

The undersigned took what he believed to be appropriate measures to perform fairly and efficiently to develop this Report, by viewing the Class Area with the Parties, presenting written questions to the Parties for comments and suggestions, and having conference calls with the Parties

to discuss their positions on the matters set forth below, which Party positions, however, are not binding, and with the Parties being invited to make their final comments below.

The undersigned makes the following Report and recommendations:

I.

THE STATUS OF THIS REPORT PRIOR TO THE EFFECTIVE DATE

Much as for the June 23, 2008 Report No. 1 respecting Medical Monitoring, your Special Master recommends that this Report be deemed to be part of the record herein for purposes of carrying out Property Remediation upon the Effective Date, but it is recommended that this Report not be considered part of the record for purposes of any appeal of previous Orders in this case.

The Parties have agreed that, by participating in the proceedings that led to the submission of this Report and in commenting on this Report, they have not waived or abandoned any of their positions previously taken before, during or after Trial or upon appeal concerning the Jury's or the Court's Property Remediation determinations or any Orders or matters addressed in this case, and that they have not thereby waived any appellate rights, or have been deemed to consent to any aspects of the Jury's or the Court's Property Remediation determinations.

In addition, until the Effective Date, the Parties, at the undersigned's request, have agreed to address certain issues pertaining to the Jury's Property Remediation determinations necessary for the Special Master to carry out the Property Remediation Program following the Effective Date, but the Property Remediation Program will not be carried out until such time.

II.

RECOMMENDED PROPERTY REMEDIATION DESIGN AND IMPLEMENTATION AND RELATED MATERIALS

1. Property Remediation Program Design, Duration of the Program and Property Remediation Eligibility.

Because the amounts determined by the Jury in Verdict Form III for the Property Remediation Program's components, other than the amount awarded for the costs of management, overhead, profit and contingencies, match the amounts suggested by Professor Kirk W. Brown, an expert sponsored by Class Counsel, in his Unit Costs for Remediation Program Expert Report in Exhibit A (the "Brown Expert Report"), your Special Master suggests that the Property Remediation Program be conducted in accordance with the recommended Brown Expert Report and in Professor Brown's supporting testimony. I understand that the record has no other property remediation design recommendations. We have asked the Parties to work with the undersigned in preparing a list of the eligible Zone 1A soil properties eligible for remediation, and the remediation eligible buildings, broken down by residences, mobile homes and personal structures, and further broken down among Zones 1, 2 and 3, to exclude the ineligible Graselli properties and other properties and structures within the Class Area ineligible for property remediation. In the remediation timeline in Exhibit B, we have suggested that the list be prepared and submitted to the Court within 30 days after the Effective Date.

Unlike the Phase II Medical Monitoring Verdict, which set in motion an equitable remedy addressed in Special Master's Report No. 1, the Phase III Property Verdict is a money judgment for

a fixed amount of \$55,537,522.25, payable by E. I. Dupont DeNemours and Company ("DuPont") if the Phase III Property Verdict is affirmed by appeal. This amount would be held separately from the Medical Monitoring Program Fund addressed in Special Master Report No. 1, and a Punitive Damages Fund to be discussed in Special Master Report No. 3. It is further recommended that the Property Remediation Fund be separated further into a soil remediation subaccount with an opening balance of \$5,652,977.43, a Zone 1 residential remediation subaccount with an opening balance of \$5,961,752.51, a Zone 2 residential remediation subaccount with an opening balance of \$8,732,368.95, a Zone 3 residential remediation subaccount with an opening balance of \$12,970,954.25, a Zone 1 mobile home remediation subaccount with an opening balance of \$755,185.79, a Zone 2 mobile home remediation subaccount with an opening balance of \$1,170,619.64, a Zone 3 mobile home remediation subaccount with an opening balance of \$852,287.09, a Zone 1 commercial structure remediation subaccount with an opening balance of \$65,410.77, a Zone 2 commercial structure remediation subaccount with an opening balance of \$200,830.88, a commercial structure remediation subaccount Zone 3 with an opening balance of \$749,777.42, and a management, overhead, profit and contingency subaccount with an opening balance of \$18,425,357.52, so that the Property Remediation Program funding matches the Jury's Phase III Verdict. As the Property Remediation Program is budgeted and carried out, it is recommended that the remediation cost components stay within these budgeted amounts and be paid from their respective subaccounts, unless ordered differently by the Court.

Notwithstanding the foregoing, depending on how the Property Remediation Judgment is structured after the Appeal, a portion of the Property Remediation Fund may be designated for Class Counsel attorneys' fees and litigation expenses.

It is suggested that the owners of the properties eligible for remediation at the Effective Date be defined as the Property Remediation Class Members. In accordance with the recommendations of Professor Brown, property remediation will begin as soon after the Effective Date as practicable, will last approximately three years from the Date of Implementation (estimated to be 365 days after the Effective Date in Exhibit B), and will occur by Zone to the extent practicable and in the following order: Zone 1A soil remediation; Zone 1 residential, mobile home and commercial structures; Zone 2 residential, mobile home and commercial structures; and Zone 3 residential, mobile home and commercial structures. In accordance with Professor Brown's recommendations, soil remediation would be for the top six inches only, and structural remediation (residences, mobile homes and commercial structures) will be in accordance with the parameters summarized in Exhibit A and testified to by Professor Brown. Zones 1, 2 and 3 are defined the same for Medical Monitoring and Property Remediation.

Successful Class Member registration for Property Remediation should be much simpler than for Medical Monitoring: We know that the properties eligible for remediation in the Class Area will be contained in the definitive list to be prepared by the Class Administrator and the Parties within 30 days after the Effective Date, with the only necessary remaining step being to determine the incumbent owner of the property at the time of property remediation and to obtain the owner's written consent. It is suggested that the Class Area ad valorem tax database be used as the presumptively valid indicator of property ownership in the Class Area. Metro Marketing Trends, which was a consultant in identifying Class Area property owners for Class Notice in the past, should be asked to review and update the resulting property owner list. The Property Remediation

Registration Form will ask, however, if the remediation property has multiple owners, which will result in consent of all owners being necessary to participate in the Property Remediation Program.

Within ten (10) days after the Effective Date, the Class Administrator should submit to the Parties and the Court the proposed Property Remediation registration forms and the recommended criteria for proof of Property Remediation eligibility.

2. Facilitating Claimant Participation in the Property Remediation Program.

The putative Class Members shall be given appropriate notice of and information concerning the Property Remediation Program's terms.

To facilitate maximum Class Member participation in the Property Remediation Program , it is recommended that there be a Notice mail-out to putative Class Members based on the ad valorem tax database for the Class Area, there will be town meetings in the Zones affected to establish a property remediation collaborative effort with the community, sign-up participants and to answer questions, and that there be a door-to-door registration campaign, with residents in each impacted Zone being hired to help conduct the registration process. In the door-to-door registration process, on-line registration with personal computers provided by the Class Administration will be available. Family members will also be asked if they have registered for Medical Monitoring, and will be able to do so at the same time. The administrative costs for this door-to-door registration process would be charged to the Property Remediation Fund only, and not to the Medical Monitoring Fund, however.

Based on my understanding of the testimony of Professor Brown, it appears that ubiquitous participation in the Property Remediation Program is most important for Zone 1A soil remediation, as the soil could blow on to neighbors' property if all 182 eligible soil remediation participants do

not have their soils remediated. Residential, mobile home and commercial structures that are not remediated would more efficiently restrict contamination to the interior of the dwelling. Therefore, it is suggested that an aggressive collaboration campaign be initiated to encourage full Zone 1A soil remediation participation. If some of the owners of the eligible soil remediation properties refuse to participate following a collaboration program and possibly offering incentive payments from the Punitive Damages Fund, it is suggested that the Court meet with the non-participating residents to discuss the importance of participating. Should there still not be 100% soil remediation participation, the Court could weigh the facts and circumstances for each non-participating individual, including the results of a soil test of his property, to determine whether to require soil remediation. Perhaps, the West Virginia law of private nuisance recited in Grat West et al. v. National Mines. Corp., et al. 285 So.E. 2d 670 at 678 (W.Va. 1981), would provide the ultimate test for requiring soil remediation: “The right to the free use of one’s own property is subject to the implied obligation to use it so that it will not be unreasonably injurious to others.”

3. Property Remediation Provisioning.

Much as for Medical Monitoring, it is recommended that there be a PC-based data gathering system for Property Remediation, with data for all Class Members participating to be entered into the same database, sortable by Zone 1A soil participants, and Zone 1, 2 and 3 residential, mobile home and commercial structure remediation participants. It is suggested that property remediation data is not confidential and should be shared with the Parties, including identification of the properties participating and not participating, the remediation initiation date and the remediation completion date. It is recommended that the Special Master and the Parties have real time access to the database.

In order to aid the Court, the Special Master and the Parties in the prudent and economical execution of the Remediation Program, it is suggested that a Remediation Technical Advisor be engaged by the Court, following a Request for Proposals, written applications and interviews. The Remediation Technical Advisor would provide advice on the engagement of a Property Remediation General Contractor, review and approve General Contractor property remediation performance, and approve periodic payments to the General Contractor. In carrying out Professor Brown's recommended post-remediation contamination testing, the Remediation Technical Advisor may consider sampling previously tested properties.

A Request for Proposals for General Contractors to carry out the Property Remediation Program, based upon a three year time frame, should be designed by the Remediation Technical Advisor, the Class Administrator, and the Parties for Court review and approval, followed by General Contractor bidding, bidder interviews and the Court's selection of a Property Remediation General Contractor. In selecting the General Contractor, skill, expertise, reputation, and the General Contractor's location should be considered. Local motel accommodations for residents during the remediation of their property should be procured by bid also. Participants in the Property Remediation Program should be allowed to choose between (a) receiving a per diem payment during the relocation period to pay for relocation accommodations of their choice; or (b) obtaining motel accommodations obtained by bid. Residents who are leasing a remediated property should also be accommodated.

4. Property Remediation Accounting and Financial Matters and Claimant Input.

A. Property Fund Disbursement Mechanism.

It is recommended that the same Finance Committee formed for the Medical Monitoring Program, chaired by the Special Master and with a representative of DuPont and a representative of the Plaintiffs, be used. The function of the Finance Committee would be to oversee the financial operations of the Property Remediation Program. In carrying out this function, this Committee would review proposed annual budgets prepared by the Special Master, for Court approval, approve day-to-day expenditures of the Property Remediation Program based on an agreed vouchering and voucher aging process, review Special Master quarterly financial statements and annual financial statements prepared in connection with the Property Remediation Program, and the annual financial fiduciary accounting of the Special Master submitted to the Court, and aid the Special Master in selecting the Property Remediation Fund Custodian, the Property Remediation Fund Investment Advisor and Manager, and the Property Remediation Fund Outside Financial Auditor for recommendation to the Court.

B. Property Remediation Financial Advisors and Auditor.

It is recommended that, following a bidding process, a financial institution located in Harrison County, West Virginia be selected by the Court, with input from the Finance Committee, to serve as the custodial bank for the Property Remediation Fund. Written investment protocols for the Property Remediation Fund should be established by the Finance Committee for Court approval, in collaboration with a Court-selected Investment Advisor, limiting the investment of the Escrow Fund to Federally-insured securities or money market funds thereof, so as to minimize principal volatility risk. The Finance Committee should consider engaging a Court-selected Investment

Manager following a bidding process so to invest the Escrow Fund in safety and within the written investment parameters. An accounting firm approved by the Court , with input from the Finance Committee, will conduct an annual outside financial audit of the Escrow Fund, and the Special Master shall submit quarterly financial reports to the Court and the Finance Committee the first four years of the program and semi-annual financial reports thereafter. Although the Medical Monitoring Fund, Property Remediation Fund and Punitive Damages Fund will be separated, it may be economical to select a common Custodial Bank, Investment Advisor, Investment Manager and outside financial auditor.

C. Claimants Advisory Committee.

In order to facilitate Class Member input in the implementation of the Property Remediation Program, it is suggested, to the extent practicable, that the same Claimants Advisory Committee recommended for the Medical Monitoring Program be asked to provide input in the implementation and administration of the Property Remediation Program, with the Committee's role being advisory and not binding the Class. Class Counsel, in making their recommendations for Claimants' Advisory Committee membership requested in Special Master Report No. 1, may try to ensure that there are nominees from Zones 1A, 1B, 2 and 3.

5. Property Remediation Administrative Office Accommodations.

The Class Administration Office recommended in Special Master Report No. 1 for Medical Monitoring would also be used for Property Remediation. The Finance Committee should propose a separations factor among the Medical Monitoring, Property Remediation and Punitive Damages Funds to share this common overhead, and any other Class administration common overhead, such as personnel, equipment and supplies, with the separations factor to change over time due to the

different life expectancies and activity levels of the three Funds and their respective programs over time.

6. Suggested Preliminary Hearing on Property Remediation.

Much as for the DuPont Medical Monitoring security issue, as discussed in Report No. 1, it is suggested that there be a preliminary hearing on this Special Report No. 2 respecting the following issues and before the Fairness Hearing requested below is held: What, if any, milestones, suggested in Exhibit B, should be accomplished before the requested Fairness Hearing to be conducted 45 days after the Effective Date? Before any actions under this Special Master's Report No. 2 are implemented, the Parties would thereby have an opportunity to object to their implementation, and to have this Court rule upon those objections.

7. Property Remediation Implementation Schedule.

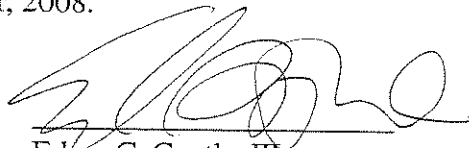
Based upon the foregoing, and to effect the timely, efficient and prudent implementation of the Property Remediation Program, the suggested Pre-Implementation Date Program Time Line and Punch List in Exhibit B is submitted for consideration by the Court and the Parties. It would result in implementation of Property Remediation 365 days after the Effective Date.

BASED UPON THE FOREGOING, the Special Master makes the following requests:

- (i) That this Report lie over for thirty (30) days after the Effective Date, so as to allow the Parties to file objections to or motions to adopt or modify the Report or other recommendations, that the preliminary hearing suggested in Paragraph II.C.6. above occur within 15 days after the Effective Date, to be held at the same date and time as the preliminary hearing requested in Report No. 1;

- (ii) Following the Effective Date, and receipt of the comments by the Parties contemplated in Paragraph (i), above, that there be a Fairness Hearing on this Report, and also to address Special Master recommendations concerning the Medical Monitoring implementation and Punitive Damages distributions to Class Members submitted in separate Reports, to which the Parties and Class Members will be invited so as to provide recommendations to the Court;
- (iii) That, following the Fairness Hearing, this Report No. 2 and its recommendations, and the materials and recommendations described in Exhibit C submitted by the Special Master prior to the Fairness Hearing be approved by the Court; and
- (iv) For such other, general, equitable and more special relief as may be proper under the premises.

Respectfully submitted this 17th day of September, 2008.



Edgar C. Gentle, III,
Special Master

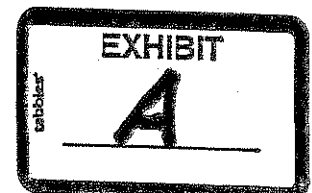
Unit Costs for Remediation

Unit Costs

Attic	Cost	Unit	Reference
Vacuum Truck, dry, rental	\$10,153.00	per month	Environmental Rental Services and Vacuum Truck Rentals
Blow-in insulation, ceiling, with open access, fiberglass, 8 1/2" thick, R19	\$0.91	per sq. ft.	pg 216, item 1100
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	pg 25, item 7655
Labor to vacuum, remove the insulation and clean	\$26.70	per hour	pg 602, crew A-2
Encapsulation with sealants, ceilings and walls, minimum	\$0.48	per sq. ft.	pg 404, item 0100
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	pg 403, item 0200, 0250
Removal of plaster on ceiling, on wood lath	\$0.95	per sq. ft.	pg 286, item 1000
Drywall gypsum plasterboard, nailed or screwed to studs, 5/8" thick, on walls, standard, taped and finished	\$1.18	per sq. ft.	pg 293, item 2050

Carpet	Cost	Unit	Reference
Carpeting removal, bonded, including surface scraping	\$0.33	per sq. ft.	pg 286, item 0400
Pad for new carpet	\$0.91	per sq. ft.	pg 306, item 9200-9300 (average)
Carpet (commercial grade, nylon, level loop, 26 oz., light to medium traffic)	\$2.56	per sq. ft.	pg 306, item 0700
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	pg 25, item 7655

Furniture	Cost	Unit	Reference
Furniture (upholstery-living area) removal	\$26.75	per hour	pg 602, crew A-2
Labor to vacuum and clean	\$26.70	per hour	pg 602, crew A-2
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	pg 25, item 7655
Furniture (upholstery-living area) replacement	\$2,283.00	living room set (sofa, love seat, table)	Living Room Sets with Tables, FurnitureOnTheWeb.com



Unit Costs for Remediation

Basement	Cost	Unit	Reference
Decontaminate and clean up irregular surfaces at basement	\$1.28	per sq. ft.	pg 403, item 0250
Labor to vacuum and clean	\$26.70	per hour	pg 602, crew A-2
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	pg 25, item 7655

HVAC Ducts	Cost	Unit	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, presure to 12"	\$4.46	per lineal ft	pg 466, item 1920

Furnace and Filter	Cost	Unit	Reference
Furnace filter replacement	\$9.00	ea.	Filtera.com

Thorough Professional Cleaning	Cost	Unit	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	pg 25, item 7655
Removal, clean and pack of belongings, 24 man hours	\$26.70	per hour	pg 602, crew A-2
Temporary Storage, 1 month	\$122.00	per month	Public Storage, http://www.publicstorage.com/estimate/ssEstimateResults.aspx
Labor to vacuum and clean	\$26.70	per hour	pg 602, crew A-2

Repairs	Cost	Unit	Reference
Caulk seams with latex	\$2.03	per lineal ft	pg 402, item 0800

Paint	Cost	Unit	Reference
Paint walls (oil base, primer or sealer coat, smooth finish, brushwork or roller)	\$0.37	per sq. ft.	pg 317, item 0200

Unit Costs for Remediation

Disposal of wastes generated	Cost	Unit	Reference
Rubbish handling, dumpster, 20 cu yd	\$440.00	per week	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment

Sampling	Cost	Unit	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn)	\$90.00	per sample	Laboratory
Labor costs on sampling	\$50.00	per hour	Environmental Services Personnel
Air sampler	\$95.00	per week	Ajax Environmental & Safety Supplies
Dry Calibrator	\$45.00	per week	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes	\$50.00	per box (200)	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette	\$65.00	per box (50)	Ajax Environmental & Safety Supplies

Distribution of literature	Cost	Unit	Reference
paper and printing	\$1.58	per page	http://www.copy-corner.com/price.html
Folding (machine fold)	\$15.00	per thousand brochures	http://www.copy-corner.com/price.html
Mailing	\$0.39	per brochure	USPS, standard first-class rate (1 oz)
Time to locate pertinent information and write literature	\$75.00	per hour for environmental scientist (approx 40 hrs to complete task)	*assume \$75/hr bill rate for environmental scientist, 40hrs to complete task and approximately 7000 houses receiving literature

Unit Costs for Remediation

Relocation (2 people, 4 weeks)		Cost	Unit	Reference
Hotel accommodations		\$67.00	per night	Fiscal Year 2003 Military Pay and Allowances, Military Per Diem Rates-West Virginia, 41 CFR 301, FTR Amendment 79-1998 Edition, Federal Travel Regulation, Final Rule
Meals		\$34.00	per person	

Density of Materials http://www.simec.co.uk/si_materials.htm				
Garbage, household rubbish	481	kg/cu m	30.0275	lb per cu ft
gypsum, broken	1290-1600	kg/cu m	90.19	lb per cu ft
plaster	849	kg/cu m	53	lb per cu ft
		Average	57.74	lb per cu ft
			1.33	ton per cu yd

Crew (2-3 people), removal of plaster

Activity	Days
Cleaning household items, packing, moving	3
Removal plasterboard, ceiling	1
Cleaning attic	1
Replace plasterboard, repair and caulk	1
Taping	1
Texture	1
Paint	1
Thorough cleaning of the house	3
Remove/replace carpet	2
Move items back	1
Total days	15

Crew (2-3 people), no removal of plaster

Activity	Days
Cleaning household items, packing, moving	3
Cleaning attic	1
Repair plasterboard and caulk	1
Paint	1
Thorough cleaning of the house	2
Remove/replace carpet	2
Move items back	1
Total days	11

Unit Costs for Remediation

Factors to determine the number of crews (to complete the remediation action for 100 houses per month)

Crew	# people /crew	Total # of crews	Total # of people	Days at Work per house*
Attic (cleaning, sealing, removing insulation, carpets, ducts)	2	5	10	1
Cleaning (clean the house, vacuum)	2	10	20	2
Plaster/painter/finishings	1	5	5	1
Ducts installation	2	5	10	1
Carpet installation	2	5	10	0
Movers (clean, pack and move)	2	8	16	2
Disposal (hauling)	2	1	2	1
Totals		39	73	8

* some days of work are accounted in other crew-day

Needs per month

Let's say # laborers	100	
At a 1:10 management ration, the management/supervision needed is	10	
Salary for supervision	\$28.70	per hour
Coordinators, project managers, schedule planner	5	
Salary for management	\$57.40	per hour
Vehicles for laborers	1 vehicle /crew	
Vehicles for management	1 vehicle /manag	
per diem management		
Hotel accomodations	\$67.00	per night
Meals	\$34.00	per person

Unit Costs for Remediation

Factors

- 1 The surface area for carpets was accounted as $\frac{2}{3}$ of the average square foot of the house. For commercial buildings, 15% of the surface area will be assumed to be covered by carpet
- 2 25% of the houses will have the plasterboard and/or hung ceiling removed and replaced
- 3 To calculate the square foot of the basement, a ratio of the residences that have basements and the total residences was calculated and multiplied by $\frac{1}{2}$ of the surface area of the house
- 4 The linear feet were assumed to be $\frac{1}{10}$ of the average square foot of the house
- 5

Waste generated	Furniture	10 cu yd
	Insulation	5 cu yd
	Plaster, carpet, insulation	10 cu yd
- 6 Relocation for residences where the plasterboard needs to be removed is taken as 4 weeks. For residences where the plasterboard is not removed, the relocation is taken as 2 weeks. If only the carpet is being replaced, 4 days were assumed, and 2 days when the carpet was recommended to be cleaned.
- 7 For rentals, a month is 30 days. For labor, a month is 20 days
- 8 Downtime for trucks and equipment 20%
- 9 A ratio of 1:10 for management personnel to laborers was used
- 10 Supplies are estimated at 20% of field labor

Project Management

Cost for Project Management

Management	Cost	Unit	Total Cost/month	Reference
Superintendent, 10 total (1:10 ratio)	\$2,325.00	per week	\$93,000.00	pg 9, item 0260
Management, scheduler, project coordinators, project management, 5	\$2,037.00	per week	\$40,740.00	pg 9, item 00120, 0200
Per diem costs for management, 20 days per month				
Hotel accomodations	\$67.00	per night	\$6,700.00	Fiscal Year 2003 Military Pay and Allowances, Military Per Diem Rates- West Virginia, 41 CFR 301, FTR Amendment 79-1998 Edition, Federal Travel Regulation, Final Rule
Meals	\$34.00	per person	\$3,400.00	
Vehicles for laborers, 1 vehicle per crew, 40 total	\$62.99	per vehicle, per day	\$50,392.00	Enterprise.com
Vehicles for management, 1 vehicle per person, 5 total	\$17.97	per vehicle, per day	\$1,797.00	carrentals.com
Sub Total			\$196,029.00	

At 100 houses per month -cost per house:	\$1,960.29
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Education

Distribution of literature to educate residents in actions to reduce exposure

Distribution of literature	Cost	Unit	Total Cost per house	Reference
paper and printing	\$1.58	per page	\$3.16	http://www.copy-corner.com/price.html
Folding (machine fold)	\$15.00	per thousand brochures	\$0.02	http://www.copy-corner.com/price.html
Mailing	\$0.39	per brochure	\$0.39	USPS, standard first-class rate (1 oz)
Time to locate pertinent information and write literature	\$75.00	per hour for environmental scientist (approx 40 hrs to complete task)	\$0.43	*assume \$75/hr bill rate for environmental scientist, 40hrs to complete task and approximately 7000 houses receiving literature
Subtotal			\$3.99	

Total Cost per house	\$1,964.28
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Remediation Costs - Zone 1 Residential

House Remediation Zone 1

Data

Average square feet of residences	1154	sq ft	
Total number of residences with basement	306		0.96
Total number of residences	318		
Waste generated			
Furniture	8	cu yd	
Insulation	4	cu yd	
Plaster and Insulation	8	cu yd	

Attic 1 (75% of residences)

Remove insulation via vacuum truck, clean attic with HEPA vacuum cleaner, seal/repair any cracks, install insulation

Attic	Cost	Unit	Total Cost	Reference
Vacuum Truck, dry, rental	\$10,153.00	per month	\$338.43	Environmental Rental Services and Vacuum Truck Rentals
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum and removed insulation, 16 man hour	\$26.70	per hour	\$427.20	pg 602, crew A-2
Blow-in insulation, ceiling, with open access, fiberglass, 8 1/2" thick, R19	\$0.91	per sq. ft.	\$1,050.28	pg 216, item 1100
Encapsulation with sealants, ceilings and walls, minimum	\$0.48	per sq. ft.	\$1,107.99	pg 404, item 0100
75% of Subtotal			\$2,201.05	

Attic 2 (25% of residences)

Remove insulation via vacuum truck, clean attic with HEPA vacuum cleaner, remove and replace plasterboard, seal/repair any cracks, install insulation

Attic	Cost	Unit	Total Cost	Reference
Vacuum Truck, dry, rental	\$10,153.00	per month	\$338.43	Environmental Rental Services and Vacuum Truck Rentals
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum and removed insulation, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Removal of plaster on ceiling, on wood lath or hung ceiling	\$0.95	per sq. ft.	\$1,096.45	pg 286, item 1000
Drywall gypsum plasterboard, nailed or screwed to studs, 5/8" thick, on walls, standard, taped and finished	\$1.18	per sq. ft.	\$1,361.91	pg 293, item 2050
Blow-in insulation, ceiling, with open access, fiberglass, 8 1/2" thick, R19	\$0.91	per sq. ft.	\$1,050.28	pg 216, item 1100
Paint ceiling (wallboard, smooth plaster, one coat, brush, roll or spray)	\$0.46	per sq. ft.	\$530.91	pg 317, item 1800
25% of the subtotal			\$1,204.00	

Remediation Costs - Zone 1 Residential

Carpet

Remove and replace carpet and pad

Carpet	Cost	Unit	Total Cost	Reference
Carpeting removal, bonded, including surface scraping	\$0.33	per sq. ft.	\$253.91	pg 286, item 0400
Pad for new carpet	\$0.91	per sq. ft.	\$702.75	pg 306, item 9200-9300 (average)
Carpet (commercial grade, nylon, level loop, 26 oz., light to medium traffic)	\$2.56	per sq. ft.	\$1,966.34	pg 306, item 0700
Subtotal			\$2,923.01	

Furniture

Remove and replace upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Furniture (upholstery-living area) removal, 4 man hours	\$26.70	per hour	\$106.80	pg 602, crew A-2
Furniture (upholstery-living area) replacement	\$2,283.00	living room set (sofa, love seat, table)	\$2,283.00	Living Room Sets with Tables, FurnitureOnTheWeb.com
Subtotal			\$2,389.80	

Basement

Clean basement (vacuum cleaner and wipe surfaces, and seal/repair cracks)

Basement	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 12 man hours	\$26.70	per hour	\$320.40	pg 602, crew A-2
Decontaminate and clean up irregular surfaces	\$1.28	per sq. ft.	\$711.22	pg 403, item 0200, 0250
Subtotal			\$1,042.45	

HVAC Ducts

Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft.	\$191.59	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, pressure to 12"	\$4.46	per lineal ft.	\$514.75	pg 466, item 1920
Subtotal			\$706.34	

Remediation Costs - Zone 1 Residential

Furnace

Remove and replace filters

Furnace and Filter	Cost	Unit	Total Cost	Reference
Furnace filter replacement	\$9.00	ea.	\$9.00	Filtera.com
Subtotal			\$9.00	

Cleaning

Thorough professional cleaning of surfaces, windows, doors, corners while the items are stored outside of the house, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$1,338.82	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental, 5 days	\$325.00	per month	\$54.17	pg 25, item 7655
Labor to vacuum and clean surfaces, 40 man hours	\$26.70	per hour	\$1,068.00	pg 602, crew A-2
Removal, clean and pack of belongings, 24 man hours	\$26.70	per hour	\$640.80	pg 602, crew A-2
Temporary Storage, 1 month	\$122.00	per month	\$122.00	Public Storage. http://www.publicstorage.com/estimate/ssEstimateResults.aspx
Caulk seams with latex, 200 linear feet	\$2.03	per lineal ft	\$406.00	pg 402, item 0800
Paint walls (oil base, primer or sealer coat, smooth finish, brushwork or roller), 4 rooms of 8' x 10'	\$0.37	per sq. ft.	\$118.40	pg 317, item 0200
Subtotal			\$3,748.19	

Disposal of wastes generated

Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 20 cu yd, 2 weeks	\$440.00	per week	\$880.00	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$608.09	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$1,563.09	

Remediation Costs - Zone 1 Residential

Sampling

Confirmation sampling after 90 days of cleaning

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per house	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per house	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Relocation of residents

Relocation of residents (assume 2 people per house) in a hotel at the area while the house is cleaned, include per diem

Relocation (2 people)	Cost	Unit	Total Cost	Reference
Hotel accommodations, 4 weeks if plaster has to be removed, 2 weeks if plaster will not be removed	\$67.00	per night	\$1,206.00	Fiscal Year 2003 Military Pay and Allowances, Military Per Diem Rates-West Virginia, 41 CFR 301, FTR Amendment 79-1998 Edition, Federal Travel Regulation, Final Rule
Meals	\$34.00	per person	\$1,224.00	
Subtotal			\$2,430.00	

Total Cost \$18,747.65

Cost per
square
feet \$16.24

Remediation Costs - Zone 2 Residential

House Remediation Zone 2

Data

Average square feet of residences	1425	sq ft
Total number of residences with basement	435	0.81
Total number of residences	539	
Waste generated		
Insulation	4	cu yd
Plaster and Insulation	8	cu yd

Attic 1 (75% of residences)

Remove insulation via vacuum truck, clean attic with HEPA vacuum cleaner, seal/repair any cracks, install insulation

Attic	Cost	Unit	Total Cost	Reference
Vacuum Truck, dry, rental	\$10,153.00	per month	\$338.43	Environmental Rental Services and Vacuum Truck Rentals
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum and removed insulation, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Blow-in insulation, ceiling, with open access, fiberglass, 8 1/2" thick, R19	\$0.91	per sq. ft.	\$1,296.62	pg 216, item 1100
Encapsulation with sealants, ceilings and walls, minimum	\$0.48	per sq. ft.	\$1,367.86	pg 404, item 0100
Subtotal			\$2,580.71	

Attic 2 (25% of residences)

Remove insulation via vacuum truck, clean attic with HEPA vacuum cleaner, remove and replace plasterboard, seal/repair any cracks, install insulation

Attic	Cost	Unit	Total Cost	Reference
Vacuum Truck, dry, rental	\$10,153.00	per month	\$338.43	Environmental Rental Services and Vacuum Truck Rentals
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum and removed insulation, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Removal of plaster on ceiling, on wood lath or hung ceiling	\$0.95	per sq. ft.	\$1,353.61	pg 286, item 1000
Drywall gypsum plasterboard, nailed or screwed to studs, 5/8" thick, on walls, standard, taped and finished	\$1.18	per sq. ft.	\$1,681.33	pg 293, item 2050
Blow-in insulation, ceiling, with open access, fiberglass, 8 1/2" thick, R19	\$0.91	per sq. ft.	\$1,296.62	pg 216, item 1100
Paint ceiling (wallboard, smooth plaster, one coat, brush, roll or spray)	\$0.46	per sq. ft.	\$655.43	pg 317, item 1800
Subtotal			\$1,440.86	

Remediation Costs - Zone 2 Residential

Carpet

Remove and replace carpet and pad

Carpet	Cost	Unit	Total Cost	Reference
Carpeting removal, bonded, including surface scraping	\$0.33	per sq. ft.	\$313.47	pg 286, item 0400
Pad for new carpet	\$0.91	per sq. ft.	\$867.58	pg 306, item 9200-9300 (average)
Carpet (commercial grade, nylon, level loop, 26 oz., light to medium traffic)	\$2.56	per sq. ft.	\$2,427.53	pg 306, item 0700
Subtotal			\$3,608.57	

Furniture

Clean upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental, 1 day	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 8 man hours	\$26.70	per hour	\$213.60	pg 602, crew A-2
Subtotal			\$224.43	

Basement

Clean basement (vacuum cleaner and wipe surfaces, and seal/repair cracks)

Basement	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental, 1 day	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 8 man hours	\$26.70	per hour	\$213.60	pg 602, crew A-2
Decontaminate and clean up irregular surfaces	\$1.28	per sq. ft.	\$736.79	pg 403, item 0200, 0250
Subtotal			\$961.23	

HVAC Ducts

Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$236.53	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, pressure to 12"	\$4.46	per lineal ft	\$635.48	pg 466, item 1920
Subtotal			\$872.01	

Furnace

Remove and replace filters

Furnace and Filter	Cost	Unit	Total Cost	Reference
Furnace filter replacement	\$9.00	ea.	\$9.00	Filtera.com
Subtotal			\$9.00	

Remediation Costs - Zone 2 Residential

Cleaning

Thorough professional cleaning of surfaces, windows, doors, corners, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$1,652.83	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental, 3	\$325.00	per month	\$32.50	pg 25, item 7655
Labor to vacuum and clean, 24 man hours	\$26.70	per hour	\$640.80	pg 602, crew A-2
Removal and pack of belongings, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Temporary Storage, 2 weeks	\$122.00	per month	\$56.93	Public Storage, http://www.publicstorage.com/estimate/ssEstimateResults.aspx ,
Caulk seams with latex, 200 linear feet	\$2.03	per lineal ft	\$406.00	pg 402, item 0800
Paint walls (oil base, primer or sealer coat, smooth finish, brushwork or roller), 4 rooms of 8'x 10'	\$0.37	per sq. ft.	\$118.40	pg 317, item 0200
Subtotal			\$3,334.66	

Disposal of wastes generated

Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 1 dump/week, 20 cu yd	\$440.00	per week	\$440.00	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$233.88	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$748.88	

Remediation Costs - Zone 2 Residential

Sampling

Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per house	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per house	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Relocation of residents

Relocation of residents (assume 2 people per house) in a hotel at the area while the house is cleaned, include per diem

Relocation (2 people)	Cost	Unit	Total Cost	Reference
Hotel accomodations, 2 weeks	\$67.00	per night	\$938.00	Fiscal Year 2003 Military Pay and Allowances, Military Per Diem Rates-West Virginia, 41 CFR 301, FTR Amendment 79-1998 Edition, Federal Travel Regulation, Final Rule
Meals	\$34.00	per person	\$952.00	
Subtotal			\$1,890.00	

Total Cost \$16,201.06

Cost per square feet \$11.37

Remediation Costs - Zone 3 Residential

House Remediation Zone 3

Data

Average square feet of residences	1316	sq ft	
Total number of residences with basement	1159		0.89
Total number of residences	1302		
Waste generated			
Insulation	4	cu yd	
Plaster and Insulation	8	cu yd	

Attic 1 (75% of residences)

Remove insulation via vacuum truck, clean attic with HEPA vacuum cleaner, seal/repair any cracks, install insulation

Attic	Cost	Unit	Total Cost	Reference
Vacuum Truck, dry, rental	\$10,153.00	per month	\$338.43	Environmental Rental Services and Vacuum Truck Rentals
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum and removed insulation, 12 man hours	\$26.70	per hour	\$320.40	pg 602, crew A-2
Blow-in insulation, ceiling, with open access, fiberglass, 8 1/2" thick, R19	\$0.91	per sq. ft.	\$1,197.55	pg 216, item 1100
Encapsulation with sealants, ceilings and walls, minimum	\$0.48	per sq. ft.	\$1,263.35	pg 404, item 0100
Subtotal			\$2,347.92	

Attic 2 (25% of residences)

Remove insulation via vacuum truck, clean attic with HEPA vacuum cleaner, remove and replace plasterboard, seal/repair any cracks, install insulation

Attic	Cost	Unit	Total Cost	Reference
Vacuum Truck, dry, rental	\$10,153.00	per month	\$338.43	Environmental Rental Services and Vacuum Truck Rentals
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum and removed insulation, 12 man hours	\$26.70	per hour	\$320.40	pg 602, crew A-2
Removal of plaster on ceiling, on wood lath or hung ceiling	\$0.95	per sq. ft.	\$1,250.19	pg 286, item 1000
Drywall gypsum plasterboard, nailed or screwed to studs, 5/8" thick, on walls, standard, taped and finished	\$1.18	per sq. ft.	\$1,552.86	pg 293, item 2050
Blow-in insulation, ceiling, with open access, fiberglass, 8 1/2" thick, R19	\$0.91	per sq. ft.	\$1,197.55	pg 216, item 1100
Paint ceiling (wallboard, smooth plaster, one coat, brush, roll or spray)	\$0.46	per sq. ft.	\$605.35	pg 317, item 1800
Subtotal			\$1,318.91	

Remediation Costs - Zone 3 Residential

Carpet

Clean carpet

Carpet	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 8 man hours	\$26.70	per hour	\$213.60	pg 602, crew A-2
Subtotal			\$224.43	

Furniture

Clean upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 8 man hours	\$26.70	per hour	\$213.60	pg 602, crew A-2
Subtotal			\$224.43	

Basement

Clean basement (vacuum cleaner and wipe surfaces, and seal/repair cracks)

Basement	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 6 man hours	\$26.70	per hour	\$160.20	pg 602, crew A-2
Decontaminate and clean up irregular surfaces	\$1.28	per sq. ft.	\$750.05	pg 403, item 0200, 0250
Subtotal			\$921.08	

HVAC ducts

Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$218.45	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, presure to 12"	\$4.46	per lineal ft	\$586.93	pg 466, item 1920
Subtotal			\$805.38	

Furnace

Remove and replace filters

Furnace and Filter	Cost	Unit	Total Cost	Reference
Furnace filter replacement	\$9.00	ea.	\$9.00	Filtera.com
Subtotal			\$9.00	

Remediation Costs - Zone 3 Residential

Cleaning

Thorough professional cleaning of exposed surfaces, windows, doors, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$1,526.54	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$21.67	pg 25, item 7655
Labor to vacuum and clean, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Removal and pack of belongings, 8 hours	\$26.70	per hour	\$213.60	pg 602, crew A-2
Temporary Storage, 1 weeks	\$122.00	per month	\$28.47	Public Storage, http://www.publicstorage.com/estimate/ssEstimateResults.aspx
Caulk seams with latex, 200 linear feet	\$2.03	per lineal ft	\$406.00	pg 402, item 0800
Paint walls (oil base, primer or sealer coat, smooth finish, brushwork or roller), 4 rooms of 8' x 10'	\$0.37	per sq. ft.	\$118.40	pg 317, item 0200
Subtotal			\$2,741.88	

Disposal of wastes generated

Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 20 cu yd, 2 days	\$440.00	per week	\$125.71	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$233.88	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$434.59	

Remediation Costs - Zone 3 Residential

Sampling

Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per house	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per house	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Relocation of residents

Relocation of residents (assume 2 people per house) in a hotel at the area while the house is cleaned, include per diem

Relocation (2 people)	Cost	Unit	Total Cost	Reference
Hotel accommodations, 4 days	\$67.00	per night	\$268.00	Fiscal Year 2003 Military Pay and Allowances, Military Per Diem Rates- West Virginia, 41 CFR 301, FTR Amendment 79-1998 Edition, Federal Travel Regulation, Final Rule
Meals	\$34.00	per person	\$136.00	
Subtotal			\$404.00	

Total \$9,962.33

Cost per
square
feet \$7.57

Remedial Action Trailers Zone 1

Trailer Remediation Zone 1

Data

Average square feet of trailers 750 sq ft
Waste generated 5 cu yd

Carpet Remove and replace carpet and pad

Carpet	Cost	Unit	Total Cost	Reference
Carpeting removal, bonded, including surface scraping	\$0.33	per sq. ft.	\$247.50	pg 286, item 0400
Pad for new carpet	\$0.91	per sq. ft.	\$685.00	pg 306, item 9200-9300 (average)
Carpet (commercial grade, nylon, level loop, 26 oz., light to medium traffic)	\$2.56	per sq. ft.	\$1,916.67	pg 306, item 0700
Subtotal			\$2,849.17	

Furniture Remove and replace upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Furniture (upholstery-living area) removal, 4 man hours	\$26.70	per hour	\$106.80	pg 602, crew A-2
Furniture (upholstery-living area) replacement	\$2,283.00	living room set (sofa, love seat, table)	\$2,283.00	Living Room Sets with Tables, FurnitureOnTheWeb.com
Subtotal			\$2,389.80	

Cleaning Thorough professional cleaning of surfaces, windows, doors, corners while the items are stored outside of the house, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$870.00	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$32.50	pg 25, item 7655
Labor to vacuum and clean, 18 man hours	\$26.70	per hour	\$480.60	pg 602, crew A-2
Removal and pack of belongings, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Temporary Storage, 1 week	\$122.00	per month	\$28.47	Public Storage, http://www.publicstorage.com/estimate/ssEstimateResults.aspx
Caulk seams with latex, 100 linear feet	\$2.03	per lineal ft	\$203.00	pg 402, item 0800
Subtotal			\$2,041.77	

Remedial Action Trailers Zone 1

HVAC Ducts

Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$124.50	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, presure to 12"	\$4.46	per lineal ft	\$334.50	pg 466, item 1920
Subtotal			\$459.00	

Disposal of wastes generated

Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 1 week, 20 cu yd	\$440.00	per week	\$440.00	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$233.88	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$748.88	

Remedial Action Trailers Zone 1

Sampling

Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per house	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per house	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Relocation of residents.

Relocation of residents (assume 2 people per house) in a hotel at the area while the house is cleaned, include per diem

Relocation (2 people)	Cost	Unit	Reference
Hotel accommodations, 4 days	\$67.00	per night	Fiscal Year 2003 Military Pay and Allowances, Military Per Diem Rates-West Virginia, 41 CFR 301, FTR Amendment 79-1998 Edition, Federal Travel Regulation, Final Rule
Meals	\$34.00	per person	\$272.00
Subtotal			\$540.00

Total Cost \$9,559.34

Cost per
square feet \$12.75

Remedial Action Trailers Zone 2

Trailer Remediation Zone 2

Data

Average square feet of trailers 750 sq ft
Waste generated 5 cu yd

Carpet Remove and replace carpet and pad

Carpet	Cost	Unit	Total Cost	Reference
Carpeting removal, bonded, including surface scraping	\$0.33	per sq. ft.	\$247.50	pg 286, item 0400
Pad for new carpet	\$0.91	per sq. ft.	\$685.00	pg 306, item 9200-9300 (average)
Carpet (commercial grade, nylon, level loop, 26 oz., light to medium traffic)	\$2.56	per sq. ft.	\$1,916.67	pg 306, item 0700
Subtotal			\$2,849.17	

Furniture Clean upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 8 man hours	\$26.75	per hour	\$214.00	pg 602, crew A-2
Subtotal			\$224.83	

HVAC ducts Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$124.50	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, presure to 12"	\$4.46	per lineal ft	\$334.50	pg 466, item 1920
Subtotal			\$459.00	

Remedial Action Trailers Zone 2

Cleaning

Thorough professional cleaning of surfaces, windows, doors, corners while the items are stored outside of the house, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$870.00	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$130.00	pg 25, item 7655
Labor to vacuum and clean, 12 man hours	\$26.75	per hour	\$321.00	pg 602, crew A-2
Removal and pack of belongings, 12 man hours	\$26.75	per hour	\$321.00	pg 602, crew A-2
Temporary Storage, 1 week	\$122.00	per month	\$28.47	Public Storage, http://www.publicstorage.com/estimate/ssEstimateResults.aspx
Caulk seams with latex, 100 linear feet	\$2.03	per linear ft	\$203.00	pg 402, item 0800
Subtotal			\$1873.47	

Disposal of wastes generated Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 1 week, 20 cu yd	\$440.00	per week	\$440.00	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$233.88	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$748.88	

Remedial Action Trailers Zone 2

Sampling

Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per house	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per house	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Relocation of residents

Relocation of residents (assume 2 people per house) in a hotel at the area while the house is cleaned, include per diem

Relocation (2 people)	Cost	Unit	Total Cost	Reference
Hotel accommodations, 4 days	\$67.00	per night	\$268.00	Fiscal Year 2003 Military Pay and Allowances, Military Per Diem Rates-West Virginia, 41 CFR 301, FTR Amendment 79-1998 Edition, Federal Travel Regulation, Final Rule
Meals	\$34.00	per person	\$272.00	
Subtotal			\$540.00	

Total Cost: \$7,226.05

Cost per
square
feet \$9.63

Remedial Action Trailers Zone 3

Trailer Remediation Zone 3

Data

Average square feet of
trailers

750 sq ft

Waste generated

2.5 cu yd

Carpet

Clean carpet

Carpet	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 4 man hours	\$26.70	per hour	\$106.80	pg 602, crew A-2
Subtotal			\$117.63	

Furniture

Clean upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 8 man hours	\$26.70	per hour	\$213.60	pg 602, crew A-2
Subtotal			\$224.43	

HVAC ducts

Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$124.50	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, presure to 12"	\$4.46	per lineal ft	\$334.50	pg 466, item 1920
Subtotal			\$459.00	

Remedial Action Trailers Zone 3

Cleaning

Thorough professional cleaning of surfaces, windows, doors, corners while the items are stored outside of the house, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$870.00	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$130.00	pg 25, item 7655
Labor to vacuum and clean, 12 man hours	\$26.70	per hour	\$320.40	pg 602, crew A-2
Removal and pack of belongings, 6 man hours	\$26.70	per hour	\$160.20	pg 602, crew A-2
Temporary Storage, 1 week	\$122.00	per month	\$28.47	Public Storage, http://www.publicstorage.com/estimate/ssEstimateResults.aspx
Caulk seams with latex, 100 linear feet	\$2.03	per lineal ft	\$203.00	pg 402, item 0800
Subtotal			\$1,772.07	

Disposal of wastes generated

Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 1 week, 20 cu yd	\$440.00	per week	\$440.00	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$116.94	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$631.94	

Remedial Action Trailers Zone 3

Sampling

Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per house	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per house	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Relocation of residents

Relocation of residents (assume 2 people per house) in a hotel at the area while the house is cleaned, include per diem

Relocation (2 people)	Cost	Unit	Total Cost	Reference
Hotel accommodations, 2 nights	\$67.00	per night	\$134.00	Fiscal Year 2003 Military Pay and Allowances, Military Per
Meals	\$34.00	per person	\$136.00	Diem Rates-West Virginia, 41
Subtotal			\$270.00	

Total Cost \$3,945.77

Cost per
square feet \$5.26

Remedial Action Commercial Building Zone 1

Commercial Building Remediation Zone 1

Data

Average square feet of
commercial buildings

1232 sq ft

Waste generated

3 cu yd

Carpet Remove and replace carpet and pad

Carpet	Cost	Unit	Total Cost	Reference
Carpeting removal, bonded, including surface scraping	\$0.33	per sq. ft.	\$60.98	pg 286, item 0400
Pad for new carpet	\$0.91	per sq. ft.	\$168.78	pg 306, item 9200-9300 (average)
Carpet (commercial grade, nylon, level loop, 26 oz., light to medium traffic)	\$2.56	per sq. ft.	\$472.27	pg 306, item 0700
Subtotal			\$702.03	

Furniture Remove and replace upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Furniture (upholstery) removal, 4 man hours	\$26.70	per hour	\$106.80	pg 602, crew A-2
Furniture (upholstery-living area) replacement	\$301.00	3 office chairs	\$903.00	3 office chairs, FurnitureOnTheWeb.com
Subtotal			\$1,009.80	

HVAC ducts Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$204.51	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, presure to 12"	\$4.46	per lineal ft	\$549.47	pg 466, item 1920
Subtotal			\$753.98	

Remedial Action Commercial Building Zone 1

Cleaning Thorough professional cleaning of surfaces, windows, doors, corners, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$1,429.12	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental, 2 days	\$325.00	per month	\$21.67	pg 25, item 7655
Labor to vacuum and clean, 24 man hours	\$26.70	per hour	\$640.80	pg 602, crew A-2
Caulk seams with latex, 100 linear feet	\$2.03	per lineal ft	\$203.00	pg 402, item 0800
Subtotal			\$2,294.59	

Sampling Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per building	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per building	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Remedial Action Commercial Building Zone 1

Disposal of wastes generated Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 1 week, 20 cu yd	\$440.00	per week	\$440.00	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$140.33	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$655.33	

Total Cost \$5,946.43

Cost per square feet \$4.83

Remedial Action Commercial Building Zone 2

Commercial Building Remediation Zone 2

Data

Average square feet of

commercial buildings

1015

sq ft

Waste generated

1

cu yd

Carpet

Clean carpet

Carpet	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 4 man hours	\$26.70	per hour	\$106.80	pg 602, crew A-2
Subtotal			\$117.63	

Furniture

Clean upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum and clean, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Subtotal			\$438.03	

HVAC ducts

Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$168.49	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, pressure to 12"	\$4.46	per lineal ft	\$452.69	pg 466, item 1920
Subtotal			\$621.18	

Remedial Action Commercial Building Zone 2

Cleaning

Thorough professional cleaning of surfaces, windows, doors, corners while the items are stored outside of the house, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$1,177.40	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental, 2 days	\$325.00	per month	\$21.67	pg 25, item 7655
Labor to vacuum and clean, 16 man hours	\$26.70	per hour	\$427.20	pg 602, crew A-2
Caulk seams with latex, 100 linear feet	\$2.03	per lineal ft	\$203.00	pg 402, item 0800
Subtotal			\$1,829.27	

Sampling

Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per building	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per building	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Remedial Action Commercial Building Zone 2

Disposal of wastes
generated

Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 1 week, 20 cu yd	\$440.00	per week	\$440.00	pg 39, item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$46.78	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$561.78	

Total Cost \$4,098.59

Cost per
square feet \$4.04

Remedial Action Commercial Building Zone 3

Commercial Building Remediation Zone 3

Data

Average square feet of
commercial buildings 1613 sq ft
Waste generated 1 cu yd

Carpet Clean carpet

Carpet	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$10.83	pg 25, item 7655
Labor to vacuum, 4 man hours	\$26.75	per hour	\$107.00	pg 602, crew A-2
Subtotal			\$117.83	

Furniture Clean upholstery furniture

Furniture	Cost	Unit	Total Cost	Reference
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$21.67	pg 25, item 7655
Labor to vacuum and clean, 16 man hours	\$26.75	per hour	\$428.00	pg 602, crew A-2
Subtotal			\$449.67	

HVAC ducts Remove and replace ducts

HVAC Ducts	Cost	Unit	Total Cost	Reference
Remove ductwork, 4" high, 8" wide	\$1.66	per lineal ft	\$267.76	pg 426, item 1000
Ductwork, flexible, insulated, 5" diameter, coated fiberglass fabric on corr. resist. metal helix, pressure to 12"	\$4.46	per lineal ft	\$719.40	pg 466, item 1920
Subtotal			\$987.16	

Remedial Action Commercial Building Zone 3

Cleaning

Thorough professional cleaning of surfaces, windows, doors, corners while the items are stored outside of the house, repair/seal cracks

Thorough Professional Cleaning	Cost	Unit	Total Cost	Reference
Decontaminate and clean up surfaces	\$1.16	per sq. ft.	\$1,871.08	pg 403, item 0200, 0250
Vacuum cleaner, HEPA, 55 gal., s.s., wet/dry, rental	\$325.00	per month	\$21.67	pg 25, item 7655
Labor to vacuum and clean, 16 man hours	\$26.75	per hour	\$428.00	pg 602, crew A-2
Caulk seams with latex, 100 linear feet	\$2.03	per lineal ft	\$203.00	pg 402, item 0800
Subtotal			\$2,523.75	

Sampling

Sampling to confirm the performance of the cleaning, removal and replacement of items

Sampling	Cost	Unit	Total Cost	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$360.00	Laboratory
Labor costs on sampling, crew of 3, 1 hour	\$50.00	per hour	\$150.00	Environmental Services Personnel
Air sampler, 1 hour	\$95.00	per week	\$9.50	Ajax Environmental & Safety Supplies
Dry Calibrator, 1 hour	\$45.00	per week	\$4.50	Ajax Environmental & Safety Supplies
Sampling materials-ghost wipes, 6 wipes per building	\$50.00	per box (200)	\$1.50	Ajax Environmental & Safety Supplies
Sampling materials-preloaded cassette, 4 cassettes per building	\$65.00	per box (50)	\$5.20	Ajax Environmental & Safety Supplies
Subtotal			\$530.70	

Remedial Action Commercial Building Zone 3

Disposal of wastes
generated

Disposed of all the items removed, dust cleaned

Disposal of wastes generated	Cost	Unit	Total Cost	Reference
Rubbish handling, dumpster, weekly rental, 1 week, 20 cu yd	\$440.00	per week	\$440.00	pg 39, Item 0725
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$46.78	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$75.00	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
Subtotal			\$561.78	

Total Cost: \$5,170.88

Cost per
square
feet \$3.21

Soil Remediation Zone 1A

Soil Remediation Zone 1A

Data

Average square feet of residential house lots 9120 sq ft
Total number of residences 182
Waste generated
Soil 168.89 cu yd

Excavation, Transport, and Disposal of wastes generated

Disposal of wastes generated	Cost	Unit	Cost/cu ft	Cost/prop	Reference
Excavation and loading	\$23.60	per bank cu yd	\$0.87	\$3,985.78	page 49, item 6030, pg 46, item 0010
Dump charges, rubbish only, tipping fees only	\$35.17	ton	\$1.76	\$8,018.76	Interdisciplinary Modules to Teach Waste or Residue Management in the Food Chain, Costs of Disposal of Wastes and Residues
Transportation, 50 miles	\$1.50	per mile	\$0.11	\$506.67	City of Jeannette, Suggestions for the Recycling Program and Analysis of the Recycling Center, A Cost Comparison of Alternatives for Providing the Proposed Martinsburg Yard Waste Compost Facility with Equipment
		Subtotal		\$121,607.20	

Backfill of dirt in the yards

Backfilling of Yards	Cost	Unit	Cost/cu ft	Cost/prop	Reference
Hauling, no loading included, 12 cy dump truck, 20 mile round trip, 0.4 load/hr	\$22.00	per loose cubic yard	\$0.81	\$3,715.56	Page 50, item 0560
Backfill, general, by hand, no compaction, light soil	\$23.50	per loose cubic yard	\$0.87	\$3,968.89	Page 45, item 0015
Finish grading area, hand grading	\$1.52	per sq yd	\$0.34	\$1,540.27	Page 45, item 1150
Soil	\$0.86	per cu ft	\$0.86	\$3,921.60	Contractors

Soil Remediation Zone 1A

Subtotal \$12,745.64

Labor

Item	Cost	Unit	Cost/Unit	Cost/Prop	Reference
Excavation and Replacement - five days, crew of 3 plus one driver	\$26.70	man hour	\$0.94	\$4,272.00	pg 602, crew A-2
Revegetation/Landscaping - 1 day, crew of 3	\$26.70	man hour	\$0.14	\$640.80	pg 602, crew A-2
Subtotal				\$4,912.80	

Sampling Confirmation sampling after 90 days of removal and replacement

Sampling	Cost	Unit	Cost/prop	Reference
Analysis for 6010 or 6020 for metals (As, Cd, Pb and Zn), 4 samples	\$90.00	per sample	\$0.08	Laboratory
Labor costs on sampling, crew of 2, 1 hour	\$50.00	per hour	\$100.00	Environmental Services Personnel
Sampling materials-soil jars, 4 per house	\$120.00	per case (48)	\$10.00	Ajax Environmental & Safety Supplies
Sampling materials-decon supplies	\$20.00	per site	\$20.00	Ajax Environmental & Safety Supplies
Subtotal			\$490.00	

Soil Remediation - Excavation up to a depth of 6 inches, with a tractor, loader (rented), rental of truck, density of soil taken as 1.5 g/cm³

Assume: five days of work per property, dumpsite located at 25 miles

Total cost per Property \$3,168,032

Total Remediation Costs \$5,652,977.43

Class Area Remediation

Total Labor Summary

Labor Requirements	Units	Rate	Subtotal	Task Cost
Residential Remediation				\$ 4,974,669.60
Zone 1	318	\$ 3,140.40	\$ 998,647.20	
Zone 2	539	\$ 2,499.60	\$ 1,347,284.40	
Zone 3	1302	\$ 2,019.00	\$ 2,628,738.00	
Trailer Remediation				\$ 460,391.40
Zone 1	79	\$ 1,164.60	\$ 92,003.40	
Zone 2	162	\$ 1,006.00	\$ 162,972.00	
Zone 3	216	\$ 951.00	\$ 205,416.00	
Commercial Building Remediation				\$ 225,707.40
Zone 1	11	\$ 897.60	\$ 9,873.60	
Zone 2	49	\$ 1,111.20	\$ 54,448.80	
Zone 3	145	\$ 1,113.00	\$ 161,385.00	
Soil Remediation				\$ 894,129.60
Zone 1A	182	\$ 4,912.80	\$ 894,129.60	
Subtotal Labor				\$ 6,554,898.00
On-site Project Mgmt.	2821	\$ 1,960.29		\$ 5,529,978.09
Total On-Site Labor				\$ 12,084,876.09

Summary of Remedial Costs

Cost Summary

	Zone 1	Zone 2	Zone 3
Houses			
Total number of houses	318	539	1302
Average square feet per total houses	1154	1425	1316
Average Cost per square feet	\$16.24	\$11.37	\$7.57
<i>All houses in the Zone</i>	<i>\$5,961,753</i>	<i>\$8,732,369</i>	<i>\$12,970,954</i>
Trailers/Mobile Homes			
Total number of Trailers	79	162	216
Average square feet per total trailers	750	750	750
Average Cost per square feet	\$12.75	\$9.63	\$5.26
<i>All trailers in the Zone</i>	<i>\$755,186</i>	<i>\$1,170,620</i>	<i>\$852,287</i>
Commercial Buildings			
Total number of Commercial buildings	11	49	145
Average square feet per total commercial buildings	1232	1015	1613
Average Cost per square feet	\$4.83	\$4.04	\$3.21
<i>All commercial buildings in the Zone</i>	<i>\$65,411</i>	<i>\$200,831</i>	<i>\$749,777</i>

Remediation Procedures by Zone

Remedial Action per Zone at Houses

Action	Zone 1	Zone 2	Zone 3
Remove, dispose and replace all upholstered furniture	√		
Clean all household items, packed and moved out to temporary storage	√	√	√
Remove and replace all insulation from the attic	√	√	√
Remove and replace all plaster from the attic in 25% of the houses located at the zone	√	√	√
Remove and replace HVAC ducts	√	√	√
Clean attic with HEPA vacuum cleaner, apply sealer, repair cracks	√	√	√
Thoroughly vacuum and clean the house, repair any cracks, repaint areas repaired	√	√	√
Remove and replace carpet	√	√	
Clean carpet with vacuum cleaner			√
Clean furniture with vacuum cleaner		√	√
Thoroughly vacuum and clean basement, repair any cracks	√	√	√
Remove and replace furnace filters	√	√	√
Disposed of wastes generated	√	√	√
Confirmation sampling after 90 days of remedial actions	√	√	√

Remediation Procedures by Zone

Remedial Action per Zone at Trailers

Action	Zone 1	Zone 2	Zone 3
Remove, disposed and replace all upholstered furniture	√		
Clean all household items, packed and moved out to temporary storage	√	√	√
Remove and replace HVAC ducts	√	√	√
Thoroughly vacuum and clean the mobile home, repair any cracks, repaint areas repaired	√	√	√
Remove and replace carpet	√	√	
Clean carpet with vacuum cleaner			√
Clean furniture with vacuum cleaner		√	√
Thoroughly vacuum and clean basement, repair any cracks	√	√	√
Remove and replace furnace filters	√	√	√
Disposed of wastes generated	√	√	√
Confirmation sampling after 90 days of remedial actions	√	√	√

Remediation Procedures by Zone

Remedial Action per Zone at Commercial Buildings

Action	Zone 1	Zone 2	Zone 3
Remove, disposed and replace all upholstered office chairs	√		
Remove and replace HVAC ducts	√	√	√
Thoroughly vacuum and clean the building, repair any cracks, repaint areas repaired	√	√	√
Remove and replace carpet	√		
Clean carpet with vacuum cleaner		√	√
Clean furniture with vacuum cleaner		√	√
Disposed of wastes generated	√	√	√
Confirmation sampling after 90 days of remedial actions	√	√	√

Class Area Remediation

Total Cost Summary

Category	Units	Rate	Subtotal	Task Cost
Residential Remediation				\$ 27,665,075.71
Zone 1	318	\$ 18,747.65	\$ 5,961,752.51	
Zone 2	539	\$ 16,201.06	\$ 8,732,368.95	
Zone 3	1302	\$ 9,962.33	\$ 12,970,954.25	
Trailer Remediation				\$ 2,778,092.53
Zone 1	79	\$ 9,559.31	\$ 755,185.79	
Zone 2	162	\$ 7,226.05	\$ 1,170,619.64	
Zone 3	216	\$ 3,945.77	\$ 852,287.09	
Commercial Building Remediation				\$ 1,016,019.07
Zone 1	11	\$ 5,946.43	\$ 65,410.77	
Zone 2	49	\$ 4,098.59	\$ 200,830.88	
Zone 3	145	\$ 5,170.88	\$ 749,777.42	
Soil Remediation				\$ 5,652,977.43
Zone 1A	182	\$ 31,060.32	\$ 5,652,977.43	
On-site Project Management	2821	\$ 1,960.29	\$ 5,529,978.09	\$ 5,529,978.09
Maintenance		5%		\$ 1,855,608.24
SubTotal Remediation				\$ 44,497,751.07
Corporate Management				\$ 5,394,752.62
Site Manager/Asst. Manager	2	\$ 250,000.00	\$ 500,000.00	
Project Management/Scheduling		2%	\$ 889,955.02	
Public Relations		2%	\$ 889,955.02	
Documentation/Quality Control		5%	\$ 2,224,887.55	
Accounting		1%	\$ 444,977.51	
CIS/Data Management		1%	\$ 444,977.51	
Start-Up/Overhead				\$ 2,543,420.14
Procurement		2%	\$ 889,955.02	
Insurance		1%	\$ 444,977.51	
Vacation/Holiday		10%	\$ 1,208,487.61	
SubTotal Management/Overhead				\$ 7,938,172.76
Contingency		10%		\$ 5,243,592.38
Profit		10%		\$ 5,243,592.38
Total Project Costs				\$ 62,923,108.59
Total Cost per Property				\$ 22,305.25

**SUGGESTED PROPERTY REMEDIATION PRE-IMPLEMENTATION DATE
TIME LINE AND PUNCH LIST**

<u>Milestone</u>	<u>Suggested Completion Date after Effective Date</u>
Effective Date	0
Class Administrator Obtains Tax Identification Number for Property Remediation Entity and Sets Up Website	1
Class Administrator Provides the Court and the Parties Draft Class Member Registration Forms and Eligibility Criteria for Property Remediation Program	10
Preliminary Hearing on Pre-Fairness Hearing Date Implementation of Milestones	15
Parties Submit Lists of Candidates for Property Remediation Technical Advisor and Property Remediation General Contractor	25
DuPont to remit \$500,000 Initial Deposit to the Property Remediation Entity	25
Class Administrator submits proposed list of Candidates for Property Remediation Technical Advisor and Property Remediation General Contractor for review by the Parties and the Court	30
Class Administrator provides to the Parties for review Property Remediation Technical Advisor Request for Proposals	30
Parties provide written comments to the Court on this Special Master Report No. 2 respecting Property Remediation	30
Class Administrator submits initial (pre-implementation date) Property Remediation Budget	30
Parties and Claims Administrator to submit definitive list of Class Area properties distinguished by zone, and specifically exchanging ineligible properties.	30
The Court conducts a Fairness Hearing on the Property Remediation submissions of the Class Administrator and the Parties	45

The Court issues an Order approving (i) this Report; and (ii) the following pending items: (A) the proposed candidates for Property Remediation Technical Advisor and Property Remediation General Contractor; (B) the proposed Property Remediation Technical Advisor Request for Proposals; (C) the Class Administrator's property remediation initial budget for the Property Remediation Program (pre-implementation date); and (D) the proposed Property Remediation Registration Forms	75
RFP issued to Property Remediation Technical Advisor Candidates	90
Property Remediation Technical Advisor Bids Received	120
DuPont provides Property Remediation Verdict balance, with the Custodial Bank and Investment Manager having been selected, as requested in Report No. 1, and with the three Funds (Medical Monitoring, Proper Remediation and Punitive Damages) having the same Custodial Bank and Investment Manager	135
Counsel for Plaintiffs to provide DuPont with an acknowledgment of satisfaction of remediation judgment signed by or on behalf of each of the class representatives and the Special Master	145
Property Remediation Technical Advisor Candidates interviewed by Class Administrator, Claimants Advisory Committee, and Counsel for the Parties. Class Administrator submits Report to the Court recommending selection of Property Remediation Technical Advisor	150
Property Remediation on-line database and Class Member on-line registration is beta-tested with the Parties	150
The Court approves Property Remediation Technical Advisor	160
Property Remediation Technical Advisor vets list of General Contractor Candidates, adding candidates as appropriate, and RFP for Property Remediation General Contractor and candidate list are submitted to the Court	190
Motel Accommodations RFP and candidate list submitted to the Court, after being prepared by Class Administrator; the Parties and the Claimants Advisory Committee	190
The Court approves Property Remediation General Contractor RFP and Motel Accommodations RFP and candidate list	200
General Contractor and Motel Accommodations RFP's issued	210
General Contractor and Motel Accommodations bids received	240

General Contractor Candidates interviewed by Class Administrator, Property Remediation Technical Advisor, Claimants Advisory Committee, and Counsel for the Parties. Class Administrator submits report to the Court recommending Property Remediation General Contractor	270
Class Administrator, in collaboration with the Claimants Advisory Committee and the Parties, vets Motel Accommodations bids, examines fair <u>per diem</u> rates for participants, both property owners and renters, and submits proposal to the Court	270
Court approves hiring of Property Remediation General Contractor and Motel Accommodations and <u>per diem</u> rate proposal	280
Property Remediation year one budget, timeline and punch list (beginning with Implementation Date) are prepared by Class Administrator, Property Remediation Technical Advisor, Property Remediation General Contractor, the Parties, the Claimants Advisory Committee, and the Finance Committee and are submitted to the Court for review	310
Court approval of year one budget, timeline and punch list	320
Property Remediation on-line database and on-line registration go live	330
Property Remediation Class Notice and Registration begins, with registration being provided in-person at the Class Administrator's office, door-to-door by Zone, by mail and on-line	335
Following verification of Class Member eligibility and the achievement of sufficient Zone 1A soil remediation registrants to make Soil Remediation economical to begin, Soil Remediation in Zone 1A begins (Implementation Date)	365