	oral: ND	ND	NA	NA	IRIS/ECAO
	inhalation: 1.19E+0 ⁶	A	respiratory tract	admin (occupational)	IRIS/ECAO
Selenium	oral: not available	D	NA	NA	ECAO
	inhalation: not available	D	NA	NA	ECAO
Silver	oral: not available	D	NA	NA	IRIS
	inhalation: not available	D	NA	NA	IRIS
Thallium	oral: no data	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	IRIS
Vanadium	oral: no data	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	IRIS

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS

Parameter	USEPA Slope Factor (SF) (mg/kg-day) ⁻¹	Weight of Evidence ¹	Type of cancer	SF Basis ² (absorbed/administered)	SF Sources ³
Zinc Phosphide	oral: no data	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	IRIS
Zinc Cyanide	oral: no data	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	IRIS
Acenaphthylene	oral: no data	D	NA	NA	IRIS/ECAO
	inhalation: no data	D	NA	NA	IRIS/ECAO
Acenaphthene	oral: no data	D	NA	NA	IRIS/ECAO
	inhalation: no data	D	NA	NA	IRIS/ECAO
Anthracene	oral: no data	D	NA	admin (diet, dermal)	IRIS/ECAO/ ATSDR (a)
	inhalation: no data	D	NA	NA	IRIS/ECAO
Benzo(a)anthracene	oral: 1.66E+0 ⁹	B2	hepatomas, pulmonary adenomas	admin (gavage, dermal)	ATSDR(a)/ECAO EPA Reg. III
	inhalation: 8.85E-1 ⁹	B2	NA	NA	ECAO/EPA Reg. III
Benzo(a)pyrene	oral: 1.15E+1	B2	stomach	admin (food)	IRIS/ECAO
	inhalation: 6.10E+0	B2	lung/respiratory tract	admin (inhalation)	IRIS/ECAO
Benzo(b)fluoranthene	oral: 1.61E+0 ⁹	B2	NA	admin (dermal)	ATSDR(a)/ECAO/
	inhalation: 8.54E-1 ⁹	B2	NA	NA	EPA Reg. III ECAO/EPA Reg. III

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS

Parameter	USEPA Slope Factor (SF) (mg/kg-day) ⁻¹	Weight of Evidence ¹	Type of cancer	SF Basis ² (absorbed/administered)	SF Sources ³
Benzo(k)fluoranthene	oral: 7.59E-1 ⁹	B2	NA	NA	ECAO/EPA Reg. III
	inhalation: 4.03E-1 ⁹	B2	NA	NA	ECAO/EPA Reg. III
Benzo(g,h,i)perylene	oral: 2.53E-1 ^{9,10}	D	NA	NA	ECAO/EPA Reg. III
	inhalation: 1.34E-1 ^{9,10}	D	NA	NA	ECAO/EPA Reg. III
Chrysene	oral: 5.06E-2 ⁹	B2	NA	admin (dermal)	ATSDR(a)/ECAO/ Reg. III
	inhalation: 2.68E-2 ⁹	B2	NA	NA	ECAO/EPA Reg. III
Dibenzofuran	oral: no data	D	NA	NA	IRIS/ECAO
	inhalation: no data	D	NA	NA	IRIS/ECAO
Dibenzo(a,h)anthracene	oral: 1.28E+1 ⁹	B2	NA	admin (dermal)	ECAO/EPA Reg. III
	inhalation: 6.77E+0 ⁹	B2	NA	NA	ECAO/EPA Reg. III
Fluoranthene	oral: no data	D	NA	NA (dermal)	IRIS/ECAO/ ATSDR (a)
	inhalation: no data	D	NA	NA	IRIS/ECAO
Fluorene	oral: no data	D	NA	admin (diet)	IRIS/ECAO/ ATSDR (a)
	inhalation: no data	D	NA	NA	IRIS/ECAO

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS

Parameter	USEPA Slope Factor (SF) (mg/kg-day) ⁻¹	Weight of Evidence ¹	Type of cancer	SF Basis ² (absorbed/administered)	SF Sources ³
Indeno (1,2,3-c,d) pyrene	oral: 2.67E+0 ⁹	B2	NA	admin (dermal)	ECAO/EPA Reg. III
	inhalation: 1.42E+0 ⁹	B2	NA	NA	ECAO/EPA Reg. III
Phenanthrene	oral: no data	D	NA	admin (gavage)	IRIS/ECAO/ ATSDR (a)
	inhalation: no data	D	NA	NA	IRIS/ECAO
4,4'-DDT	oral: 3.4E-1	B2	liver tumors	admin (food)	IRIS
	inhalation: 3.4E-1	B2	liver tumors	admin (food) [calculated from oral data]	IRIS/ECAO
Pyrene	oral: 9.32E-1 ^{9,10}	D	NA	admin (dermal)	ATSDR(a)/ECAO/ EPA Reg. III
	inhalation: 4.94E-1 ^{9,10}	D	NA	NA	ECAO/EPA Reg. III
4,4'-DDE	oral: 3.4E-1	B2	liver/thyroid tumors	admin (food)	IRIS
	inhalation: 3.4E-1 ⁷	NA	NA	NA	IRIS
Bis(2-ethylhexyl) phthalate	oral: 1.4E-2	B2	liver tumors	admin (food)	IRIS
	inhalation: 1.4E-2 ⁷	B2	NA	NA	IRIS/ECAO/EPA Reg. III
Butyl benzyl phthalate	oral: no data	C	mononuclear cell leukemia	admin	IRIS/ECAO
	inhalation: no data	NA	NA	NA	IRIS/ECAO
Di-n-butyl phthalate	oral: no data	D	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	IRIS

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Slope Factor (SF) (mg/kg-day)⁻¹</u>	<u>Weight of Evidence¹</u>	<u>Type of cancer</u>	<u>SF Basis² (absorbed/administered)</u>	<u>SF Sources³</u>
Di-n-octyl phthalate	oral: no data inhalation: no data	NA NA	NA NA	NA NA	IRIS IRIS
Toluene	oral: not available inhalation: not available	D D	NA NA	admin (inhalation/dermal) NA	IRIS IRIS
2,3,7,8-TCDD	oral: 1.56E+5 inhalation: 1.56E+5 ¹¹	B2 B2	several several	admin (diet) admin (diet)	IRIS IRIS
PCBs	oral: 7.7E+0 inhalation: 7.7E+0 ⁷	B2 B2	liver, melanoma NA	admin (food) NA	IRIS IRIS
Acetone	oral: pending inhalation: pending	D D	NA NA	NA NA	IRIS/ECAO IRIS/ECAO
Phenol	oral: not available inhalation: not available	D D	NA NA	admin (diet/dermal) NA	ATSDR (b) ATSDR (b)
Naphthalene	oral: no data inhalation: no data	D D	NA NA	NA NA	IRIS IRIS
Benzoic acid	oral: no data inhalation: no data	D NA	NA NA	NA NA	IRIS IRIS
Carbon disulfide	oral: no data inhalation: no data	NA NA	NA NA	NA NA	IRIS IRIS
Chloroform	oral: 6.1E-3 inhalation: 8.1E-2	B2 B2	kidney liver	admin (drinking water) admin	IRIS ECAO/IRIS

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS

<u>Parameter</u>	<u>USEPA Slope Factor (SF)</u> <u>(mg/kg-day)⁻¹</u>	<u>Weight</u> <u>of</u> <u>Evidence¹</u>	<u>Type of cancer</u>	<u>SF Basis²</u> <u>(absorbed/administered)</u>	<u>SF Sources³</u>
Methylene chloride	oral: 7.5E-3	B2	hepatocellular neoplasms & alveolar & broncholar neoplasms; salivary sarcomas, leukemias; humans: pancreatic cancer	admin (inhalation and drinking water)	IRIS
	inhalation: 1.4E-2	B2	lung, liver	admin (inhalation)	IRIS/ECAO
2-Methylnaphthalene	oral: no data	NA	NA	NA	IRIS/ECAO
	inhalation: no data	NA	NA	NA	IRIS/ECAO
4-Methyl phenol	oral: no data	NA	NA	NA	IRIS
	inhalation: no data	NA	NA	NA	IRIS
Methyl ethyl ketone	oral: no data	D	NA	NA	ECAO/IRIS
	inhalation: no data	D	NA	NA	ECAO/IRIS
Pentachlorophenol	oral: pending	NA	NA	NA	IRIS
	inhalation: pending	NA	NA	NA	IRIS
Xylenes	oral: no data	D	NA	NA	IRIS
	inhalation: no data	D	NA	NA	IRIS

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS
(CONTINUED)

Footnote:

1 - The USEPA Weight of Evidence classification system is used to characterize the extent to which the available data indicate that an agent is a human carcinogen.

- | | |
|---|---|
| A - Human Carcinogen: | Sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer. |
| B1 - Probable Human Carcinogen: | Limited evidence of carcinogenicity in humans from epidemiologic studies. |
| B2 - Probable Human Carcinogen: | Sufficient evidence of carcinogenicity in animals, inadequate evidence of carcinogenicity in humans. |
| C - Possible Human Carcinogen: | Limited evidence of carcinogenicity in animals. |
| D - Not Classified: | Inadequate evidence of carcinogenicity in animals. |
| E - No Evidence of Carcinogenicity in Humans: | No evidence of carcinogenicity in at least two adequate animal tests or in both epidemiologic and animal studies. |

2 - SF Basis: Whether the USEPA slope factor is expressed as an absorbed dose or an administered intake.

3 - SF Sources:

IRIS - Integrated Risk Information System, USEPA, January, 1990, and September 1990; all values were verified in HEAST 3Q, FY 1990.

ECAO - Environmental Criteria Assessment Office, USEPA, Health Effects Assessment Summary Tables, Third Quarter FY 1990, July 1990. OERR 9200.6-303-90-3.

EPA Reg. III - USEPA Region III; values based upon relative potency estimates for PAHs.

ATSDR - Agency for Toxic Substances and Disease Registry, US Public Health Service, (a) October, 1989; and (b) December, 1988.

4 - The USEPA Risk Assessment Forum has completed a reassessment of the carcinogenicity risk associated with ingestion of inorganic arsenic. This report, which has been extensively peer-reviewed by outside reviewers (including SAB (Science Advisory Board) review) concluded that the most appropriate basis for an oral quantitative estimate was the study by Tseng et al. (1977), which reported increased prevalence of skin cancers in humans as a consequence of arsenic exposure in drinking water. Based on this study a unit risk of $5E-5$ (ug/l)⁻¹ was proposed.

A recent memorandum by the Administrator of the USEPA recommended that the above slope factor be adopted. The memorandum further counsels that "in reaching risk management decisions in a specific situation, risk managers must recognize and consider the qualities and uncertainties of risk estimates. The uncertainties associated with ingested inorganic arsenic are such that estimates could be modified downwards as much as an order of magnitude, relative to risk estimates associated with most other carcinogens. In such instances, the management document must clearly articulate this fact and state the factors that influenced such a decision" (IRIS, January, 1990).

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TABLE 4-3

USEPA TOXICITY VALUES FOR EVALUATING POTENTIAL CARCINOGENIC EFFECTS
(CONTINUED)

Footnote (Cont'd):

- 5 - An absorption factor of 30% is used in calculation of the inhalation unit risk from the USEPA slope factor $(5E+01 \text{ (mg/kg/day)}^{-1} \times 0.30) = 1.5E+01 \text{ (mg/kg/day)}^{-1}$.
- 6 - Value taken from USEPA Region III Updated Reference Concentration Table; 25 April 1989; Philadelphia, PA. Appendix E3.
- 7 - At the request of USEPA Region III, where inhaled slope factor values are not available, the analagous oral values should be used; the agency recognizes that this is not scientifically correct because of differences in mechanisms of action and toxicity endpoints for oral and inhalation exposures, and that this approach contradicts RAGS guidance.
- 8 - ND: Not determined
NA: Not applicable or not available
- 9 - The guidance provided by USEPA Region III recommended the use of relative potency factors derived for PAHs (see Section 4.5.1) to assess the cancer risk of these chemicals. The relative potency factors (based on a relative potency estimate of 1.0 for benzo(a)pyrene) are applied to the slope factor for benzo(a)pyrene $(11.5 \text{ (mg/kg-day)}^{-1})$, in order to obtain slope factors for other PAHs.
- 10- There are two inconsistencies resulting from USEPA's guidance on use of the relative potency approach: both pyrene and benzo(g,h,i)perylene were classified as D weight-of-evidence by ECAO. However, a USEPA-derived cancer potency slope factor relative to benzo(a)pyrene was provided by USEPA Region 3 for these two PAHs (see Section 4.5.1). The more conservative approach, which adopted the modified USEPA slope factor for potential carcinogenic effects for these two chemicals of potential concern was used, in spite of the apparent lack of justification provided in USEPA guidance for their carcinogenic potential as indicated by their D weight-of-evidence classification by USEPA.
- 11- Inhalation slope factor for 2,3,7,8-TCDD is based upon route-to-route extrapolation by USEPA.
- 12- Inhalation studies with antimony trioxide in rats provides qualitative evidence of lung cancer. The cancer potency was not estimated (HEAST, July, 1990).

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4.5 Chemicals for Which No Toxicity Values are Available

4.5.1 Polycyclic Aromatic Hydrocarbons (PAHs)

At present (January, 1991) there are no USEPA-published slope factors for carcinogens listed in the IRIS database for any of the organic compounds included in the category of polycyclic aromatic hydrocarbons. USEPA has withdrawn the previously published value for benzo(a)pyrene, while they review the data which exist on it and other organic compounds in its class. There are also several PAHs for which no RfD value is published. In an attempt to best quantify the potential risk posed by these organic compounds at the Site, guidance was requested from USEPA ECAO (Environmental Criteria and Assessment Office) (see Appendix E) and USEPA Region III (see Appendix E) regarding their recommendations for quantitative treatment of these PAHs in the absence of USEPA-published toxicity values.

The USEPA weight-of-evidence classifications for potential carcinogenicity for PAHs were obtained from USEPA ECAO, and are as follows:

<u>Organic Compound</u>	<u>USEPA Weight-of-evidence classification</u>
Benzo(a)pyrene	B2
Benzo(a)anthracene	B2 (Not Finalized)
Benzo(b)fluoranthene	B2
Benzo(k)fluoranthene	B2
Chrysene	B2
Dibenzo(a,h)anthracene	B2
Indeno(1,2,3-c,d)pyrene	B2
Anthracene	D
Fluoranthene	D
Fluorene	D
Phenanthrene	D
Pyrene	D
Benzo(g,h,i)perylene	Not classified.

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APPENDIX D

RISK CHARACTERIZATION TABLES

FINAL DRAFT
HUMAN HEALTH RISK
ASSESSMENT REPORT
C&D RECYCLING SITE
FOSTER TOWNSHIP, LUZERNE COUNTY
PENNSYLVANIA

Prepared for:

AT&T Nassau Metals
Staten Island, New York

Prepared by:

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Lester, Pennsylvania 19113

November 18, 1991

TABLE 5-1

POTENTIAL RISKS VIA INGESTION OF OFF-SITE
GROUNDWATER BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	3.01E-03			3.51E-02	2.90E+00	1.21E-02
Antimony	1.19E-04			1.39E-03	4.00E-04	3.48E+00
Arsenic	1.99E-05	5.00E-05	9.95E-10	2.32E-04	1.00E-03	2.32E-01
Barium	2.43E-06			2.83E-03	7.00E-02	4.05E-02
Beryllium	7.96E-06	4.30E+00	3.42E-05	9.29E-05	5.00E-03	1.86E-02
Chromium	1.99E-05			2.32E-04	1.00E+00	2.32E-04
Cobalt	9.15E-05			1.07E-03		
Copper	4.26E-04			4.97E-03	3.70E-02	1.37E-01
Lead	3.58E-05			4.18E-04		
Manganese	3.62E-04			4.23E-03	2.00E-01	2.11E-02
Mercury	9.15E-07			1.07E-05	3.00E-04	3.56E-02
Selenium	1.19E-05			1.39E-04	3.00E-03	4.64E-02
Silver	2.79E-05			3.25E-04	3.00E-03	1.08E-01
Vanadium	9.55E-05			1.11E-03	7.00E-03	1.59E-01
Zinc	3.74E-04			4.37E-03	2.00E-01	2.18E-01
Cyanide	4.78E-05			5.57E-04	2.00E-02	2.79E-02

Organics:

Methylene Chloride	1.19E-05	7.50E-03	8.96E-08	1.39E-04	6.00E-02	2.32E-03
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* Cumulative Carcinogenic Risk:

3.43E-05

* Cumulative Noncarcinogenic Risk: 4.34E+00

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	3.12E-03			1.82E-02	2.90E+00	6.28E-03
Antimony	1.24E-04			7.22E-04	4.00E-04	1.81E+00
Arsenic	2.06E-05	5.00E-05	1.03E-09	1.20E-04	1.00E-03	1.20E-01
Barium	2.52E-04			1.47E-03	7.00E-02	2.10E-02
Beryllium	8.25E-06	4.30E+00	3.55E-05	4.81E-05	5.00E-03	9.63E-03
Chromium	2.06E-05			1.20E-04	1.00E+00	1.20E-04
Cobalt	9.49E-05			5.54E-04		
Copper	4.42E-04			2.58E-03	3.70E-02	6.96E-02
Lead	3.71E-05			2.17E-04		
Manganese	3.76E-04			2.19E-03	2.00E-01	1.10E-02
Mercury	9.49E-07			5.54E-06	3.00E-04	1.85E-02
Selenium	1.24E-05			7.22E-05	3.00E-03	2.41E-02
Silver	2.89E-05			1.69E-04	3.00E-03	5.62E-02
Vanadium	9.90E-05			5.78E-04	7.00E-03	8.25E-02
Zinc	3.88E-04			2.26E-03	2.00E-01	1.13E-02
Cyanide	4.95E-05			2.89E-04	2.00E-02	1.44E-02

Organics:

Methylene Chloride	1.24E-05	7.50E-03	9.29E-08	7.22E-05	6.00E-02	1.20E-03
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* Cumulative Carcinogenic Risk:

3.56E-05

* Cumulative Noncarcinogenic Risk: 2.25E+00

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TABLE 5-1

POTENTIAL RISKS VIA INGESTION OF OFF-SITE
GROUNDWATER BY ADULTS UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	9.26E-03			2.16E-02	2.90E+00	7.45E-03
Antimony	3.67E-04			8.57E-04	4.00E-04	2.14E+00
Arsenic	6.12E-05	5.00E-05	3.06E-09	1.43E-04	1.00E-03	1.43E-01
Barium	7.47E-04			1.74E-03	7.00E-02	2.49E-02
Beryllium	2.45E-05	4.30E+00	1.05E-04	5.71E-05	5.00E-03	1.14E-02
Chromium	6.12E-05			1.43E-04	1.00E+00	1.43E-04
Cobalt	2.82E-04			6.57E-04		
Copper	1.31E-03			3.06E-03	3.70E-02	8.26E-02
Lead	1.10E-04			2.57E-04		
Manganese	1.11E-03			2.60E-03	2.00E-01	1.30E-02
Mercury	2.82E-06			6.57E-06	3.00E-04	2.19E-02
Selenium	3.67E-05			8.57E-05	3.00E-03	2.86E-02
Silver	8.57E-05			2.00E-04	3.00E-03	6.67E-02
Vanadium	2.94E-04			6.86E-04	7.00E-03	9.80E-02
Zinc	1.15E-03			2.69E-03	2.00E-01	1.34E-02
Cyanide	1.47E-04			3.43E-04	2.00E-02	1.71E-02
<u>Organics:</u>						
Methylene Chloride	3.67E-05	7.50E-03	2.76E-07	8.57E-05	6.00E-02	1.43E-03
* Cumulative Carcinogenic Risk:			1.06E-04	* Cumulative Noncarcinogenic Risk: 2.67E+00		

TABLE 5-2

POTENTIAL RISKS VIA INGESTION OF OFF-SITE
SOIL BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Copper	7.42E-05			8.65E-04	3.70E-02	2.34E-02
Lead	2.59E-04			3.02E-03		
Silver	8.53E-07			9.95E-06	3.00E-03	3.32E-03
Vanadium	1.36E-05			1.58E-04	7.00E-03	2.26E-02
Zinc	2.93E-05			3.42E-04	2.00E-01	1.71E-03
Cyanide	1.68E-07			1.96E-06	2.00E-02	9.82E-05
<u>Organics:</u>						
Acenaphthylene	3.91E-08			4.56E-07	4.00E-03	1.41E-04
Anthracene	5.16E-08			6.02E-07	3.00E-01	2.01E-06
Benzo(a)anthracene	1.90E-07	1.66E+00	3.15E-07	2.21E-06		
Benzo(a)pyrene	1.77E-07	1.15E+01	2.04E-06	2.07E-06		
Benzo(b)fluoranthene	2.37E-07	1.61E+00	3.81E-07	2.76E-06		
Benzo(g,h,i)perylene	1.27E-07	2.53E-01	3.20E-08	1.48E-06	4.00E-03	3.69E-04
Benzo(k)fluoranthene	2.37E-07	7.59E-01	1.80E-07	2.76E-06		
Bis(2-ethylhexyl)phthalate	1.03E-07	1.40E-02	1.44E-09	1.20E-06	2.00E-02	5.99E-05
Chrysene	1.98E-07	5.06E-02	1.00E-08	2.31E-06		
Dibenzo(a,h)anthracene	7.06E-08	1.28E+01	9.04E-07	8.24E-07		
Di-n-butyl phthalate	2.55E-08			2.98E-07	1.00E-01	2.98E-06
Fluoranthene	3.16E-07			3.69E-06	4.00E-02	9.22E-05
Indeno(1,2,3-cd)pyrene	1.22E-07	2.67E+00	3.25E-07	1.42E-06		
Phenanthrene	1.57E-07			1.83E-06	2.90E-02	6.31E-05
Pyrene	2.52E-07	9.32E-01	2.35E-07	2.94E-06	3.00E-02	9.80E-05
4,4'-OQE	1.52E-08	3.40E-01	5.17E-09	1.77E-07		
Total Phenols	8.09E-08			9.44E-07	6.00E-01	1.57E-06
Benzoic Acid	3.91E-08			4.56E-07	4.00E+00	1.14E-07
Pentachlorophenol	5.43E-09			6.43E-08	3.00E-02	2.11E-06
Cumulative Carcinogenic Risk:			4.42E-06	Cumulative Noncarcinogenic Risk:		5.19E-02
<u>Background-Related:</u>						
Arsenic	1.66E-05	5.00E-05	8.29E-10	1.93E-04	1.00E-03	1.93E-01
Beryllium	3.10E-07	4.30E+00	1.33E-06	3.61E-06	5.00E-03	7.22E-04
Cumulative Background-Related Carcinogenic Risk:			1.33E-06	Cumulative Background-Related Noncarcinogenic Risk:		1.94E-01
* Total Carcinogenic Risk:			5.75E-06	* Total Noncarcinogenic Risk:		2.46E-01

TABLE 5-2

POTENTIAL RISKS VIA INGESTION OF OFF-SITE
SOIL BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Copper	2.75E-05			1.60E-04	3.70E-02	4.33E-03
Lead	9.59E-05			5.59E-04		
Silver	3.16E-07			1.84E-06	3.00E-03	6.14E-04
Vanadium	5.03E-06			2.93E-05	7.00E-03	4.19E-03
Zinc	1.08E-05			6.33E-05	2.00E-01	3.16E-04
Cyanide	6.24E-08			3.64E-07	2.00E-02	1.82E-05
<u>Organics:</u>						
Acenaphthylene	1.45E-08			8.45E-08	4.00E-03	2.11E-05
Anthracene	1.91E-08			1.11E-07	3.00E-01	3.72E-07
Benzo(a)anthracene	7.02E-08	1.66E+00	1.17E-07	4.09E-07		
Benzo(a)pyrene	6.56E-08	1.15E+01	7.54E-07	3.82E-07		
Benzo(b)fluoranthene	8.77E-08	1.61E+00	1.41E-07	5.12E-07		
Benzo(g,h,i)perylene	4.69E-08	2.53E-01	1.19E-08	2.73E-07	4.00E-03	6.83E-05
Benzo(k)fluoranthene	8.77E-08	7.59E-01	6.66E-08	5.12E-07		
Bis(2-ethylhexyl)phthalate	3.80E-08	1.40E-02	9.32E-10	2.22E-07	2.00E-02	1.11E-05
Chrysene	7.34E-08	5.06E-02	3.71E-09	4.28E-07		
Dibenzo(a,h)anthracene	2.61E-08	1.28E+01	3.35E-07	1.53E-07		
Di-n-butyl phthalate	9.45E-09			5.51E-08	1.00E-01	5.51E-07
Fluoranthene	1.17E-07			6.83E-07	4.00E-02	1.71E-05
Indeno(1,2,3-cd)pyrene	4.51E-08	2.67E+00	1.20E-07	2.63E-07		
Phenanthrene	5.81E-08			3.39E-07	2.90E-02	1.17E-05
Pyrene	9.33E-08	9.32E-01	8.70E-08	5.44E-07	3.00E-02	1.81E-05
4,4'-ODE	5.63E-09	3.40E-01	1.91E-09	3.29E-08		
Total Phenols	3.00E-08			1.75E-07	6.00E-01	2.91E-07
Benzoic Acid	1.45E-08			8.45E-08	4.00E+00	2.11E-08
Pentachlorophenol	2.01E-09			1.17E-08	3.00E-02	3.91E-07
Cumulative Carcinogenic Risk:			1.64E-06	Cumulative Noncarcinogenic Risk:		9.62E-03
<u>Background-Related:</u>						
Arsenic	6.14E-06	5.00E-05	3.07E-10	3.58E-05	1.00E-03	3.58E-02
Beryllium	1.15E-07	4.30E+00	4.93E-07	6.69E-07	5.00E-03	1.34E-04
Cumulative Background-Related Carcinogenic Risk:			4.93E-07	Cumulative Background-Related Noncarcinogenic Risk:		3.59E-02
* Total Carcinogenic Risk:			2.13E-06	* Total Noncarcinogenic Risk:		4.56E-02

TABLE 5-2

RISKS VIA INGESTION OF OFF-SITE
SOILS BY ADULTS UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
Inorganics:						
Copper	4.24E-05			9.89E-05	3.70E-02	2.67E-03
Lead	1.48E-04			3.45E-04		
Silver	4.87E-07			1.14E-06	3.00E-03	3.79E-04
Vanadium	7.76E-06			1.81E-05	7.00E-03	2.59E-03
Zinc	1.67E-05			3.90E-05	2.00E-01	1.95E-04
Cyanide	9.62E-08			2.24E-07	2.00E-02	1.12E-05
Organics:						
Acenaphthylene	2.23E-08			5.21E-08	4.00E-03	1.30E-05
Anthracene	2.95E-08			6.88E-08	3.00E-01	2.29E-07
Benzo(a)anthracene	1.08E-07	1.66E+00	1.80E-07	2.53E-07		
Benzo(a)pyrene	1.01E-07	1.15E+01	1.16E-06	2.36E-07		
Benzo(b)fluoranthene	1.35E-07	1.61E+00	2.18E-07	3.16E-07		
Benzo(g,h,i)perylene	7.23E-08	2.53E-01	1.83E-08	1.69E-07	4.00E-03	4.22E-05
Benzo(k)fluoranthene	1.35E-07	7.59E-01	1.03E-07	3.16E-07		
Bis(2-ethylhexyl)phthalate	5.86E-08	1.40E-02	8.21E-10	1.37E-07	2.00E-02	6.84E-06
Chrysene	1.13E-07	5.06E-02	5.73E-09	2.64E-07		
Dibenzo(a,h)anthracene	4.03E-08	1.28E+01	5.16E-07	9.41E-08		
Di-n-butyl phthalate	1.46E-08			3.40E-08	1.00E-01	3.40E-07
Fluoranthene	1.81E-07			4.21E-07	4.00E-02	1.05E-05
Indeno(1,2,3-cd)pyrene	6.95E-08	2.67E+00	1.86E-07	1.62E-07		
Phenanthrene	8.97E-08			2.09E-07	2.90E-02	7.22E-06
Pyrene	1.44E-07	9.32E-01	1.34E-07	3.36E-07	3.00E-02	1.12E-05
4,4'-DDE	8.69E-09	3.40E-01	2.95E-09	2.03E-08		
Total Phenols	4.62E-08			1.08E-07	6.00E-01	1.80E-07
Benzoic Acid	2.23E-08			5.21E-08	4.00E+00	1.30E-08
Pentachlorophenol	3.10E-09			7.24E-09	3.00E-02	2.41E-07
Cumulative Carcinogenic Risk:			2.53E-06	Cumulative Noncarcinogenic Risk:		5.94E-03
Background-Related:						
Arsenic	9.47E-06	5.00E-05	4.74E-10	2.21E-05	1.00E-03	2.21E-02
Beryllium	1.77E-07	4.30E+00	7.61E-07	4.13E-07	5.00E-03	8.25E-05
Cumulative Background-Related Carcinogenic Risk:			7.61E-07	Cumulative Background-Related Noncarcinogenic Risk:		2.22E-02
* Total Carcinogenic Risk:			3.29E-06	*Total Noncarcinogenic Risk:		2.81E-02

TABLE 5-3

POTENTIAL RISKS VIA INHALATION OF AIRBORNE PARTICULATES OFF-SITE
BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	1.81E-06			2.11E-05		
Zinc	6.29E-07			7.34E-06	2.00E-01	3.67E-05
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		3.67E-05
<u>Background-Related:</u>						
Cadmium	5.50E-08	6.10E+00	3.40E-07	6.41E-07	1.00E-03	6.41E-04
Nickel	1.34E-07	1.19E+00	1.60E-07	1.57E-06	2.00E-02	7.83E-05
Cumulative Background-Related Carcinogenic Risk:			4.95E-07	Cumulative Background-Related Noncarcinogenic Risk:		7.20E-04
* Total Carcinogenic Risk:			4.95E-07	*Total Noncarcinogenic Risk:		7.56E-04

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	1.83E-06			1.07E-05		
Zinc	6.37E-07			3.72E-06	2.00E-01	1.86E-05
Cumulative Site-Related Carcinogenic Risk:				Cumulative Site-Related Noncarcinogenic Risk:		1.86E-05
<u>Background-Related:</u>						
Cadmium	5.56E-08	6.10E+00	3.40E-07	3.25E-07	1.00E-03	3.25E-04
Nickel	1.36E-07	1.19E+00	1.60E-07	7.93E-07	2.00E-02	3.96E-05
Cumulative Background-Related Carcinogenic Risk:			5.01E-07	Cumulative Background-Related Noncarcinogenic Risk:		3.64E-04
* Total Carcinogenic Risk:			5.10E-07	*Total Noncarcinogenic Risk:		3.83E-04

TABLE 5-3

**POTENTIAL RISKS VIA INHALATION OF AIRBORNE PARTICULATES OFF-SITE
BY ADULTS UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)**

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
Inorganics:						
Lead	2.87E-06			6.69E-06		
Zinc	9.99E-07			2.33E-06	2.00E-01	1.17E-05
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk: 1.17E-05		
Background-Related:						
Cadmium	8.72E-08	6.10E+00	5.30E-07	2.04E-07	1.00E-03	2.04E-04
Nickel	2.13E-07	1.19E+00	2.50E-07	4.97E-07	2.00E-02	2.49E-05
Cumulative Background-Related Carcinogenic Risk:			7.86E-07	Cumulative Background-Related Noncarcinogenic Risk:		2.28E-04
* Total Carcinogenic Risk:			7.86E-07	*Total Noncarcinogenic Risk:		2.40E-04

TABLE 5-4

POTENTIAL RISKS VIA INGESTION OF OFF-SITE SOIL IN THE DRAINAGE SWALE AREA
BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Copper	5.32E-06			6.21E-05	3.70E-02	1.68E-03
Lead	3.82E-05			4.46E-04		
Selenium	3.21E-07			3.74E-06	3.00E-03	1.25E-03
Zinc	8.51E-06			9.92E-05	2.00E-01	4.96E-04
<u>Organics:</u>						
Bis(2-ethylhexyl)-phthalate	4.12E-09	1.40E-02	5.80E-11	4.81E-08	2.00E-02	2.40E-06
Chloroform	7.05E-11	6.10E-03	4.30E-13	8.22E-10	1.00E-02	8.22E-08
Di-n-butylphthalate	4.30E-09			5.01E-08	1.00E-01	5.01E-07
Pentachlorophenol	1.99E-08			2.33E-07	3.00E-02	7.75E-06
PCB-1260	1.92E-08	7.70E+00	1.50E-07	2.24E-07		
Cumulative Carcinogenic Risk:			1.48E-004	Cumulative Noncarcinogenic Risk:		3.43E-03
<u>Background-Related:</u>						
Arsenic	1.16E-07	5.00E-05	5.80E-12	1.36E-06	1.00E-03	1.36E-03
Beryllium	2.01E-08	4.30E+00	8.60E-08	2.34E-07	5.00E-03	4.68E-05
Cumulative Background-Related Carcinogenic Risk:			8.63E-08	Cumulative Background-Related Noncarcinogenic Risk:		1.40E-03
* Total Carcinogenic Risk:			2.34E-07	*Total Noncarcinogenic Risk:		4.83E-03

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Copper	1.97E-06			1.15E-05	3.70E-02	3.11E-04
Lead	1.42E-05			8.26E-05		
Selenium	1.19E-07			6.93E-07	3.00E-03	2.31E-04
Zinc	3.15E-06			1.84E-05	2.00E-01	9.19E-05
<u>Organics:</u>						
Bis(2-ethylhexyl)-phthalate	1.53E-09	1.40E-02	2.10E-11	8.90E-09	2.00E-02	4.45E-07
Chloroform	2.61E-11	6.10E-03	1.60E-13	1.52E-10	1.00E-02	1.52E-08
Di-n-butylphthalate	1.59E-09			9.28E-09	1.00E-01	9.28E-08
Pentachlorophenol	7.38E-09			4.31E-08	3.00E-02	1.44E-06
PCB-1260	7.11E-09	7.70E+00	5.50E-08	4.15E-08		
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		6.36E-04
<u>Background-Related:</u>						
Arsenic	4.31E-08	5.00E-05	2.20E-12	2.51E-07	1.00E-03	2.51E-04
Beryllium	7.44E-09	4.30E+00	3.20E-08	4.34E-08	5.00E-03	8.68E-06
Cumulative Background-Related Carcinogenic Risk:			3.20E-08	Cumulative Background-Related Noncarcinogenic Risk:		2.60E-04
* Total Carcinogenic Risk: (253(c-9))			8.67E-08	*Total Noncarcinogenic Risk:		8.95E-04

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TABLE 5-4

POTENTIAL RISKS VIA INGESTION OF OFF-SITE SOIL IN THE DRAINAGE SWALE AREA
BY ADULTS UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
 (CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
Inorganics:						
Copper	3.04E-06			7.10E-06	3.70E-02	1.92E-04
Lead	2.18E-05			5.10E-05		
Selenium	1.83E-07			4.27E-07	3.00E-03	1.42E-04
Zinc	4.86E-06			1.13E-05	2.00E-01	5.67E-05
Organics:						
Bis(2-ethylhexyl)-phthalate	2.36E-09	1.40E-02	3.30E-11	5.50E-09	2.00E-02	2.75E-07
Chloroform	4.03E-11	6.10E-03	2.50E-13	9.39E-11	1.00E-02	9.39E-09
Di-n-butylphthalate	2.46E-09			5.73E-09	1.00E-01	5.73E-08
Pentachlorophenol	1.14E-08			2.66E-08	3.00E-02	8.86E-07
PCB-1260	1.10E-08	7.70E+00	8.40E-08	2.56E-08		
Cumulative Carcinogenic Risk:			8.45E-08	Cumulative Noncarcinogenic Risk:		3.92E-04
Background-Related:						
Arsenic	6.64E-08	5.00E-05	3.30E-12	1.55E-07	1.00E-03	1.55E-04
Beryllium	1.15E-08	4.30E+00	4.90E-08	2.68E-08	5.00E-03	5.35E-06
Cumulative Background-Related Carcinogenic Risk:			4.93E-08	Cumulative Background-Related Noncarcinogenic Risk:		1.60E-04
* Total Carcinogenic Risk:			1.34E-07	*Total Noncarcinogenic Risk:		5.53E-04

TABLE 5-5

**POTENTIAL RISKS VIA INGESTION OF SEDIMENT FROM CREEK AND POND
BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO**

Parameter	Ages 1-6					
	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
Inorganics:						
Antimony	5.46E-07			6.37E-06	4.00E-04	1.59E-02
Beryllium	5.14E-08	4.30E+00	2.20E-07	6.00E-07	5.00E-03	1.20E-04
Chromium	5.04E-07			5.88E-06	1.00E+00	5.88E-06
Copper	3.72E-05			4.34E-04	3.70E-02	1.17E-02
Lead	8.42E-05			9.83E-04		
Mercury	5.28E-09			6.16E-08	3.00E-04	2.05E-04
Silver	4.58E-08			5.34E-07	3.00E-03	1.78E-04
Zinc	1.38E-05			1.61E-04	2.00E-01	8.06E-04
Organics:						
Total Phenols	4.58E-09			5.34E-08	6.00E-01	8.90E-08
Bis(2-ethyl-hexyl)phthalate	3.55E-08	1.40E-02	5.00E-10	4.14E-07	2.00E-02	2.07E-05
Chloroform	7.05E-11	6.10E-03	4.30E-13	8.22E-10	1.00E-02	8.22E-08
Methylene Chloride	2.92E-09	7.50E-03	2.20E-11	3.41E-08	6.00E-02	5.68E-07
Benzoic Acid	1.23E-08			1.44E-07	4.00E+00	3.60E-08
4-Methylphenol	5.71E-09			6.66E-08		
Pentachlorophenol	5.28E-09			6.16E-08	3.00E-02	2.05E-06
Di-n-butyl-phthalate	4.58E-09			5.34E-08	1.00E-01	5.34E-07
Di-n-octyl-phthalate	5.28E-09			6.16E-08	2.00E-02	3.08E-06
Benzo(a)anthracene	3.35E-09	1.66E+00	5.60E-09	3.90E-08		
Benzo(b)fluoranthene	6.66E-09	1.61E+00	1.10E-08	7.77E-08		
Benzo(k)fluoranthene	6.73E-09	7.59E-01	5.10E-09	7.85E-08		
Benzo(a)pyrene	2.96E-09	1.15E+01	3.40E-08	3.45E-08		
Chrysene	3.87E-09	5.06E-02	2.00E-10	4.52E-08		
Fluoranthene	4.90E-09			5.71E-08	4.00E-02	1.43E-06
Phenanthrene	2.92E-09			3.41E-08	2.90E-02	1.18E-06
Pyrene	4.40E-09	9.32E-01	4.10E-09	5.14E-08	3.00E-02	1.71E-06
Cumulative Carcinogenic Risk:			2.81E-07	Cumulative Noncarcinogenic Risk:		2.90E-02
Background-Related:						
Arsenic	3.72E-07	5.00E-05	1.86E-11	4.34E-06	1.00E-03	4.34E-03
Cumulative Background-Related Carcinogenic Risk:			1.86E-11	Cumulative Background-Related Noncarcinogenic Risk:		4.34E-03
* Total Carcinogenic Risk:			2.81E-07	*Total Noncarcinogenic Risk:		3.33E-02

TABLE 5-5

POTENTIAL RISKS VIA INGESTION OF SEDIMENT FROM CREEK AND POND
BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (ng/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Antimony	2.02E-07			1.18E-06	4.00E-04	2.95E-03
Beryllium	1.90E-08	4.30E+00	8.20E-08	1.11E-07	5.00E-03	2.22E-05
Chromium	1.87E-07			1.09E-06	1.00E+00	1.09E-06
Copper	1.38E-05			8.04E-05	3.70E-02	2.17E-03
Lead	3.12E-05			1.82E-04		
Mercury	1.96E-09			1.14E-08	3.00E-04	3.81E-05
Silver	1.70E-08			9.89E-08	3.00E-03	3.30E-05
Zinc	5.12E-06			2.99E-05	2.00E-01	1.49E-04
<u>Organics:</u>						
Total Phenols	1.70E-09			9.89E-09	6.00E-01	1.65E-08
Bis(2-ethyl-hexyl)phthalate	1.31E-08	1.40E-02	1.80E-10	7.66E-08	2.00E-02	3.83E-06
Chloroform	2.61E-11	6.10E-03	1.60E-13	1.52E-10	1.00E-02	1.52E-08
Methylene Chloride	1.08E-09	7.50E-03	8.10E-12	6.32E-09	6.00E-02	1.05E-07
Benzoic Acid	4.57E-09			2.66E-08	4.00E+00	6.66E-09
4-Methylphenol	2.11E-09			1.23E-08		
Pentachlorophenol	1.96E-09			1.14E-08	3.00E-02	3.81E-07
Di-n-butyl-phthalate	1.70E-09			9.89E-09	1.00E-01	9.89E-08
Di-n-octyl-phthalate	1.96E-09			1.14E-08	2.00E-02	5.71E-07
Benzo(a)anthracene	1.24E-09	1.66E+00	2.10E-09	7.23E-09		
Benzo(b)fluoranthene	2.47E-09	1.61E+00	4.00E-09	1.44E-08		
Benzo(k)fluoranthene	2.49E-09	7.59E-01	1.90E-09	1.45E-08		
Benzo(a)pyrene	1.10E-09	1.15E+01	1.30E-08	6.39E-09		
Chrysene	1.44E-09	5.06E-02	7.30E-11	8.37E-09		
Fluoranthene	1.81E-09			1.06E-08	4.00E-02	2.64E-07
Phenanthrene	1.08E-09			6.32E-09	2.90E-02	2.18E-07
Pyrene	1.63E-09	9.32E-01	1.50E-09	9.51E-09	3.00E-02	3.17E-07
Cumulative Carcinogenic Risk:			1.04E-07	Cumulative Noncarcinogenic Risk:		5.37E-03
<u>Background-Related:</u>						
Arsenic	1.38E-07	5.00E-05	6.89E-12	8.04E-07	1.00E-03	8.04E-04
Cumulative Background-Related Carcinogenic Risk:			6.89E-12	Cumulative Background-Related Noncarcinogenic Risk:		8.04E-04
* Total Carcinogenic Risk:			1.04E-07	* Total Noncarcinogenic Risk:		6.18E-03

TABLE 5-5

POTENTIAL RISKS VIA INGESTION OF SEDIMENT FROM CREEK AND POND
BY ADULTS UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
 (CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Antimony	3.12E-07			7.28E-07	4.00E-04	1.82E-03
Beryllium	2.94E-08	4.30E+00	1.30E-07	6.86E-08	5.00E-03	1.37E-05
Chromium	2.88E-07			6.72E-07	1.00E+00	6.72E-07
Copper	2.13E-05			4.96E-05	3.70E-02	1.34E-03
Lead	4.81E-05			1.12E-04		
Mercury	3.02E-09			7.05E-09	3.00E-04	2.35E-05
Silver	2.62E-08			6.11E-08	3.00E-03	2.04E-05
Zinc	7.90E-06			1.84E-05	2.00E-01	9.22E-05
<u>Organics:</u>						
Total Phenols	2.62E-09			6.11E-09	6.00E-01	1.02E-08
Bis(2-ethylhexyl)phthalate	2.03E-08	1.40E-02	2.80E-10	4.73E-08	2.00E-02	2.36E-06
Chloroform	4.03E-11	6.10E-03	2.50E-13	9.39E-11	1.00E-02	9.39E-09
Methylene Chloride	1.67E-09	7.50E-03	1.30E-11	3.90E-09	6.00E-02	6.50E-08
Benzoic Acid	7.05E-09			1.64E-08	4.00E+00	4.11E-09
4-Methylphenol	3.26E-09			7.61E-09		
Pentachlorophenol	3.02E-09			7.05E-09	3.00E-02	2.35E-07
Di-n-butylphthalate	2.62E-09			6.11E-09	1.00E-01	6.11E-08
Di-n-octylphthalate	3.02E-09			7.05E-09	2.00E-02	3.52E-07
Benzo(a)anthracene	1.91E-09	1.66E+00	3.20E-09	4.46E-09		
Benzo(b)fluoranthene	3.80E-09	1.61E+00	6.10E-09	8.88E-09		
Benzo(k)fluoranthene	3.84E-09	7.59E-01	2.90E-09	8.97E-09		
Benzo(a)pyrene	1.69E-09	1.15E+01	1.90E-08	3.95E-09		
Chrysene	2.21E-09	5.06E-02	1.10E-10	5.17E-09		
Fluoranthene	2.80E-09			6.53E-09	4.00E-02	1.63E-07
Phenanthrene	1.67E-09			3.90E-09	2.90E-02	1.34E-07
Pyrene	2.52E-09	9.32E-01	2.30E-09	5.14E-08	3.00E-02	1.96E-07
Cumulative Carcinogenic Risk:			1.61E-07	Cumulative Noncarcinogenic Risk:		3.31E-03
<u>Background-Related:</u>						
Arsenic	2.13E-07	5.00E-05	1.06E-11	4.96E-07	1.00E-03	4.96E-04
Cumulative Background-Related Carcinogenic Risk:			1.06E-11	Cumulative Background-Related Noncarcinogenic Risk:		4.96E-04
* Total Carcinogenic Risk:			1.61E-07	* Total Noncarcinogenic Risk:		3.81E-03

TABLE 5-6

POTENTIAL RISKS VIA INGESTION OF ON-SITE
SOIL OUTSIDE THE FENCED AREA BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Parameter	Ages 1-6					
	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical- Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical- Specific Risk
<u>Inorganics:</u>						
Aluminum	4.05E-04			4.73E-03	2.93E+00	1.61E-03
Chromium	4.73E-07			5.52E-06	1.00E+00	5.52E-06
Copper	5.98E-06			6.98E-05	3.70E-02	1.89E-03
Lead	1.39E-05			1.63E-04		
Manganese	6.43E-05			7.50E-04	2.00E-01	3.75E-03
Silver	4.02E-08			4.68E-07	3.00E-03	1.56E-04
Zinc	4.28E-06			4.99E-05	2.00E-01	2.49E-04
Cyanide	1.09E-08			1.27E-07	2.00E-02	6.37E-06
<u>Organics:</u>						
4,4'- DDT	9.51E-10	3.40E-01	3.23E-10	1.11E-08	5.00E-04	2.22E-05
Fluorene	2.50E-09			2.92E-08	4.00E-02	7.29E-07
Phenanthrene	6.34E-09			7.40E-08	2.90E-02	2.55E-06
Fluoranthene	5.81E-09			6.78E-08	4.00E-02	1.70E-06
Pyrene	5.81E-09	9.32E-01	5.42E-09	6.78E-08	3.00E-02	2.26E-06
Chrysene	5.81E-09	5.06E-02	2.94E-10	6.78E-08		
Benzo(a)anthracene	5.81E-09	1.66E+00	9.65E-09	6.78E-08		
Benzo(b)fluoranthene	5.81E-09	1.61E+00	9.36E-09	6.78E-08		
Benzo(k)fluoranthene	6.62E-09	7.59E-01	5.03E-09	7.73E-08		
Naphthalene	2.18E-09			2.55E-08	4.00E-03	6.37E-06
2-Methylnaphthalene	7.93E-09			9.25E-08		
Chloroform	3.17E-10	6.10E-03	1.93E-12	3.70E-09	1.00E-02	3.70E-07
Benzoic Acid	3.20E-08			3.74E-07	4.00E+00	9.34E-08
Cumulative Carcinogenic Risk:			3.01E-08	Cumulative Noncarcinogenic Risk:		7.70E-03
<u>Background-Related:</u>						
Arsenic	1.41E-07	5.00E-05	7.06E-12	1.65E-06	1.00E-03	1.65E-03
Beryllium	2.54E-08	4.30E+00	1.09E-07	2.96E-07	5.00E-03	5.92E-05
Cumulative Background- Related Carcinogenic Risk:			1.09E-07	Cumulative Background-Related Noncarcinogenic Risk:		1.71E-03
* Total Carcinogenic Risk:			1.39E-07	* Total Noncarcinogenic Risk:		9.41E-03

TABLE 5-6

POTENTIAL RISKS VIA INGESTION OF ON-SITE
SOIL OUTSIDE THE FENCED AREA BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Parameter	Ages 7-18			Ages 7-18		
	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical- Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical- Specific Risk
<u>Inorganics:</u>						
Aluminum	1.50E-04			8.76E-04	2.93E+00	2.99E-04
Chromium	1.75E-07			1.02E-06	1.00E+00	1.02E-06
Copper	2.21E-06			1.29E-05	3.70E-02	3.49E-04
Lead	5.16E-06			3.01E-05		
Manganese	2.38E-05			1.39E-04	2.00E-01	6.94E-04
Silver	1.49E-08			8.68E-08	3.00E-03	2.89E-05
Zinc	1.58E-06			9.24E-06	2.00E-01	4.62E-05
Cyanide	4.04E-09			2.36E-08	2.00E-02	1.18E-06
<u>Organics:</u>						
4,4'- DDT	3.52E-10	3.40E-01	1.20E-10	2.05E-09	5.00E-04	4.11E-06
Fluorene	9.26E-10			5.40E-09	4.00E-02	1.35E-07
Phenanthrene	2.35E-09			1.37E-08	2.90E-02	4.72E-07
Fluoranthene	2.15E-09			1.26E-08	4.00E-02	3.14E-07
Pyrene	2.15E-09	9.32E-01	2.01E-09	1.26E-08	3.00E-02	4.19E-07
Chrysene	2.15E-09	5.06E-02	1.09E-10	1.26E-08		
Benzo(a)anthracene	2.15E-09	1.66E+00	3.57E-09	1.26E-08		
Benzo(b)fluoranthene	2.15E-09	1.61E+00	3.47E-09	1.26E-08		
Benzo(k)fluoranthene	2.45E-09	7.59E-01	1.86E-09	1.43E-08		
Naphthalene	8.49E-10			4.72E-09	4.00E-03	1.18E-06
2-Methylnaphthalene	2.94E-09			1.71E-08		
Chloroform	1.17E-10	6.10E-03	7.16E-13	6.85E-10	1.00E-02	6.85E-08
Benzoic Acid	1.19E-08			6.92E-08	4.00E+00	1.73E-08
Cumulative Carcinogenic Risk:			1.11E-08	Cumulative Noncarcinogenic: Risk:		1.43E-03
<u>Background-Related:</u>						
Arsenic	2.53E-08	5.00E-05	2.62E-12	3.05E-07	1.00E-03	3.05E-04
Beryllium	9.39E-09	4.30E+00	4.04E-08	5.48E-08	5.00E-03	1.10E-05
Cumulative Background- Related Carcinogenic Risk:			4.04E-08	Cumulative Background-Related Noncarcinogenic Risk:		3.16E-04
* Total Carcinogenic Risk:			5.15E-08	*Total Noncarcinogenic Risk:		1.74E-03

TABLE 5-6

POTENTIAL RISKS VIA INGESTION OF ON-SITE SOILS OUTSIDE THE FENCED AREA
BY ADULTS UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
 (CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	2.32E-04			5.40E-04	2.93E+00	1.84E-04
Chromium	2.71E-07			6.31E-07	1.00E+00	6.31E-07
Copper	3.42E-06			7.97E-06	3.70E-02	2.15E-04
Lead	7.97E-06			1.86E-05		
Manganese	3.67E-05			8.57E-05	2.00E-01	4.28E-04
Silver	2.29E-08			5.35E-08	3.00E-03	1.78E-05
Zinc	2.44E-06			5.70E-06	2.00E-01	2.85E-05
Cyanide	6.24E-09			1.46E-08	2.00E-02	7.28E-07
<u>Organics:</u>						
4,4'- DDT	5.43E-10	3.40E-01	1.85E-10	1.27E-09	5.00E-04	2.54E-06
Fluorene	1.43E-09			3.33E-09	4.00E-02	8.34E-08
Phenanthrene	3.62E-09			8.45E-09	2.90E-02	2.92E-07
Fluoranthene	3.32E-09			7.75E-09	4.00E-02	1.94E-07
Pyrene	3.32E-09	9.32E-01	3.10E-09	7.75E-09	3.00E-02	2.58E-07
Chrysene	3.32E-09	5.06E-02	1.68E-10	7.75E-09		
Benzo(a)anthracene	3.32E-09	1.66E+00	5.15E-09	7.75E-09		
Benzo(b)fluoranthene	3.32E-09	1.61E+00	5.35E-09	7.75E-09		
Benzo(k)fluoranthene	3.78E-09	7.59E-01	2.87E-09	8.83E-09		
Naphthalene	1.25E-09			2.91E-09	4.00E-03	7.28E-07
2-Methylnaphthalene	4.53E-09			1.06E-08		
Chloroform	1.81E-10	6.10E-03	1.11E-12	4.23E-10	1.00E-02	4.23E-08
Benzoic Acid	1.83E-08			4.27E-08	4.00E+00	1.07E-08
Cumulative Carcinogenic Risk:			1.72E-08	Cumulative Noncarcinogenic Risk:		8.80E-04
<u>Background-Related:</u>						
Arsenic	8.07E-08	5.00E-05	4.04E-12	1.88E-07	1.00E-03	1.88E-04
Beryllium	1.45E-08	4.30E+00	6.23E-08	3.38E-08	5.00E-03	6.76E-06
Cumulative Background-Related Carcinogenic Risk:			6.23E-08	Cumulative Background-Related Noncarcinogenic Risk:		1.95E-04
* Total Carcinogenic Risk:			7.95E-08	*Total Noncarcinogenic Risk:		1.08E-03

TABLE 5-7

POTENTIAL RISKS VIA INHALATION OF AIRBORNE PARTICULATES ON-SITE OUTSIDE THE
FENCED AREA BY CHILDREN UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	7.71E-09			8.99E-08		
Zinc	2.03E-09			2.37E-08	2.00E-01	1.18E-07
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		1.18E-07
<u>Background-Related:</u>						
Cadmium	2.23E-10	6.10E+00	1.36E-09	2.61E-09	1.00E-03	2.61E-06
Nickel	4.71E-10	1.19E+00	5.60E-10	5.49E-09	2.00E-02	2.74E-07
Cumulative Background-Related Carcinogenic Risk:			1.92E-09	Cumulative Background-Related Noncarcinogenic Risk:		2.88E-06
* Total Carcinogenic Risk:			1.92E-09	*Total Noncarcinogenic Risk:		3.00E-06

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	9.60E-09			5.60E-08		
Zinc	2.53E-09			1.47E-08	2.00E-01	7.37E-08
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		7.37E-08
<u>Background-Related:</u>						
Cadmium	2.78E-10	6.10E+00	1.70E-09	1.62E-09	1.00E-03	1.62E-06
Nickel	5.86E-10	1.19E+00	6.98E-10	3.42E-09	2.00E-02	1.71E-07
Cumulative Background-Related Carcinogenic Risk:			2.39E-09	Cumulative Background-Related Noncarcinogenic Risk:		1.79E-06
* Total Carcinogenic Risk:			2.39E-09	*Total Noncarcinogenic Risk:		1.87E-06

TABLE 5-7

POTENTIAL RISKS VIA INHALATION OF AIRBORNE PARTICULATES ON-SITE OUTSIDE
THE FENCED AREA BY ADULTS UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kd/day) ⁻¹	Chemical- Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical- Specific Risk
<u>Inorganics:</u>						
Lead	1.20E-08			2.80E-08		
Zinc	3.16E-09			7.38E-09	2.00E-01	3.69E-08
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		3.69E-08
<u>Background-Related:</u>						
Cadmium	3.48E-10	6.10E+00	2.10E-09	8.12E-10	1.00E-03	8.12E-07
Nickel	7.33E-10	1.19E+00	8.70E-10	1.71E-09	2.00E-02	8.56E-08
Cumulative Background- Related Carcinogenic Risk:			3.00E-09	Cumulative Background-Related Noncarcinogenic Risk:		8.98E-07
* Total Carcinogenic Risk:			3.00E-09	*Total Noncarcinogenic Risk:		9.35E-07

TABLE 5-8

POTENTIAL RISKS VIA INGESTION OF SURFACE WATER
BY CHILDREN UNDER CURRENT CONDITIONS
WHILE SWIMMING IN POND OFF-SITE
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Arsenic	4.34E-07	5.00E-05	2.17E-11	5.06E-06	1.00E-03	5.06E-03
Beryllium	5.46E-08	4.30E+00	2.35E-07	6.37E-07	5.00E-03	1.27E-04
Cadmium	6.53E-08			7.62E-07	1.00E-03	7.62E-04
Chromium	7.80E-08			9.10E-07	1.00E+00	9.10E-07
Copper	5.88E-07			6.86E-06	3.70E-02	1.85E-04
Lead	6.60E-07			7.71E-06		
Silver	6.28E-08			7.32E-07	3.00E-03	2.44E-04
Zinc	5.91E-07			6.90E-06	2.00E-01	3.45E-05

Organics:

Bis(2-ethylhexyl) phthalate	7.69E-08	1.40E-02	1.08E-09	8.98E-07	2.00E-02	4.49E-05
Cumulative Carcinogenic Risk:			2.36E-07	Cumulative Noncarcinogenic Risk:		6.46E-03

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Arsenic	3.22E-07	5.00E-05	1.61E-11	1.88E-06	1.00E-03	1.88E-03
Beryllium	4.07E-08	4.30E+00	1.74E-07	2.36E-07	5.00E-03	4.72E-05
Cadmium	4.84E-08			2.82E-07	1.00E-03	2.82E-04
Chromium	5.78E-08			3.73E-07	1.00E+00	3.37E-07
Copper	4.36E-07			2.54E-06	3.70E-02	6.87E-05
Lead	4.89E-07			2.85E-06		
Silver	4.65E-08			2.71E-07	3.00E-03	9.04E-05
Zinc	4.38E-07			2.55E-06	2.00E-01	1.28E-05

Organics:

Bis(2-ethylhexyl) phthalate	5.70E-08	1.40E-02	7.98E-10	3.32E-07	2.00E-02	1.66E-05
Cumulative Carcinogenic Risk:			1.75E-07	Cumulative Noncarcinogenic Risk:		2.39E-03

TABLE 5-8

POTENTIAL RISKS VIA INGESTION OF SURFACE WATER
BY ADULTS UNDER CURRENT CONDITIONS
WHILE SWIMMING IN POND OFF-SITE
REASONABLE MAXIMUM EXPOSURE SCENARIO
 (CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Arsenic	4.96E-08	5.00E-05	2.48E-12	1.16E-07	1.00E-03	1.16E-04
Beryllium	6.24E-08	4.30E+00	2.68E-07	1.46E-07	5.00E-03	2.91E-05
Cadmium	7.46E-08			1.74E-07	1.00E-03	1.74E-04
Chromium	8.91E-08			2.08E-07	1.00E+00	2.08E-07
Copper	6.72E-07			1.57E-06	3.70E-02	4.24E-05
Lead	7.55E-07			1.76E-06		
Silver	7.17E-08			1.67E-07	3.00E-03	5.58E-05
Zinc	6.76E-07			1.58E-06	2.00E-01	7.88E-06
<u>Organics:</u>						
Bis(2-ethylhexyl) phthalate	8.89E-08	1.40E-02	1.23E-09	2.05E-07	2.00E-02	1.03E-05
Cumulative Carcinogenic Risk:			2.70E-07	Cumulative Noncarcinogenic Risk:		4.36E-04

TABLE 5-9

POTENTIAL RISKS VIA INHALATION OF AIRBORNE PARTICULATES WITHIN
THE FENCED AREA BY ADULT EMPLOYEES UNDER CURRENT CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	1.02E-06			2.39E-06		
Zinc	2.69E-07			6.29E-07	2.00E-01	3.14E-06
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		3.14E-06
<u>Background-Related:</u>						
Cadmium	2.97E-08	6.10E+00	1.80E-07	6.92E-08	1.00E-03	6.92E-05
Nickel	6.25E-08	1.19E+00	7.40E-08	1.46E-07	2.00E-02	7.29E-06
Cumulative Background-Related Carcinogenic Risk:			2.55E-07	Cumulative Background-Related Noncarcinogenic Risk:		7.65E-05
* Total Carcinogenic Risk:			2.55E-07	*Total Noncarcinogenic Risk:		7.97E-05

TABLE 5-10

POTENTIAL RISKS VIA INGESTION OF ON-SITE
GROUNDWATER BY CHILDREN UNDER FUTURE CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	9.39E-03			1.09E-01	2.90E+00	3.78E-02
Arsenic	3.98E-05	5.00E-05	1.99E-09	4.64E-04	1.00E-03	4.64E-01
Barium	1.19E-04			1.39E-03	7.00E-02	1.99E-02
Beryllium	1.19E-05	4.30E+00	5.13E-05	1.39E-04	5.00E-03	2.79E-02
Chromium	3.58E-05			4.18E-04	1.00E+00	4.18E-04
Cobalt	5.57E-05			6.50E-04		
Copper	1.15E-04			1.35E-03	3.70E-02	3.64E-02
Lead	5.17E-05			6.04E-04		
Manganese	1.13E-03			1.32E-02	2.00E-01	6.59E-02
Mercury	6.37E-07			7.43E-06	3.00E-04	2.48E-02
Selenium	1.59E-05			1.86E-04	3.00E-03	6.19E-02
Thallium	1.99E-05			2.32E-04	7.00E-05	3.32E+00
Vanadium	7.16E-05			8.36E-04	7.00E-03	1.19E-01
Zinc	3.62E-04			4.23E-03	2.00E-01	2.11E-02
<u>Organics:</u>						
Acetone	1.39E-04			1.63E-03	1.00E-01	1.63E-02
Toluene	1.59E-05			1.86E-04	3.00E-01	6.19E-04
Carbon Disulfide	1.19E-05			1.39E-04	1.00E-01	1.39E-03
Methylene Chloride	1.19E-05	7.50E-03	8.96E-08	1.39E-04	6.00E-02	2.32E-03
Bis(2-ethylhexyl)phthalate	1.99E-05	1.40E-02	2.79E-07	2.32E-04	2.00E-02	1.16E-02
2-Butanone	1.99E-05			2.32E-04	5.00E-02	4.64E-03
Xylenes	1.19E-05			1.39E-04	2.00E+00	6.97E-05
Di-n-butylphthalate	1.99E-05			2.32E-04	1.00E-01	2.32E-03
Cumulative Carcinogenic Risk:			5.17E-05	Cumulative Non-carcinogenic Risk:		4.24E+00

TABLE 5-10

POTENTIAL RISKS VIA INGESTION OF ON-SITE
GROUNDWATER BY CHILDREN UNDER FUTURE CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	9.73E-03			5.68E-02	2.90E+00	1.96E-02
Arsenic	4.13E-05	5.00E-05	2.06E-09	2.41E-04	1.00E-03	2.41E-01
Barium	1.24E-04			7.22E-04	7.00E-02	1.03E-02
Beryllium	1.24E-05	4.30E+00	5.32E-05	7.22E-05	5.00E-03	1.44E-02
Chromium	3.71E-05			2.17E-04	1.00E+00	2.17E-04
Cobalt	5.78E-05			3.37E-04		
Copper	1.20E-04			6.98E-04	3.70E-02	1.89E-02
Lead	5.37E-05			3.13E-04		
Manganese	1.17E-03			6.84E-03	2.00E-01	3.42E-02
Mercury	6.60E-07			3.85E-06	3.00E-04	1.28E-02
Selenium	1.65E-05			9.63E-05	3.00E-03	3.21E-02
Thallium	2.06E-05			1.20E-04	7.00E-05	1.72E+00
Vanadium	7.43E-05			4.33E-04	7.00E-03	6.19E-02
Zinc	3.76E-04			2.19E-03	2.00E-01	1.10E-02
<u>Organics:</u>						
Acetone	1.44E-04			8.43E-04	1.00E-01	8.43E-03
Toluene	1.65E-05			9.63E-05	3.00E-01	3.21E-04
Carbon Disulfide	1.24E-05			7.22E-05	1.00E-01	7.22E-04
Methylene Chloride	1.24E-05	7.50E-03	9.29E-08	7.22E-05	6.00E-02	1.20E-03
Bis(2-ethylhexyl)phthalate	2.06E-05	1.40E-02	2.89E-07	1.20E-04	2.00E-02	6.02E-03
2-Butanone	2.06E-05			1.20E-04	5.00E-02	2.41E-03
Xylenes	1.24E-05			7.22E-05	2.00E+00	3.61E-05
Di-n-butylphthalate	2.06E-05			1.20E-04	1.00E-01	1.20E-03
Cumulative Carcinogenic Risk:			5.36E-05	Cumulative Non-carcinogenic Risk:		2.20E+00

TABLE 5-10

POTENTIAL RISKS VIA INGESTION OF ON-SITE
GROUNDWATER BY ADULTS UNDER FUTURE CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	2.89E-02			6.74E-02	2.90E+00	2.32E-02
Arsenic	1.22E-04	5.00E-05	6.12E-08	2.86E-04	1.00E-03	2.86E-01
Barium	3.67E-04			8.57E-04	7.00E-02	1.22E-02
Beryllium	3.67E-05	4.30E+00	1.58E-04	8.57E-04	5.00E-03	1.71E-02
Chromium	1.10E-04			2.57E-04	1.00E+00	2.57E-04
Cobalt	1.71E-04			4.00E-04		
Copper	3.55E-04			8.29E-04	3.70E-02	2.24E-02
Lead	1.59E-04			3.71E-04		
Manganese	3.48E-03			8.11E-03	2.00E-01	4.06E-02
Mercury	1.96E-06			4.57E-06	3.00E-04	1.52E-02
Selenium	4.90E-05			1.14E-04	3.00E-03	3.81E-02
Thallium	6.12E-05			1.43E-04	7.00E-05	2.04E+00
Vanadium	2.20E-04			5.14E-04	7.00E-03	7.35E-02
Zinc	1.11E-03			2.60E-03	2.00E-01	1.30E-02
<u>Organics:</u>						
Acetone	4.29E-04			1.00E-03	1.00E-01	1.00E-02
Toluene	4.78E-05			1.11E-04	3.00E-01	3.71E-04
Carbon Disulfide	3.67E-05			8.57E-05	1.00E-01	8.57E-04
Methylene Chloride	3.67E-05	7.50E-03	2.76E-07	8.57E-05	6.00E-02	1.43E-03
Bis(2-ethylhexyl)phthalate	6.12E-05	1.40E-02	8.57E-07	1.43E-04	2.00E-02	7.14E-03
2-Butanone	6.12E-05			1.43E-04	5.00E-02	2.86E-03
Xylenes	3.67E-05			8.57E-05	2.00E+00	4.29E-05
Di-n-butylphthalate	6.12E-05			1.43E-04	1.00E-01	1.43E-03
Cumulative Carcinogenic Risk:			1.59E-04	Cumulative Non-carcinogenic Risk:		2.61E+00

TABLE 5-11

**POTENTIAL RISKS VIA INGESTION OF ON-SITE
SOIL BY CHILDREN UNDER FUTURE CONDITIONS
RESIDENTIAL EXPOSURE
REASONABLE MAXIMUM EXPOSURE SCENARIO**

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kd/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
Inorganics:						
Aluminum	7.72E-03			9.00E-02	2.90E+00	3.11E-02
Antimony	4.65E-05			5.42E-04	4.00E-04	1.36E+00
Chromium	8.70E-06			1.01E-04	1.00E+00	1.01E-04
Copper	4.37E-03			5.10E-02	3.70E-02	1.38E+00
Lead	1.10E-02			1.28E-01		
Manganese	5.68E-04			6.63E-03	2.00E-01	3.31E-02
Silver	1.35E-06			1.58E-05	3.00E-03	5.26E-03
Zinc	5.62E-04			6.55E-03	2.00E-01	3.28E-02
Cyanide	2.17E-07			2.53E-06	2.00E-02	1.27E-04
Organics:						
Acenaphthene	8.69E-08			1.01E-06	6.00E-02	1.69E-05
Acenaphthylene	1.16E-07			1.35E-06	4.00E-03	3.37E-04
Anthracene	1.31E-07			1.53E-06	3.00E-01	5.11E-06
Benzo(a)anthracene	1.99E-07	1.66E+00	3.30E-07	2.32E-06		
Benzo(a)pyrene	1.64E-07	1.55E+01	2.54E-06	1.91E-06		
Benzo(b)fluoranthene	3.31E-07	1.61E+00	5.33E-07	3.86E-06		
Benzo(g,h,i)perylene	1.17E-07	2.53E-01	2.97E-08	1.37E-06	4.00E-03	3.42E-04
Benzo(k)fluoranthene	3.35E-07	7.59E-01	2.54E-07	3.90E-06		
Chrysene	2.23E-07	5.06E-02	1.13E-08	2.60E-06		
Dibenzo(a,h)anthracene	9.99E-08	1.28E+01	1.28E-06	1.17E-06		
Dibenzofuran	4.51E-08			5.26E-07		
Fluoranthene	2.42E-07			2.82E-06	4.00E-02	7.05E-05
Fluorene	1.12E-07			1.31E-06	4.00E-02	3.26E-05
Indeno(1,2,3-cd)pyrene	1.23E-07	2.67E+00	3.29E-07	1.44E-06		
Phenanthrene	1.85E-07			2.16E-06	2.90E-02	7.45E-05
Pyrene	2.49E-07	9.32E-01	2.32E-07	2.91E-06	3.00E-02	9.69E-05
Bis(2-ethylhexyl)phthalate	4.25E-07	1.40E-02	5.95E-09	4.96E-06	2.00E-02	2.48E-04
Di-n-octylphthalate	1.94E-07			2.27E-06	2.00E-02	1.13E-04
4,4'-DDT	7.33E-08	3.40E-01	2.49E-08	8.55E-07	5.00E-04	1.71E-03
4,4'-DDE	1.36E-08	3.40E-01	4.62E-09	1.58E-07		
PCB-1260	1.49E-07	7.70E+00	1.15E-06	1.74E-06		
PCB-1248	4.07E-08	7.70E+00	3.14E-07	4.75E-07		
Di-n-butylphthalate	3.69E-08			4.31E-07	1.00E-01	4.31E-06
Butyl benzylphthalate	2.82E-08			3.29E-07	2.00E-01	1.65E-06
Benzoic Acid	4.83E-08			5.64E-07	4.00E+00	1.41E-07
Cumulative Carcinogenic Risk:			7.04E-06	Cumulative Noncarcinogenic Risk:		2.84E+00
Background-Related:						
Arsenic	2.21E-06	5.00E-05	1.11E-10	2.58E-05	1.00E-03	2.58E-02
Beryllium	3.26E-07	4.30E+00	1.40E-06	3.80E-06	5.00E-03	7.60E-04
Cumulative Background-Related Carcinogenic Risk:			1.40E-06	Cumulative Background-Related Noncarcinogenic Risk:		2.65E-02
* Total Carcinogenic Risk:			8.44E-06	*Total Noncarcinogenic Risk:		2.87E+00

TABLE 5-11

POTENTIAL RISKS VIA INGESTION OF ON-SITE
SOIL BY CHILDREN UNDER FUTURE CONDITIONS
RESIDENTIAL EXPOSURE
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Aluminum	2.86E-03			1.67E-02	2.90E+00	5.75E-03
Antimony	1.72E-05			1.00E-04	4.00E-04	2.51E-01
Chromium	3.22E-06			1.88E-05	1.00E+00	1.88E-05
Copper	1.62E-03			9.44E-03	3.70E-02	2.55E-01
Lead	4.06E-03			2.37E-02		
Manganese	2.10E-04			1.23E-03	2.00E-01	6.14E-03
Silver	5.01E-07			2.92E-06	3.00E-03	9.74E-04
Zinc	2.08E-04			1.21E-03	2.00E-01	6.07E-03
Cyanide	8.05E-08			4.69E-07	2.00E-02	2.35E-05
<u>Organics:</u>						
Acenaphthene	3.22E-08			1.88E-07	6.00E-02	3.13E-06
Acenaphthylene	4.28E-08			2.50E-07	4.00E-03	6.25E-05
Anthracene	4.87E-08			2.84E-07	3.00E-01	9.46E-07
Benzo(a)anthracene	7.36E-08	1.66E+00	1.22E-07	4.29E-07		
Benzo(a)pyrene	6.07E-08	1.55E+01	9.41E-07	3.54E-07		
Benzo(b)fluoranthene	1.23E-07	1.61E+00	1.98E-07	7.16E-07		
Benzo(g,h,i)perylene	4.34E-08	2.53E-01	1.10E-08	2.53E-07	4.00E-03	6.34E-05
Benzo(k)fluoranthene	1.24E-08	7.59E-01	9.40E-08	7.23E-07		
Chrysene	8.25E-08	5.06E-02	4.17E-09	4.81E-07		
Dibenzo(a,h)anthracene	3.70E-08	1.28E+01	4.74E-07	2.16E-07		
Dibenzofuran	1.67E-08			9.74E-08		
Fluoranthene	8.95E-08			5.22E-07	4.00E-02	1.31E-05
Fluorene	4.14E-08			2.42E-07	4.00E-02	6.04E-06
Indeno(1,2,3-cd)pyrene	4.57E-08	2.67E+00	1.22E-07	2.66E-07		
Phenanthrene	6.86E-08			4.00E-07	2.90E-02	1.38E-05
Pyrene	9.23E-08	9.32E-01	8.60E-08	5.39E-07	3.00E-02	1.80E-05
Bis(2-ethylhexyl)phthalate	1.57E-07	1.40E-02	2.20E-09	9.19E-07	2.00E-02	4.59E-05
Di-n-octylphthalate	7.20E-08			4.20E-07	2.00E-02	2.10E-05
4,4'-DDT	2.72E-08	3.40E-01	9.23E-09	1.58E-07	5.00E-04	3.17E-04
4,4'-DDE	5.03E-09	3.40E-01	1.71E-09	2.93E-08		
PCB-1260	5.51E-08	7.70E+00	4.24E-07	3.21E-07		
PCB-1248	1.51E-08	7.70E+00	1.16E-07	8.80E-08		
Di-n-butylphthalate	1.37E-08			7.98E-08	1.00E-01	7.98E-07
Butyl benzylphthalate	1.05E-08			6.10E-08	2.00E-01	3.05E-07
Benzoic Acid	1.79E-08			1.04E-07	4.00E+00	2.61E-08
Cumulative Carcinogenic Risk:			2.61E-06	Cumulative Noncarcinogenic Risk:		5.26E-01
<u>Background-Related:</u>						
Arsenic	8.19E-07	5.00E-05	4.09E-11	4.78E-06	1.00E-03	4.78E-03
Beryllium	1.21E-07	4.30E+00	5.19E-07	7.04E-07	5.00E-03	1.41E-04
Cumulative Background-Related Carcinogenic Risk:			5.19E-07	Cumulative Background-Related Noncarcinogenic Risk:		4.92E-03
* Total Carcinogenic Risk:			3.12E-06	*Total Noncarcinogenic Risk:		5.31E-01

TABLE 5-11

POTENTIAL RISKS VIA INGESTION OF ON-SITE
SOILS BY ADULTS UNDER FUTURE CONDITIONS
RESIDENTIAL EXPOSURE
REASONABLE MAXIMUM EXPOSURE SCENARIO
(CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
Inorganics:						
Aluminum	4.41E-03			1.03E-02	2.90E+00	3.55E-03
Antimony	2.66E-05			6.20E-05	4.00E-04	1.55E-01
Chromium	4.97E-06			1.16E-05	1.00E+00	1.16E-05
Copper	2.50E-03			5.83E-03	3.70E-02	1.58E-01
Lead	6.27E-03			1.46E-02		
Manganese	3.25E-04			7.75E-04	2.00E-01	3.79E-03
Silver	7.73E-07			1.80E-06	3.00E-03	6.01E-04
Zinc	3.21E-04			7.49E-04	2.00E-01	3.74E-03
Cyanide	1.24E-07			2.90E-07	2.00E-02	1.45E-05
Organics:						
Acenaphthene	4.97E-08			1.16E-07	6.00E-02	1.93E-06
Acenaphthylene	6.61E-08			1.54E-07	4.00E-03	3.86E-05
Anthracene	7.51E-08			1.75E-07	3.00E-01	8.84E-07
Benzo(a)anthracene	1.14E-07	1.66E+00	1.89E-07	2.65E-07		
Benzo(a)pyrene	9.37E-08	1.55E+01	1.45E-06	2.19E-07		
Benzo(b)fluoranthene	1.89E-07	1.61E+00	3.05E-07	4.42E-07		
Benzo(g,h,i)perylene	6.70E-08	2.53E-01	1.70E-08	1.56E-07	4.00E-03	3.91E-05
Benzo(k)fluoranthene	1.91E-07	7.59E-01	1.45E-07	4.46E-07		
Chrysene	1.27E-07	5.06E-02	6.44E-09	2.97E-07		
Dibenzo(a,h)anthracene	5.71E-08	1.28E+01	7.31E-07	1.33E-07		
Dibenzofuran	2.58E-08			6.01E-08		
Fluoranthene	1.38E-07			3.22E-07	4.00E-02	8.06E-06
Fluorene	6.39E-08			1.49E-07	4.00E-02	3.73E-06
Indeno(1,2,3-cd)pyrene	7.04E-08	2.67E+00	1.88E-07	1.64E-07		
Phenanthrene	1.06E-07			2.47E-07	2.90E-02	8.51E-06
Pyrene	1.42E-07	9.32E-01	1.33E-07	3.23E-07	3.00E-02	1.11E-05
Bis(2-ethylhexyl)phthalate	2.43E-07	1.40E-02	3.40E-09	5.67E-07	2.00E-02	2.83E-05
Di-n-octylphthalate	1.11E-07			2.59E-07	2.00E-02	1.30E-05
4,4'-DDT	4.19E-08	3.40E-01	1.42E-08	9.77E-08	5.00E-04	1.95E-04
4,4'-DDE	7.76E-09	3.40E-01	2.64E-09	1.81E-08		
PCB-1260	8.50E-08	7.70E+00	6.55E-07	1.98E-07		
PCB-1248	2.33E-08	7.70E+00	1.79E-07	5.43E-08		
Di-n-butylphthalate	2.11E-08			4.92E-08	1.00E-01	4.92E-07
Butyl benzylphthalate	1.61E-08			3.77E-08	2.00E-01	1.88E-07
Benzoic Acid	2.76E-08			6.44E-08	4.00E+00	1.61E-08
Cumulative Carcinogenic Risk:			4.02E-06	Cumulative Noncarcinogenic Risk:		3.24E-01
Background-Related:						
Arsenic	1.26E-06	5.00E-05	6.31E-11	2.95E-06	1.00E-03	2.95E-03
Beryllium	1.86E-07	4.30E+00	8.01E-07	4.34E-07	5.00E-03	8.69E-05
Cumulative Background-Related Carcinogenic Risk:			8.01E-07	Cumulative Background-Related Noncarcinogenic Risk:		3.03E-03
* Total Carcinogenic Risk:			4.82E-06	* Total Noncarcinogenic Risk:		3.27E-01

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TABLE 5-12

POTENTIAL RISKS VIA INGESTION OF ON-SITE ASH
FROM ASH PILE BY CHILDREN UNDER FUTURE CONDITIONS
RESIDENTIAL EXPOSURE
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Copper				2.72E-02	3.70E-02	7.30E-01
Lead				2.30E-01		
<u>Organics:</u>						
2,3,7,8-TCDD	1.69E-10	1.56E+05	2.63E-05	1.97E-09		
Cumulative carcinogenic risk:			2.63E-05			Cumulative noncarcinogenic risk: 7.30E-01

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Oral Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Oral Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Copper				5.74E-03	3.70E-02	1.50E-01
Lead				8.52E-02		
<u>Organics:</u>						
2,3,7,8-TCDD	6.25E-11	1.56E+05	9.75E-06	3.64E-10		
Cumulative carcinogenic risk:			9.75E-06			Cumulative noncarcinogenic risk: 1.50E-01

TABLE 5-13

POTENTIAL RISKS VIA INHALATION OF ON-SITE AIRBORNE PARTICULATES
BY CHILDREN UNDER FUTURE CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO

Ages 1-6

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	2.62E-06			3.05E-05		
Zinc	6.89E-07			8.03E-06	2.00E-01	4.02E-05
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		4.02E-05
<u>Background-Related:</u>						
Cadmium	7.58E-08	6.10E+00	4.60E-07	8.84E-07	1.00E-03	8.84E-04
Nickel	1.60E-07	1.19E+00	1.90E-07	1.86E-06	2.00E-02	9.32E-05
Cumulative Background-Related Carcinogenic Risk:			6.52E-07	Cumulative Background-Related Noncarcinogenic Risk:		9.77E-04
* Total Carcinogenic Risk:			6.52E-07	*Total Noncarcinogenic Risk:		1.02E-03

Ages 7-18

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	2.65E-06			1.54E-05		
Zinc	6.97E-07			4.07E-06	2.00E-01	2.03E-05
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		2.03E-05
<u>Background-Related:</u>						
Cadmium	7.67E-08	6.10E+00	4.70E-07	4.48E-07	1.00E-03	4.48E-04
Nickel	1.62E-07	1.19E+00	1.90E-07	9.43E-07	2.00E-02	4.72E-05
Cumulative Background-Related Carcinogenic Risk:			6.60E-07	Cumulative Background-Related Noncarcinogenic Risk:		4.95E-04
* Total Carcinogenic Risk:			6.60E-07	*Total Noncarcinogenic Risk:		5.15E-04

TABLE 5-13

POTENTIAL RISKS VIA INHALATION OF ON-SITE AIRBORNE PARTICULATES
BY ADULTS UNDER FUTURE CONDITIONS
REASONABLE MAXIMUM EXPOSURE SCENARIO
 (CONTINUED)

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	4.15E-06			9.69E-06		
Zinc	1.09E-06			2.55E-06	2.00E-01	1.27E-05
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk: 1.27E-05		
<u>Background-Related:</u>						
Cadmium	1.20E-07	6.10E+00	7.30E-07	2.81E-07	1.00E-03	2.81E-04
Nickel	2.53E-07	1.19E+00	3.00E-07	5.91E-07	2.00E-02	2.96E-05
Cumulative Background-Related Carcinogenic Risk:			1.30E-06	Cumulative Background-Related Noncarcinogenic Risk: 3.10E-04		
* Total Carcinogenic Risk:			1.30E-06	*Total Noncarcinogenic Risk: 3.23E-04		

TABLE 5-14

POTENTIAL RISKS VIA INHALATION OF ON-SITE
AIRBORNE PARTICULATES BY ADULTS UNDER FUTURE CONDITIONS
UTILITY WORKER OCCUPATIONAL EXPOSURE SCENARIO
REASONABLE MAXIMUM EXPOSURE SCENARIO

Parameter	Carcinogenic Risks			Noncarcinogenic Risks		
	Chronic Daily Intake (mg/kg/day)	Inhalation Slope Factor (mg/kg/day) ⁻¹	Chemical-Specific Risk	Chronic Daily Intake (mg/kg/day)	Inhalation Reference Dose (mg/kg/day)	Chemical-Specific Risk
<u>Inorganics:</u>						
Lead	2.04E-07			1.43E-06		
Zinc	1.53E-08			1.07E-07	2.00E-01	5.35E-07
Cumulative Carcinogenic Risk:				Cumulative Noncarcinogenic Risk:		5.35E-07
<u>Background-Related:</u>						
Cadmium	5.25E-09	6.10E+00	3.20E-08	3.67E-08	1.00E-03	3.67E-05
Nickel	6.36E-09	1.19E+00	7.60E-09	4.45E-08	2.00E-02	2.23E-06
Cumulative Background-Related Carcinogenic Risk:			3.96E-08	Cumulative Background-Related Noncarcinogenic Risk:		3.90E-05
* Total Carcinogenic Risk:			3.96E-08	*Total Noncarcinogenic Risk:		3.95E-05

TABLE 5-17

WORST CASE 30 YEAR
RISK TABLE (AGES 0-30)
FOR POTENTIAL CARCINOGENIC RISKS

$$R_{30} = R(0-6) + R(7-18) + R(18-30) \text{ where } R(18-30) = \text{adult risk} \times \frac{12}{30}$$

CURRENT CONDITIONS/OFF-SITE RESIDENTS/SOIL INHALATION

<u>Parameter</u>	<u>Ages 1-6</u>	<u>Ages 7-18</u>	<u>Adult to 30 Years</u>	<u>Combined Risk</u>
Cadmium*	3.40E-07	3.40E-07	2.12E-07	8.92E-07
Nickel*	1.60E-07	1.60E-07	1.00E-07	4.20E-07
Cumulative Risk:	5.00E-07	5.00E-07	3.12E-07	1.31E-06

CURRENT CONDITIONS/OFF-SITE RESIDENTS/GROUNDWATER INGESTION

<u>Parameter</u>	<u>Ages 1-6</u>	<u>Ages 7-18</u>	<u>Adult to 30 Years</u>	<u>Combined Risk</u>
Arsenic	9.95E-10	1.03E-09	1.22E-09	3.25E-09
Beryllium	3.42E-05	3.55E-05	4.20E-05	1.12E-04
Methylene chloride	8.95E-08	9.29E-08	1.10E-07	2.93E-07
Cumulative Risk:	3.43E-05	3.56E-05	4.21E-05	1.12E-04

CURRENT CONDITIONS/OFF-SITE RESIDENTS/SOIL INGESTION

<u>Parameter</u>	<u>Ages 1-6</u>	<u>Ages 7-18</u>	<u>Adult to 30 Years</u>	<u>Combined Risk</u>
Arsenic*	8.29E-10	3.07E-10	1.90E-10	1.33E-09
Beryllium*	1.33E-06	4.93E-07	3.04E-07	2.13E-06
Benzo(a)anthracene	3.15E-07	1.17E-07	7.20E-08	5.40E-07
Benzo(a)pyrene	2.04E-06	7.84E-07	4.64E-07	3.26E-06
Benzo(b)fluoranthene	3.81E-07	1.41E-07	8.72E-08	6.09E-07
Benzo(g,h,i)perylene	3.20E-08	1.19E-08	7.32E-09	5.12E-08
Benzo(k)fluoranthene	1.80E-07	6.66E-08	4.12E-08	2.88E-07
Bis(2-ethylhexyl) phthalate	1.44E-09	5.32E-10	3.28E-10	2.30E-09
Chrysene	1.00E-08	3.71E-09	2.29E-09	1.60E-08
Dibenzo(a,h)anthracene	9.04E-07	3.35E-07	2.06E-07	1.45E-06
Indeno(1,2,3-cd)pyrene	3.25E-07	1.20E-07	7.44E-08	5.19E-07
4,4'-DDE	5.17E-09	1.91E-09	1.18E-09	8.26E-09
Pyrene	2.35E-07	8.70E-08	5.36E-08	3.76E-07
Cumulative Risk:	5.76E-06	2.13E-06	1.31E-06	9.25E-06

Note:

* - Background-related parameters.

TABLE 5-17
(CONTINUED)

WORST CASE 30 YEAR
RISK TABLE (AGES 0-30)
FOR POTENTIAL CARCINOGENIC RISKS

$$R_{30} = R(0-6) + R(7-18) + R(18-30) \text{ where } R(18-30) = \text{adult risk} \times \frac{12}{30}$$

FUTURE CONDITIONS/ON-SITE RESIDENTS/SOIL INHALATION

<u>Parameter</u>	<u>Ages 1-6</u>	<u>Ages 7-18</u>	<u>Adult to 30 Years</u>	<u>Combined Risk</u>
Cadmium*	4.60E-07	4.70E-07	2.92E-07	1.22E-06
Nickel*	1.90E-07	1.90E-07	1.20E-07	5.00E-07
Cumulative Risk:	6.50E-07	6.60E-07	4.12E-07	1.72E-06

FUTURE CONDITIONS/ON-SITE RESIDENTS/GROUNDWATER INGESTION

<u>Parameter</u>	<u>Ages 1-6</u>	<u>Ages 7-18</u>	<u>Adult to 30 Years</u>	<u>Combined Risk</u>
Arsenic	1.99E-09	2.06E-09	2.45E-08	2.86E-08
Beryllium	5.13E-05	5.32E-05	6.32E-05	1.68E-04
Methylene chloride	8.96E-08	9.29E-08	1.10E-07	2.93E-07
Bis(2-ethylhexyl) phthalate	2.79E-07	2.89E-07	3.43E-07	9.11E-07
Cumulative Risk:	5.17E-05	5.36E-05	6.37E-05	1.69E-04

FUTURE CONDITIONS/ON-SITE RESIDENTS/SOIL INGESTION

<u>Parameter</u>	<u>Ages 1-6</u>	<u>Ages 7-18</u>	<u>Adult to 30 Years</u>	<u>Combined Risk</u>
Arsenic*	1.11E-10	4.09E-11	2.52E-11	1.77E-10
Beryllium*	1.40E-06	5.19E-07	3.20E-07	2.24E-06
Benzo(a)anthracene	3.30E-07	1.22E-07	7.56E-08	5.28E-07
Benzo(a)pyrene	2.54E-06	9.41E-07	5.80E-07	4.06E-06
Benzo(b)fluoranthene	5.33E-07	1.98E-07	1.22E-07	8.53E-07
Benzo(g,h,i)perylene	2.97E-08	1.10E-08	6.80E-09	4.75E-08
Benzo(k)fluoranthene	2.54E-07	9.40E-08	5.80E-08	4.06E-07
Chrysene	1.13E-08	4.17E-09	2.58E-09	1.81E-08
Dibenzo(a,h)anthracene	1.28E-06	4.74E-07	2.92E-07	2.05E-06
Indeno(1,2,3-cd)pyrene	3.29E-07	1.22E-07	7.52E-08	5.26E-07
Pyrene	2.32E-07	8.60E-08	5.32E-08	3.71E-07
Bis(2-ethylhexyl) phthalate	5.95E-09	2.20E-09	1.36E-09	9.51E-09
4,4'-DDT	2.49E-08	9.23E-09	5.6E-09	3.98E-08
4,4'-DDE	4.62E-09	1.71E-09	1.0E-09	7.39E-09
PCB 1260	1.15E-06	4.24E-07	2.62E-07	1.84E-06
PCB 1248	3.14E-07	1.16E-07	7.16E-08	5.02E-07
Cumulative Risk:	8.44E-06	3.12E-06	1.93E-06	1.35E-05

Note:

* - Background-related parameters.
(2531c-50)

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TABLE 5-18

SUMMARY OF POTENTIAL RISKS EXCEEDING 10⁻⁶
FOR CARCINOGENS AND HAZARD (INDEX) FOR NONCARCINOGENS

CURRENT CONDITIONS/OFF-SITE RESIDENTS/CHILDREN 1-6

	<u>Soil Inhalation</u>		<u>Soil Ingestion</u>		<u>Groundwater Ingestion</u>		<u>Combined Risk¹ Across Pathways</u>	
	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>
Antimony						3.48E+00		3.48E+00
Beryllium			1.33E-06*		3.42E-05		3.55E-05	
Benzo(a)pyrene			2.04E-06				2.04E-06	
Cumulative Risk ² :			5.75E-06		3.43E-05	4.34E+00	4.05E-05	4.59E+00

CURRENT CONDITIONS/OFF-SITE RESIDENTS/CHILDREN 7-18

Antimony						1.81E+00		1.81E+00
Beryllium					3.56E-05		3.60E-05	
Cumulative Risk:			2.13E-06		3.56E-05	2.25E+00	3.82E-05	2.30E+00

CURRENT CONDITIONS/OFF-SITE RESIDENTS/ADULTS

Antimony						2.14E+00		2.14E+00
Beryllium					1.05E-04		1.06E-04	
Benzo(a)pyrene			1.16E-06				1.16E-06	
Cumulative Risk:			3.29E-06		1.06E-04	2.67E+00	1.10E-04	2.70E+00

Note:

- * - Background-related parameters.
- 1 - Combined Risks for all parameters (see Table 5-19).
- 2 - Cumulative Risks for all parameters (see Table 5-19).

APR 30 9 55 65

5-55

TABLE 5-18
(CONTINUED)

SUMMARY OF POTENTIAL RISKS EXCEEDING 10⁻⁶
FOR CARCINOGENS AND HAZARD INDEX=1 FOR NONCARCINOGENS

FUTURE CONDITIONS/ON-SITE RESIDENTS/CHILDREN 1-6

	<u>Soil Inhalation</u>		<u>Soil Ingestion</u>		<u>Groundwater Ingestion</u>		<u>Combined Risk Across Pathways</u>	
	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>
Antimony				1.36E+00				1.36E+00
Beryllium			1.40E-06		5.13E-05		5.27E-05	
Copper				1.38E+00				1.42E+00
Thallium						3.32E+00		3.32E+00
PCB 1260			1.15E-06				1.15E-06	
Benzo(a)pyrene			2.54E-06				2.54E-06	
Dibenz(a,h)anthracene			1.28E-06				1.28E-06	
Cumulative Risk:			8.44E-06	2.87E+00	5.17E-05	4.24E+00	6.08E-05	7.12E+00

FUTURE CONDITIONS/ON-SITE RESIDENTS/CHILDREN 7-18

Beryllium					5.32E-05		5.37E-05	
Thallium						1.72E+00		1.72E+00
Cumulative Risk:			3.12E-06		5.36E-05	2.20E+00	5.73E-05	2.45E+00

FUTURE CONDITIONS/ON-SITE RESIDENTS/ADULTS

Beryllium					1.58E-04		1.59E-04	
Thallium						2.04E+00		2.04E+00
Benzo(a)pyrene			1.45E-06				1.45E-06	
Cumulative Risk:	1.30E-06		4.82E-06		1.59E-04	2.61E+00	1.65E-04	2.93E+00

ASH PILE INCIDENTAL INGESTION FUTURE CONDITIONS/ONSITE RECREATIONAL CHILDREN 1-6

2,3,7,8-TCDD 2.63E-05

ASH PILE INCIDENTAL INGESTION FUTURE CONDITIONS/ONSITE RECREATIONAL/CHILDREN 7-18

2,3,7,8-TCDD 9.75E-06

(2531c-54)

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TABLE 5-19

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
CURRENT CONDITIONS/OFF-SITE RESIDENTS/CHILDREN 1-6

	<u>Soil Inhalation</u>		<u>Soil Ingestion</u>		<u>Groundwater Ingestion</u>		<u>Combined Risk Across Pathways</u>	
	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>
Aluminum						1.21E-02		1.21E-02
Antimony						3.48E+00		3.48E+00
Arsenic			8.29E-10*	1.93E-01*	9.95E-10	2.32E-01	1.82E-09	4.25E-01
Barium						4.05E-02		4.05E-02
Beryllium			1.33E-06*	7.22E-04*	3.42E-05	1.86E-02	3.55E-05	1.93E-02
Cadmium	3.40E-07*	6.41E-04*					3.40E-07	6.41E-04
Chromium						2.32E-04		2.32E-04
Copper				2.34E-02		1.34E-01		1.57E-01
Manganese						2.11E-02		2.11E-02
Mercury						3.56E-02		3.56E-02
Nickel	1.60E-07*	7.83E-05*					1.60E-07	7.83E-05
Selenium						4.64E-02		4.64E-02
Silver				3.32E-03		1.08E-01		1.11E-01
Vanadium				2.26E-02		1.59E-01		1.82E-01
Zinc		3.67E-05		1.71E-03		2.18E-02		2.35E-02
Cyanide				9.82E-05		2.79E-02		2.80E-02
Acenaphthylene				1.14E-04				1.14E-04
Anthracene				2.01E-06				2.01E-06
Benzo(a)anthracene			3.15E-07				3.15E-07	
Benzo(a)pyrene			2.04E-06				2.04E-06	
Benzo(b)fluoranthene			3.81E-07				3.81E-07	
Benzo(g,h,i)perylene			3.20E-08	3.69E-04			3.20E-08	3.69E-04
Benzo(k)fluoranthene			1.80E-07				1.80E-07	
Bis(2-ethylhexyl)phthalate			1.44E-09	5.99E-05			1.44E-09	5.99E-05
Chrysene			1.00E-08				1.00E-08	
Dibenzo(a,h)anthracene			9.04E-07				9.04E-07	
Di-n-butyl phthalate				2.98E-06				2.98E-06
Fluoranthene				9.22E-05				9.22E-05
Indeno(1,2,3-cd)pyrene			3.25E-07				3.25E-07	
Methylene chloride					8.96E-08	2.32E-03	8.96E-08	2.32E-03
Phenanthrene				6.31E-05				6.31E-05
Pyrene			2.35E-07	9.80E-05			2.35E-07	9.80E-05
Total Phenols				1.57E-06				1.57E-06
4,4'-DDE			5.71E-09				5.71E-09	
Benzoic Acid				1.14E-07				1.14E-07
Pentachlorophenol				2.11E-06				2.11E-06
Cumulative Risk:	5.00E-07	7.56E-04	5.76E-06	2.46E-01	3.43E-05	4.34E+00	4.05E-05	4.59E+00

Note:

* - Background-related parameters.

TABLE 5-19
(CONTINUED)

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
CURRENT CONDITIONS/OFF-SITE RESIDENTS/CHILDREN 7-18

	Soil Inhalation		Soil Ingestion		Groundwater Ingestion		Combined Risk Across Pathways	
	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic
Aluminum						6.20E-03		6.20E-03
Antimony						1.81E+00		1.81E+00
Arsenic			3.07E-10*	3.58E-02*	1.03E-09	1.20E-01	1.34E-09	1.56E-01
Barium						2.10E-02		2.10E-02
Beryllium			4.93E-07*	1.34E-04*	3.55E-05	9.63E-03	3.60E-05	9.76E-03
Cadmium	3.60E-07*	3.25E-04*					3.40E-07	3.25E-04
Chromium						1.20E-04		1.20E-04
Copper				4.33E-03		6.96E-02		7.39E-02
Manganese						1.10E-02		1.10E-02
Mercury						1.85E-02		1.85E-02
Nickel	1.60E-07*	3.96E-05*					1.60E-07	3.96E-05
Selenium						2.41E-02		2.41E-02
Silver				6.14E-04		5.62E-02		5.62E-02
Vanadium				4.19E-03		8.25E-02		8.67E-02
Zinc		1.86E-05		3.16E-04		1.13E-02		1.16E-02
Cyanide				1.82E-05		1.44E-02		1.44E-02
Acenaphthylene				2.11E-05				2.11E-05
Anthracene				3.72E-07				3.72E-07
Benzo(a)anthracene			1.17E-07				1.17E-07	
Benzo(a)pyrene			7.54E-07				7.54E-07	
Benzo(b)fluoranthene			1.41E-07				1.41E-07	
Benzo(g,h,i)perylene			1.19E-08	6.83E-05			1.19E-08	6.83E-05
Benzo(k)fluoranthene			6.66E-08				6.66E-08	
Bis(2-ethylhexyl)phthalate			5.32E-10	1.11E-05			5.32E-10	1.11E-05
Chrysene			3.71E-09				3.71E-09	
Dibenzo(a,h)anthracene			3.33E-07				3.33E-07	
Di-n-butyl phthalate				5.51E-07				5.51E-07
Fluoranthene				1.71E-05				1.71E-05
Indeno(1,2,3-cd)pyrene			1.20E-07				1.20E-07	
Methylene chloride					9.29E-08	1.20E-03	9.29E-08	1.20E-03
Phenanthrene				1.17E-05				1.17E-05
Pyrene			8.70E-08	1.81E-05			8.70E-08	1.81E-05
Total Phenols				2.91E-07				2.91E-07
4,4'-DDE			1.91E-09				1.91E-09	
Benzoic Acid				2.11E-08				2.11E-08
Pentachlorophenol				3.91E-07				3.91E-07
Cumulative Risk:	5.00E-07	7.93E-04	2.13E-06	4.56E-02	3.56E-05	2.26E+00	3.82E-05	2.30E+00

Note:

* - Background-related parameters.

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TABLE 5-19
(CONTINUED)

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
CURRENT CONDITIONS/OFF-SITE RESIDENTS/ADULTS

	Soil Inhalation		Soil Ingestion		Groundwater Ingestion		Combined Risk Across Pathways	
	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic
Aluminum						7.45E-03		7.45E-03
Antimony						2.14E+00		2.14E+00
Arsenic			4.74E-10*	2.21E-02*	3.06E-09	1.43E-01	3.53E-09	1.65E-01
Barium						2.49E-02		2.49E-02
Beryllium			7.61E-07*	8.25E-05*	1.05E-04	1.14E-02	1.06E-04	1.15E-02
Cadmium	5.30E-07*	2.04E-04*					5.30E-07	2.04E-04
Chromium						1.43E-04		1.43E-04
Copper				2.67E-03		8.26E-02		8.53E-02
Manganese						1.30E-02		1.30E-02
Mercury						2.19E-02		2.19E-02
Nickel	2.50E-07*	2.49E-05*					2.50E-07	2.49E-05
Selenium						2.86E-02		2.86E-02
Silver				3.79E-04		6.67E-02		6.71E-02
Vanadium				2.59E-03		9.80E-02		1.00E-01
Zinc		1.17E-05		1.95E-04		1.34E-02		1.36E-02
Cyanide				1.12E-05		1.71E-02		1.71E-02
Acenaphthylene				1.30E-05				1.30E-05
Anthracene				2.29E-07				2.29E-07
Benzo(a)anthracene			1.80E-07				1.80E-07	
Benzo(a)pyrene			1.16E-06				1.16E-06	
Benzo(b)fluoranthene			2.18E-07				2.18E-07	
Benzo(g,h,i)perylene			1.83E-08	4.22E-05			1.83E-08	4.22E-05
Benzo(k)fluoranthene			1.03E-07				1.03E-07	
Bis(2-ethylhexyl)phthalate			8.21E-10	6.84E-06			8.21E-10	6.84E-06
Chrysene			5.73E-09				5.73E-09	
Dibenzo(a,h)anthracene			5.16E-07				5.16E-07	
Di-n-butyl phthalate				3.40E-07				3.40E-07
Fluoranthene				1.05E-05				1.05E-05
Indeno(1,2,3-cd)pyrene			1.86E-07				1.86E-07	
Methylene chloride					2.76E-07	1.43E-03	2.76E-07	1.43E-03
Phenanthrene				7.22E-06				7.22E-06
Pyrene			1.34E-07	1.12E-05			1.34E-07	1.12E-05
Total Phenols				1.80E-07				1.80E-07
4,4'-DDE			2.95E-09				2.95E-09	
Benzoic Acid				1.30E-08				1.30E-08
Pentachlorophenol				2.41E-07				2.41E-07
Cumulative Risk:	7.80E-07	2.41E-04	3.29E-06	2.81E-02	1.05E-04	2.67E+00	1.10E-04	2.70E+00

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Note:
* - Background-related parameters.

TABLE 5-19
(CONTINUED)

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
FUTURE CONDITIONS/ON-SITE RESIDENTS/CHILDREN 1-6

	Soil Inhalation		Soil Ingestion		Groundwater Ingestion		Combined Risk Across Pathways	
	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic
Aluminum				3.11E-02		3.78E-02		6.89E-02
Antimony				1.36E+00				1.36E+00
Arsenic			1.11E-10*	2.58E-02*	1.99E-09	4.64E-01	2.10E-09	4.90E-01
Barium						1.99E-02		1.99E-02
Beryllium			1.40E-06*	7.60E-04*	5.13E-05	2.79E-02	5.27E-05	2.87E-02
Cadmium	4.60E-07*	8.84E-04*					4.60E-07	8.84E-04
Chromium				1.01E-04		4.18E-04		5.19E-04
Copper				1.38E+00		3.64E-02		1.42E+00
Manganese				3.31E-02		6.59E-02		9.90E-02
Mercury						2.48E-02		2.48E-02
Nickel	1.90E-07*	9.32E-05*					1.90E-07	9.32E-05
Selenium						6.19E-02		6.19E-02
Silver				5.26E-03				5.26E-03
Thallium						3.32E+00		3.32E+00
Vanadium						1.19E-01		1.19E-01
Zinc		4.02E-05		3.28E-02		2.11E-02		5.39E-02
Cyanide				1.27E-04				1.27E-04
Acenaphthene				1.69E-05				1.69E-05
Acenaphthylene				3.37E-04				3.37E-04
Acetone						1.63E-02		1.63E-02
Toluene						6.19E-04		6.19E-04
Carbon disulfide						1.39E-03		1.39E-03
Methylene chloride					8.96E-08	2.32E-03	8.96E-08	2.32E-03
2-Butanone						4.64E-03		4.64E-03
Xylenes						6.97E-05		6.97E-05
Anthracene				5.11E-06				5.11E-06
Benzo(a)anthracene			3.30E-07				3.30E-07	
Benzo(a)pyrene			2.54E-06				2.54E-06	
Benzo(b)fluoranthene			5.33E-07				5.33E-07	
Benzo(g,h,i)perylene			2.97E-08	3.42E-04			2.97E-08	3.42E-04
Benzo(k)fluoranthene			2.54E-07				2.54E-07	
Chrysene			1.13E-08				1.13E-08	
Dibenzo(a,h)anthracene			1.28E-06				1.28E-06	

Note:

* - Background-related parameters.

TABLE 5-19
(CONTINUED)

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
FUTURE CONDITIONS/ON-SITE RESIDENTS/CHILDREN 1-6

	<u>Soil Inhalation</u>		<u>Soil Ingestion</u>		<u>Groundwater Ingestion</u>		<u>Combined Risk Across Pathways</u>	
	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>
Fluoranthene				7.05E-05				7.05E-05
Fluorene				3.26E-05				3.26E-05
Indeno(1,2,3-cd)pyrene			3.29E-07				3.29E-07	
Phenanthrene				7.45E-05				7.45E-05
Pyrene			2.32E-07	9.69E-05			2.32E-07	9.69E-05
Bis(2-ethylhexyl)phthalate			5.95E-09	2.48E-04	2.79E-07	1.16E-02	2.85E-07	1.10E-02
Di-n-octyl phthalate				1.13E-04				1.13E-04
4,4'-DDT			2.49E-08	1.71E-03			2.49E-08	1.71E-03
4,4'-DDE			4.62E-09				4.62E-09	
PCB 1260			1.15E-06				1.15E-06	
PCB 1248			3.14E-07				3.14E-07	
Di-n-butyl phthalate				4.31E-06		2.32E-03		2.32E-03
Butyl benzyl phthalate				1.65E-06				1.65E-06
Benzoic Acid				1.41E-07				1.41E-07
Cumulative Risk:	6.50E-07	1.02E-03	8.44E-06	2.87E+00	5.17E-05	4.24E+00	6.08E-05	7.12E+00

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TABLE S-19
(CONTINUED)

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
FUTURE CONDITIONS/ON-SITE RESIDENTS/CHILDREN 7-18

	Soil Inhalation		Soil Ingestion		Groundwater Ingestion		Combined Risk Across Pathways	
	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic	Carcinogenic	Non-Carcinogenic
Aluminum				5.73E-03		1.96E-02		2.54E-02
Antimony				2.51E-01				2.51E-01
Arsenic			4.09E-11*	4.78E-03*	2.06E-09	2.41E-01	2.10E-09	2.46E-01
Barium						1.03E-02		1.03E-02
Beryllium			5.19E-07*	1.41E-04*	5.32E-05	1.44E-02	5.37E-05	1.45E-02
Cadmium	4.70E-07*	4.48E-04*					4.70E-07	4.48E-04
Chromium				1.88E-05		2.17E-04		2.36E-04
Copper				2.55E-01		1.89E-02		2.74E-01
Manganese				6.14E-03		3.42E-02		4.03E-02
Mercury						1.28E-02		1.28E-02
Nickel	1.90E-07*	4.72E-05*					1.90E-07	4.72E-05
Selenium						3.21E-02		3.21E-02
Silver				9.74E-04				9.74E-04
Thallium						1.72E+00		1.72E+00
Vanadium						6.19E-02		6.19E-02
Zinc		2.03E-05		6.07E-03		1.10E-02		1.71E-02
Cyanide				2.35E-05				2.35E-05
Acenaphthene				3.13E-06				3.13E-06
Acenaphthylene				6.25E-05				6.25E-05
Acetone						8.43E-03		8.43E-03
Toluene						3.21E-04		3.21E-04
Carbon disulfide						7.22E-04		7.22E-04
Ethylene chloride					9.29E-08	1.20E-03	9.29E-08	1.20E-03
Butanone						2.41E-03		2.41E-03
Xylenes						3.61E-05		3.61E-05
Anthracene				9.46E-07				9.46E-07
Benzo(a)anthracene			1.22E-07				1.22E-07	
Benzo(a)pyrene			9.41E-07				9.41E-07	
Benzo(b)fluoranthene			1.98E-07				1.98E-07	
Benzo(g,h,i)perylene			1.10E-08	6.34E-05			1.10E-08	6.34E-05
Benzo(k)fluoranthene			9.40E-08				9.40E-08	
Chrysene			4.17E-09				4.17E-09	
Dibenzo(a,h)anthracene			4.74E-07				4.74E-07	

Note:

* - Background-related parameters.

TABLE 5-19
(CONTINUED)

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
FUTURE CONDITIONS/ON-SITE RESIDENTS/ADULTS

	<u>Soil Inhalation</u>		<u>Soil Ingestion</u>		<u>Groundwater Ingestion</u>		<u>Combined Risk Across Pathways</u>	
	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non- Carcinogenic</u>
Aluminum				3.55E-03		2.32E-02		2.68E-02
Antimony				1.55E-01				1.55E-01
Arsenic			6.31E-11*	2.95E-03*	6.12E-08	2.86E-01	6.13E-08	2.89E-01
Barium						1.22E-02		1.22E-02
Beryllium			8.01E-07*	8.69E-05*	1.58E-04	1.71E-02	1.59E-04	1.72E-02
Cadmium	7.30E-07*	2.81E-04*					7.30E-07	2.81E-04
Chromium				1.16E-05		2.57E-04		2.69E-04
Copper				1.58E-01		2.24E-02		1.80E-01
Manganese				3.79E-03		4.06E-02		4.44E-02
Mercury						1.52E-02		1.52E-02
Nickel	3.00E-07*	2.96E-05*					3.00E-07	2.96E-05
Selenium						3.81E-02		3.81E-02
Silver				6.01E-04				6.01E-04
Thallium						2.04E+00		2.04E+00
Vanadium						7.35E-02		7.35E-02
Zinc		1.27E-05		3.74E-03		1.30E-02		1.68E-02
Cyanide				1.45E-05				1.45E-05
Acenaphthene				1.93E-06				1.93E-06
Acenaphthylene				3.86E-05				3.86E-05
Acetone						1.00E-02		1.00E-02
Toluene						3.71E-04		3.71E-04
Carbon disulfide						8.57E-04		8.57E-04
Methylene chloride					2.76E-07	1.43E-03	2.76E-07	1.43E-03
2-Butanone						2.06E-03		2.06E-03
Xylenes						4.29E-05		4.29E-05
Anthracene				5.84E-07				5.84E-07
Benzo(a)anthracene			1.89E-07				1.89E-07	
Benzo(a)pyrene			1.45E-06				1.45E-06	
Benzo(b)fluoranthene			3.05E-07				3.05E-07	
Benzo(g,h,i)perylene			1.70E-08	3.91E-05			1.70E-08	3.91E-05
Benzo(k)fluoranthene			1.45E-07				1.45E-07	
Chrysene			6.44E-09				6.44E-09	
Dibenzo(a,h)anthracene			7.31E-07				7.31E-07	

Note:

* - Background-related parameters.

TABLE 5-19
(CONTINUED)

COMBINING RISKS ACROSS EXPOSURE PATHWAYS
FUTURE CONDITIONS/ON-SITE RESIDENTS/ADULTS

	<u>Soil Inhalation</u>		<u>Soil Ingestion</u>		<u>Groundwater Ingestion</u>		<u>Combined Risk Across Pathways</u>	
	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>	<u>Carcinogenic</u>	<u>Non-Carcinogenic</u>
Fluoranthene				8.06E-06				8.06E-06
Fluorene				3.73E-06				3.73E-06
Indeno(1,2,3-cd)pyrene			1.88E-07				1.88E-07	
Phenanthrene				8.51E-06				8.51E-06
Pyrene			1.33E-07	1.11E-05			1.33E-07	1.11E-05
Bis(2-ethylhexyl)phthalate			3.40E-09	2.83E-05	8.57E-07	7.14E-03	8.60E-07	7.17E-03
Di-n-octyl phthalate				1.30E-05				1.30E-05
4,4'-DDT			1.42E-08	1.95E-04			1.42E-08	1.95E-04
4,4'-DDE			2.64E-09				2.64E-09	
PCB 1260			6.55E-07				6.55E-07	
PCB 1248			1.79E-07				1.79E-07	
Di-n-butyl phthalate				4.92E-07		1.43E-03		1.43E-03
Butyl benzyl phthalate				1.88E-07				1.88E-07
Benzoic Acid				1.61E-08				1.61E-08
Cumulative Risk:	1.03E-06	3.23E-04	4.82E-06	3.26E-01	1.59E-04	2.61E+00	1.65E-04	2.93E+00

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APPENDIX E

COST ESTIMATES

FOR

REMEDIAL ACTION ALTERNATIVES

**NOTE: THIS RCD APPENDIX E IS COMPILED FROM
APPENDICES F+G FROM THE FS**

**FINAL DRAFT
FEASIBILITY STUDY REPORT
C & D RECYCLING SITE
FOSTER TOWNSHIP, LUZERNE COUNTY
PENNSYLVANIA**

**VOLUME II
APPENDICES**

Prepared on behalf of:

**AT&T Nassau Metals
Staten Island, New York**

Prepared by:

**ERM-Northeast
475 Park Avenue South
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Prepared for:

**McLaren/Hart Environmental Engineering Corporation
25 Independence Boulevard
Warren, New Jersey**

January 10, 1991

TABLE E-1
 COST ESTIMATE
 ALTERNATIVE II
 ACCESS RESTRICTIONS
 Page 2 of 2

Notes:

- (2) Based on the following:
 - a. Dismantling (\$10/ton) and transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. Total volume of old furnace (25' long, 10' wide, 20' high), plus interior mechanical equipment is approximately 120 cubic yards after demolition; average density of 200 pounds per cubic foot, or 2.7 tons per cubic yard. Total quantity is approximately 325 tons (120 c.y. x 2.7 tons/c.y.).
- (3) Based on the following:
 - a. Transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. Total of 600 cubic yards (Table 4-3) and assumed density of 2.0 tons per cubic yard.
- (4) Based on the following:

<u>Location of Off-site Soil</u>	<u>Surface Area</u>	<u>Volume at 1' Depth</u>
southwest corner	16,005 s.f.	593 c.y.
northwest corner	66,571 s.f.	2,466 c.y.
northern perimeter	13,283 s.f.	492 c.y.
	Subtotal =	3,551 c.y.
<u>Location of On-site Soil</u>		
Mill Hopper Creek	15,932 s.f.	590 c.y.
	Total =	4,141 c.y.

- (5) Based on the following:
 - a. Transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. 3,500 tons of pond sediment (see Section 4.2.3) and 43.8 tons (23.8 c.y. x 1.84 tons per c.y.) of storm sewer sediment (see Section 4.2.4) for a total of 3,543.8 tons (approximately 3,540 tons).
- (6) Means Building Construction Cost Data (1989)
 (015-304-0100)
 Chain link fence, 6' high: \$11.85 per linear foot
 Adjusted for inflation: \$11.85 x 1.1 = \$13.00/l.f.
 (approximately)
- (7) Based on a ten year life for 4,230 l.f. of new (2,930 l.f.) and existing (1,300 l.f.) perimeter fence. Assumes annual repair of ten percent of total length, i.e., 423 l.f. per year (approximately 430 l.f.).

TABLE E-2

COST ESTIMATE
ALTERNATIVE III
SOIL COVER
Page 2 of 4

<u>Item Description</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total Cost</u>	<u>Reference</u>
ANNUAL COST					
I. Maintenance	l.s.	16,000.00	1	16,000	(16)
II. Fence Repair	l.f.	13.00	430	5,590	(17)
III. Site Inspections	each	3,000.00	2	6,000	
IV. Groundwater Monitoring	l.s.	6,230.00	1	<u>6,230</u>	Table G-5
Subtotal (Annual Cost)				=	33,820
Present Worth (30 yrs., 10%, PWF=9.43)				=	318,920
Contingency (25%)				=	<u>79,730</u>
Total Present Worth (Annual Cost)				=	\$398,650
TOTAL PRESENT WORTH OF ALL COSTS				=	\$3,302,210

Notes:

- (1) Based on recent similar industrial sewer cleaning project cost, New Jersey and Pennsylvania area. Cost for stabilization is included with cost of pond sediment stabilization, Table G-1.
- (2) Based on the following:
 - a. Dismantling (\$10/ton) and transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. Total volume of old furnace (25' long, 10' wide, 20' high), plus interior mechanical equipment is approximately 120 cubic yards after demolition; average density of 200 pounds per cubic foot, or 2.7 tons per cubic yard. Total quantity is approximately 325 tons (120 c.y. x 2.7 tons/c.y.).
- (3) Based on the following:
 - a. Transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. Total of 600 cubic yards (Table 4-3) and assumed density of 2.0 tons per cubic yard.
- (4) Based on the following:

<u>Location of Off-site Soil</u>	<u>Surface Area</u>	<u>Volume at 1' Depth</u>
southwest corner	16,005 s.f.	593 c.y.
northwest corner	66,571 s.f.	2,466 c.y.
northern perimeter	13,283 s.f.	<u>492 c.y.</u>
Subtotal		= 3,551 c.y.
<u>Location of On-site Soil</u>		
Mill Hopper Creek	15,932 s.f.	<u>590 c.y.</u>
Total		= 4,141 c.y.

TABLE E-2

COST ESTIMATE
ALTERNATIVE III
SOIL COVER
Page 4 of 4

Notes (continued):

- Intermediate Cover (12") = (345,010 s.f. x 1.0') / (1 cy/ 27cf)
= 12,800 c.y. (approximately)
- (11) Quantity is equal to net surface area of soil to be covered (see note (10), above) plus 10 percent additional for cover: 345,010 s.f. The cost is price quote from NSC liners for 10 ounce per square yard geotextile (\$0.12/s.f.) plus installation (\$0.06/s.f.).
- (12) Based on cost for storm water and erosion control channels as percentage (4.4%) of total Site cover cost, from bid selected for GEMS Landfill, N.J. Superfund Remediation
- (13) Means Building Construction Cost Data (1989)
(015-304-0100)
Chain link fence, 6' high: \$11.85 per linear foot
Adjusted for inflation: \$11.85 x 1.1 = \$13.00/l.f.
(approximately)
- (14) Based on the following costs:
- | | |
|---------------|---|
| \$65,000 | air monitoring program for three months until: (1) off-site and on-site soil consolidation is completed; and (2) first layer (12" intermediate cover) has been installed. |
| 25,000 | X-ray florescence field sampler for metals (post-excavation sampling). |
| 10,000 | off-site analytical costs for post-excavation confirmation samples (to confirm field results). |
| <u>20,000</u> | labor costs for air monitoring and post-excavation sampling. |
| 120,000 | Total costs for air monitoring and post-excavation sampling. |
- (15) Based on the following:
- a. Areas to be paved:
- | | | |
|----------------------------|---|----------------------|
| Weigh Station Road | = | 1,292 sq.ft. |
| Employee Parking Area | = | 4,857 sq.ft. |
| Main Facility Parking Area | = | <u>34,356 sq.ft.</u> |
| Total | = | 40,505 sq.ft. |
| | = | 4,500 sq.yds. |
- b. Cost is from Means Construction Cost Data for Philadelphia, three inch asphalt pavement. Present unit costs of \$7.50/sq.yd. updated from July 1988 (\$6.30 per square yard) using Engineering News Record Construction Cost Index from July, 1988 (5981.27) to November, 1991 (7110.37).
- (16) Based upon the following costs reported in Section 2.1.3.2 of Compendium of Costs for Remedial Technologies at Hazardous Waste Sites; EPA/600/2-87/087; October 1987, adjusted for inflation:
- | | | |
|---|------------------------------|--------------|
| Mowing/reevegatation: | \$960/year/acre x 10 acres = | 9,600 |
| Erosion control: | \$320/year/acre x 10 acres = | 3,200 |
| Repairs due to shrinkage, swelling or freeze/thaw damage: | \$320/year/acre x 10 acres = | <u>3,200</u> |
| Total | = | \$16,000 |
- (17) Based on a ten year life for 4,230 l.f. of new (2,930 l.f.) and existing (1,300 l.f.) perimeter fence. Assumes annual repair of ten percent of total length, i.e., 423 l.f. per year (approximately 430 l.f.).

TABLE E-3
COST ESTIMATE
ALTERNATIVE IV - RCRA COVER
Page 2 of 4

<u>Item Description</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total Cost</u>	<u>Reference</u>
ANNUAL COST					
I. Maintenance	l.s.	16,000.00	1	16,000	(18)
II. Fence Repair	l.f.	13.00	430	5,590	(19)
III. Site Inspections	each	3,000.00	2	6,000	
IV. Groundwater Monitoring	l.s.	6,230.00	1	<u>6,230</u>	Table G-5
Subtotal (Annual Cost)				=	33,820
Present Worth (30 yrs., 10%, PWF=9.43)				=	318,920
Contingency (25%)				=	<u>79,730</u>
Total Present Worth (Annual Cost)				=	\$398,650
TOTAL PRESENT WORTH OF ALL COSTS				=	\$3,864,110

Notes:

- (1) Based on recent similar industrial sewer cleaning project cost, New Jersey and Pennsylvania area. Cost for stabilization is included with cost of pond sediment stabilization, Table G-1.
- (2) Based on the following:
 - a. Dismantling (\$10/ton) and transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. Total volume of old furnace (25' long, 10' wide, 20' high), plus interior mechanical equipment is approximately 120 cubic yards after demolition; average density of 200 pounds per cubic foot, or 2.7 tons per cubic yard. Total quantity is approximately 325 tons (120 c.y. x 2.7 tons/c.y.).
- (3) Based on the following:
 - a. Transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. Total of 600 cubic yards (Table 4-3) and assumed density of 2.0 tons per cubic yard.
- (4) Based on the following:

<u>Location of Off-site Soil</u>	<u>Surface Area</u>	<u>Volume at 1' Depth</u>
southwest corner	16,005 s.f.	593 c.y.
northwest corner	66,571 s.f.	2,466 c.y.
northern perimeter	13,283 s.f.	<u>492 c.y.</u>
Subtotal		= 3,551 c.y.
<u>Location of On-site Soil</u>		
Mill Hopper Creek	15,932 s.f.	<u>590 c.y.</u>
Total		= 4,141 c.y.

TABLE E-3

COST ESTIMATE
ALTERNATIVE IV - RCRA COVER
Page 4 of 4

Notes (continued):

- (11) Quantity is equal to twice the net surface area of soil to be covered (see note (10), above) plus 10 percent additional for cover: $313,645 \times 1.1 \times 2.0 = 690,020$ s.f. The cost is price quote from NSC liners for 10 ounce per square yard geotextile (\$0.12/s.f.) plus installation (\$0.06/s.f.).
- (12) Based on price quote from supplier (NSC, Pittsburgh, PA) of \$0.31/s.f. for geonet drainage layer (PN 3000), installed: \$0.25/s.f. materials; \$0.06/s.f. installation.
- (13) Based on price quote from supplier (NSC, Pittsburgh, PA) of \$0.55/s.f. for 60 mil high density polyethylene (HDPE) liner, installed; \$0.30/s.f. materials; \$0.25/s.f. installation.
- (14) Based on cost for storm water and erosion control channels as percentage (4.4%) of total Site cover cost, from bid selected for GEMS Landfill, N.J. Superfund Remediation.
- (15) Means Building Construction Cost Data (1989)
(015-304-0100)
Chain link fence, 6' high: \$11.85 per linear foot
Adjusted for inflation: $\$11.85 \times 1.1 = \$13.00/1.f.$
(approximately)
- (16) Based on the following costs:
- | | |
|---------------|---|
| \$65,000 | air monitoring program for three months until: (1) off-site and on-site soil consolidation is completed; and (2) first layer (12" intermediate cover) has been installed. |
| 25,000 | X-ray fluorescence field sampler for metals (post-excavation sampling). |
| 10,000 | off-site analytical costs for post-excavation confirmation samples (to confirm field results). |
| <u>20,000</u> | labor costs for air monitoring and post-excavation sampling. |
| 120,000 | Total costs for air monitoring and post-excavation sampling. |
- (17) Based on the following:
- a. Areas to be paved:
- | | | |
|----------------------------|---|----------------------|
| Weigh Station Road | = | 1,292 sq.ft. |
| Employee Parking Area | = | 4,857 sq.ft. |
| Main Facility Parking Area | = | <u>34,356</u> sq.ft. |
| Total | = | 40,505 sq.ft. |
| | = | 4,500 sq.yds. |
- b. Cost is from Means Construction Cost Data for Philadelphia, three inch asphalt pavement. Present unit costs of \$7.50/sq.yd. updated from July 1988 (\$6.30 per square yard) using Engineering News Record Construction Cost Index from July, 1988 (5981.27) to November, 1991 (7110.37).
- (18) Based upon the following costs reported in Section 2.1.3.2 of Compendium of Costs for Remedial Technologies at Hazardous Waste Sites; EPA/600/2-87/087; October 1987, adjusted for inflation:
- | | | |
|---|------------------------------|--------------|
| Mowing/revegetation: | \$960/year/acre x 10 acres = | 9,600 |
| Erosion control: | \$320/year/acre x 10 acres = | 3,200 |
| Repairs due to shrinkage, swelling or freeze/thaw damage: | \$320/year/acre x 10 acres = | <u>3,200</u> |
| | Total = | \$16,000 |
- (19) Based on a ten year life for 4,230 l.f. of new (2,930 l.f.) and existing (1,300 l.f.) perimeter fence. Assumes annual repair of ten percent of total length, i.e., 423 l.f. per year (approximately 430 l.f.).

TABLE E-5
COST ESTIMATE
ALTERNATIVE VI
ON-SITE STABILIZATION AND DISPOSAL
Page 2 of 5

<u>Item Description</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total Cost</u>	<u>Reference</u>
VI. Additional Fence	l.f.	13.00	2,930	38,090	(18)
VII. Groundwater Monitoring Well	l.s.	15,000.00	1	15,000	Table G-4
VIII. Post-Excavation Sampling and Air Monitoring Program	l.s.	120,000.00	1	120,000	(19)
IX. Asphalt Repaving	s.y	7.50	4,500	<u>33,750</u>	(20)
Subtotal (Capital Cost)				=	\$3,505,455 ✓
Mobilization, Engineering and Contingency (50%)				=	<u>\$1,752,730</u>
Total Capital Cost				=	\$5,258,185
<u>ANNUAL COST</u>					
I. Site Maintenance	month	1,150.00	12	13,800	(21)
II. Cell Maintenance	l.s.	6,400.00	1	6,400	(22)
III. Site Inspections	each	3,000.00	2	6,000	
IV. Fence Repair	l.f.	13.00	430	5,590	(23)
IV. Groundwater Monitoring	l.s.	6,230.00	1	<u>6,230</u>	Table G-5
Subtotal (Annual Cost)				=	38,020
Present Worth (30 yrs., 10%, PWF=9.43)				=	358,530
Contingency (25%) ✓				=	<u>89,630</u>
Total Present Worth (Annual Cost)				=	\$448,160
<u>TOTAL PRESENT WORTH OF ALL COSTS</u>				=	\$5,706,345

Notes:

- (1) Based on recent similar industrial sewer cleaning project cost, New Jersey and Pennsylvania area. Cost for stabilization is included with cost of pond sediment stabilization, Table G-1.
- (2) Based on the following:
 - a. Transportation and disposal facility price quote for non-hazardous waste transportation (\$14/ton) and disposal (\$58/ton) in Argyl, PA.
 - b. Total of 600 cubic yards (Table 4-3) and assumed density of 2.0 tons per cubic yard.

TABLE E-5

COST ESTIMATE
ALTERNATIVE VI
ON-SITE STABILIZATION AND DISPOSAL
Page 4 of 5

Notes (continued):

- (10) Based on the following:
- a. Cost: Refer to Table G-6.
 - b. Ash Quantity: Total of 165 c.y. (refer to Section 4.2.1) and assumed density of 1.84 tons per cubic yard. Total = 165 c.y. x 1.84 tons/c.y. = 303.6 tons (approximately 300 tons).
 - c. Soil Quantity: Total of 18,494 c.y. (refer to Table 4-2) and assumed density of 1.84 tons per cubic yard. Total = 18,494 c.y. x 1.84 tons/c.y. = 34,029 tons.
 - d. Total Soil and Ash Quantity : 300 tons (ash) + 34,029 tons (soil) = 34,329 tons.
- (11) For cost, see note 4(a), above. Quantity is equal to area of RCRA cell cover (160,000 s.f.) x 1' depth = 160,000 c.f., or 5,926 c.y.
- (12) For cost, see note 5, above. Quantity is equal to area of RCRA cell cover (160,000 s.f.).
- (13) For cost, see note 6, above. Quantity is equal to area of RCRA cell cover (160,000 s.f.).
- (14) For cost, see note 7, above. Quantity is equal to area of RCRA cell cover (160,000 s.f.).
- (15) For cost, see note 8, above. Quantity is equal to area of RCRA cell cover (160,000 s.f.) x 1.5' depth = 240,000 c.f., or 8,890 c.y.
- (16) Based on \$3.72 per square yard for 12" thick topsoil and seeding from bid selected for GEMS Landfill. Cost per c.y., adjusted for inflation, is \$12.95/c.y. (approximately \$13.00/c.y.). Quantity is equal to area of RCRA cell cover (160,000 s.f.) x 0.5' depth = 80,000 c.f., or 2,965 c.y.
- (17) Based on the following:
- A. Dimensions of channel cross-section:
 - width = 13.0 ft.
 - depth at center = 2.5' (slope = 1H:2V)
 - thickness of rip rap = 0.75'
 - cross-sectional area of channel to be excavated = 21.12 s.f.
 - cross-sectional area of rip rap = 5.06 s.f.
 - B. Costs - Rip Rap Liner
 - Excavation = 21.12 s.f./l.f. x 1c.y./27c.f. x \$12.14/c.y. (Means, 022-250-2035)
= \$9.50/l.f.
 - Load/stockpile = 21.12 s.f./l.f. x 1.0 l.f. x 1c.y./27c.f. x (\$1.26/c.y. + \$1.87/c.y.) (Means, 022-250-9024, 022-266-0310)
= \$2.44/l.f.
 - Rip Rap = 5.06 s.f./l.f. x 1.0 l.f. x 1c.y./27c.f. x \$13.50/c.y. (see above)
= \$2.53/l.f.
 - Place rip rap = 16.0s.f./l.f. x \$0.18/sf (see above)
= \$2.88/l.f.
 - Geotextile = 16.0 s.f./l.f. x \$0.18/s.f. (see above)
= \$2.88/l.f.
 - Total = \$9.50 + \$2.44 + \$2.53 + \$0.59 + \$2.88
= \$17.94/l.f.

**COST ESTIMATES
FOR
REMEDIAL ACTION TECHNOLOGIES
AND
COMMON ACTIONS**

LIST OF TABLES

Table No.	Title
1	Removal and Stabilization of Pond and Sewer System Sediment
2	Building Decontamination
3	Current Operation and Maintenance Costs
4	Installation of Three Groundwater Monitoring Wells
5	Annual Groundwater Monitoring
6	Unit Costs for Stabilization

TABLE 1
ESTIMATE OF COSTS
REMOVAL AND STABILIZATION
OF
POND AND SEWER SYSTEM SEDIMENT
Page 2 of 2

Notes (continued):

- (6) Pump, rental
Means, 1989 (016-420-4100)
\$160/week

- (7) Pump, operation
Means, 1989 (021-4444-0410)
\$770/week

- (8) Front end loader, wheel mounted, 45 cubic yard per hour capacity
Means, 1989 (022-238-1500)
 $\$1.63/\text{c.y.} \times 45\text{c.y./hour} \times 1.103 = \$80.90/\text{hour} = \$81/\text{hour}$
 $= \$650/\text{day}$

- (9) Backhoe, hydraulic crawler mounted
Means (022-238-0200)
 $\$1.75/\text{c.y.} \times 75\text{c.y./hour} \times 1.03 = \$144.70/\text{hour} = \$145/\text{hour}$
 $= \$1,160/\text{day}$

- (10) Dump truck, tandem, 12 ton payload
rent per month = $\$2,450 \times 1.5$ (O&P) $\times 1.103 = \$4,050/\text{month}$

- (11) Rip rap
Means, 1989 (022-712-0100)
 $\$25/\text{c.y.} \times 1.103 = \$27.56/\text{c.y.}$

c.y. = cubic yard

O&P = overhead and profit (subcontractor, see Means for definition).

1.103 = two year (1989 to 1991) inflation factor.

TABLE 2
COST ESTIMATE
BUILDING DECONTAMINATION
Page 2 of 2

Notes (continued):

- (1) (continued):
 - d. Preparation includes removal and containerizing debris in buildings that can not be decontaminated.
- (2) One vacuum for every other worker; total of 10 vacuums for 7 days = 70 days.
- (3) One airless sprayer for every other worker; total of 10 airless sprayers for 7 days = 70 days.

TABLE 4

COST ESTIMATE
 INSTALLATION OF THREE ADDITIONAL
 GROUNDWATER MONITORING WELLS

<u>Item Description</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Total Cost</u>	<u>Reference</u>
Mobilization	lump sum	2,400.00	1	2,400.00	
Drilling	feet	12.00	210	2,520.00	(1)
Screen	feet	6.00	45	270.00	(2)
Riser	feet	3.00	175	525.00	(3)
Pea Gravel	feet	8.00	60	480.00	(4)
Bentonite Seal	feet	36.00	6	216.00	(5)
Bentonite & Cement Tremie	feet	7.50	144	1,080.00	(6)
Steel Standpipe	each	120.00	3	360.00	
Locks	each	6.00	3	18.00	
Development	hour	120.00	9	1,080.00	(7)
Expenses					
(per diem)	day	360.00	5	1,800.00	(8)
Coordination	day	600.00	7	4,200.00	(9)
				<u>Total =</u>	<u>\$14,949.00</u>

Notes:

- (1) Assumes 70 feet per well and air rotary drilling six inch diameter.
- (2) Assumes three 15 foot sections of 3 inch diameter 60 slot screen (PVC).
- (3) Assumes approximately 58 feet, three inch diameter PVC riser for each well.
- (4) Assumes 20 linear feet of pea gravel in annular space.
- (5) Assumes two foot bentonite pellet seal in each well.
- (6) Assumes 48 feet of bentonite/cement (70 ft. - 20 ft. gravel - 2 ft. bentonite) per well.
- (7) Assumes three hour development per well, discharge onto ground surface.
- (8) Assumes three drillers and one oversight geologist at \$90 per day per person.
- (9) Assumes two day coordination/scheduling and 5 day field oversight at \$75 per hour.

TABLE 6
UNIT COSTS FOR STABILIZATION

<u>Source of Cost Estimate</u>	<u>Stabilization Cost Estimates</u>		<u>Reference</u>
	<u>\$/Ton</u>	<u>\$/Cubic Yard</u>	
<u>USEPA Handbook for Stabilization/Solidification of Hazardous Waste</u> (EPA/540/2-86/001; June 1986)	65.00	120.00	(1)
Vendor No. 1	49.00	90.00	(2)
Vendor No. 2	38.00	70.00	(3)
Vendor No. 3	41.00	76.00	(4)
Vendor No. 4	48.00	88.00	(5)
Treatability Study	<u>67.00</u>	<u>123.00</u>	(6)
Average Cost =	51.00	94.50	

Notes:

General: All costs presented include the cost of the following: (1) excavating wastes; (2) adding stabilization reagent (portland cement), including the cost of the reagent; (3) mixing waste and reagent; and (4) placing stabilized waste in disposal area or loading stabilized waste onto trucks for off-site disposal.

- (1) Cost per ton of plant mixing of unpumpable or solid wastes with reagent (portland cement), Table 6-4 of Handbook. Cost presented was \$48.40/ton, adjusted for inflation from June 1986 to June 1991.
- (2) Based on costs provided by Steven Kimbach of VFL Technologies, Malvern, PA, May 1991.
- (3) Based on costs provided by Brian Jaspers of Geo-Con Inc., Pittsburgh, PA, May 1991.
- (4) Based on costs provided by Bruno Petrillo of OHM Corporation, Princeton, New Jersey, June 1991.
- (5) Based on costs provided by Associated Chemicals and Environmental Services, Inc. (ACES), Blue Bell, PA, July 1991.
- (6) Estimate of costs from Kiber Associates, Atlanta Georgia, based on results of Stabilization Treatability Study Report. Estimate prepared by Kiber Associates, Section 3.0 of Treatability Study Report.

TECHNICAL MEMORANDUM No. 3

SUPPLEMENTAL EVALUATIONS AND INFORMATION
IN SUPPORT OF
FINAL DRAFT FEASIBILITY STUDY
C&D RECYCLING SITE

FOSTER TOWNSHIP, LUZERNE COUNTY, PA

Prepared by

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January 10, 1992

AR310398

TABLE 1

COMPARISON OF COSTS FOR
 REMEDIAL ACTION ALTERNATIVES:
 500ppm TO 1,000ppm ON-SITE LEAD
 REMEDIATION GOAL

C&D RECYCLING SITE
 LUZERNE COUNTY, PA

Alternative No. Description	Cost (\$) (1,000ppm Pb Goal) ⁽¹⁾	Cost (\$) (500ppm Pb Goal) ⁽²⁾	Increase	
			Amount	Percent
I No Action	831,020	831,020	\$ 0	0 %
II Access Restrictions	2,263,740	2,270,531	+ \$6,791	+ 0.3 %
III Soil Cover	3,302,210	3,863,586	+ \$561,376	+ 17 %
IV RCRA Cover	3,864,110	4,830,138	+ \$966,028	+ 25 %
V Stabilization & Off-site Disposal	8,944,565	11,985,717	+ \$3,041,152	+ 34 %
VI Stabilization & On-site Disposal	5,706,345	7,361,185	+ \$1,654,840	+ 29 %

Notes:

1. Cost estimate based on the quantity of soil representing a 1,000 ppm on-site and a 500 ppm off-site lead remediation goal, as reported in Section 5.0 and Appendix F of the Feasibility Study Report.
2. Cost estimate based on the quantity of on-site and off-site soil containing lead in concentrations exceeding 500 ppm.