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June 2, 2005

Mr. Brian P. Freeman
U.S. EPA, Region V
Waste Pesticide and Toxics Division
Enforcement and Compliance Assurance Branch
77 West Jackson Boulevard, DRE-9J
Chicago, Illinois 60604-3590

US EPA RECORDS CENTER REGION 5
1003404

**Information in Support of CA 750 – Environmental Indicator**

Dear Mr. Freeman:

DuPont previously submitted an evaluation of the environmental indicator (EI) "Migration of Contaminated Groundwater Under Control." We also responded to several EPA comments on the submission in an e-mail dated May 12, 2005. In order to support the EPA review process we have provided the following information:

- Table 4-1 from the approved Phase I RFI Report summarizing Groundwater/Surface Water Mixing Calculations and showing resultant analyte concentrations in the East Branch of the Grand Calumet River.

- Three pages from Draft Report – Sediment Characterization Study for the DuPont East Chicago Facility, showing mean GCR stream flow of 467 cfs (about 302 MGD). Table 4-1 utilized a surface flow value of 300 MGD in calculating groundwater/surface water mixing.

- Woodward-Clyde Memorandum dated December 6, 1999 summarizing slug test results from three locations on DuPont East Chicago property. Data and solution methods for each test are attached. Results for hydraulic conductivity (k) ranged from about 3.0-4.5E-03 cm/sec. Table 4-1 utilized a k value of 3.5E-03 cm/sec in calculating groundwater/surface water mixing.

As you know from reviewing Table 4-1, a very conservative approach was taken to generate results. For instance, initial analyte concentrations in groundwater were set at the maximum value detected in monitoring wells sampled in November 1999. Those maximum values were applied to the entire length of DuPont property, even though analytes were concentrated along only a fraction of the property length. Therefore, even if hydraulic conductivity varied by an order of magnitude, resultant analyte concentrations would be well below relevant surface water criteria.

Based on this information DuPont believes that groundwater discharge of metals-contaminated groundwater to the GCR is "currently acceptable." This belief is based on the calculations, hydrogeologic variables and assumptions incorporated into Table 4-1 that shows resultant metals concentrations being below appropriate surface water criteria.

If you have any questions, please feel free to call Alan Egler at (302) 892-1296.

Sincerely,

Thomas E. Stilley, PE
DuPont Corporate Remediation Group
Project Director

cc: Bernie Reilly, DuPont Legal (cover ltr only)
Alan Egler, URSD (cover ltr only)
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**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**
**Interim Final 2/5/99**
**RCRA Corrective Action**
**Environmental Indicator (EI) RCRIS code (CA750)**

**Migration of Contaminated Groundwater Under Control**

**Facility Name:** DuPont East Chicago Indiana Facility
**Facility Address:** 5215 Kennedy Avenue in East Chicago, Indiana
**Facility EPA ID #:** IND005174254

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   __X__ If yes - check here and continue with #2 below.

   _____ If no - re-evaluate existing data, or

   _____ If data are not available, skip to #8 and enter "IN" (more information needed) status code.

## BACKGROUND

### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

### Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

### Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

### Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

__X__ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

_____ If unknown – skip to #8 and enter "IN" status code.

Rationale and Reference(s):

The site groundwater analytical data from December 1997 through March 2004 were reviewed. The analytical constituents monitored included the following: antimony, arsenic, barium, cadmium, chromium, copper, lead, nickel, selenium, vanadium, and zinc. The groundwater analytical results associated with Pool A (groundwater north of the divide) were compared to EPA Maximum Contaminant Levels (MCLs). The groundwater analytical results associated with Pool B (groundwater south of the divide) were compared to the Indiana Ambient Water Quality Standard (IAWQS) for either Human Health or Chronic Aquatic Life, whichever value was lower.

In Pool A arsenic, nickel, and zinc were the only groundwater constituents to exceed the MCLs. The arsenic concentrations in Pool A ranged from below MCL (0.01 mg/l) to a concentration high of 2.43 mg/l. Nickel concentrations ranged from below MCL (0.073 mg/l) to a concentration high of 0.146 mg/l. Zinc concentrations ranged from below Secondary MCL (5 mg/l) to a concentration high of 48.9 mg/l; see Section 5.3 for more detail).

In Pool B four constituents exceeded the IAWQS within a limited number of monitor wells. In monitor well MW-13, the following three constituents exceeded the IAWQS: chromium, lead, and vanadium. Exceedences of these three constituents were limited to MW-13. In all other Pool B wells, these three constituents were well below the IAWQS.

The only other constituent to exceed the IAWQS was arsenic. The IAWQS Chronic Aquatic value for arsenic is 0.1479 mg/l. This level was consistently exceeded in wells MW-03 (with a concentration high of 17.9 in June 1999) and MW-15 (with a concentration high of 0.561 mg/l in November 1999.

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

__X__ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) – skip to #8 and enter "NO" status code, after providing an explanation.

_____ If unknown – skip to #8 and enter "IN" status code.

Rationale and Reference(s):

| | | |
|---|---|---|
| YES | Western Half Pool A | The groundwater contaminants associated with the western half of Pool A is prevented from migrating off-site by a permeable reactive barrier (PRB). See Section 5.2 for more detail. |
| YES | Eastern Half Pool A | The constituents associated with the eastern half of Pool A groundwater is prevented from further migration by the presence of a groundwater depression that is associated with the sewer system underlying Riley Park. See Section 5.2 for more detail. |
| YES | Pool B | The groundwater contaminants associated with Pool B are prevented from further migration by the presence of the Grand Calumet River; the groundwater in Pool B discharges to the Grand Calumet River. |

[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

__X__ If yes - continue after identifying potentially affected surface water bodies.

_____ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

| | | |
|---|---|---|
| NO | Western Half Pool A | The groundwater associated with the western half of Pool A is treated by a PRB. |
| NO | Eastern Half Pool A | The groundwater east of the PRB contains constituent concentrations that exceed MCLs for arsenic, nickel, and zinc. However, this plume discharges to the downgradient sewer system associated with Riley Park. From the sewer system the water is sent to the City of East Chicago Treatment Facility. The groundwater constituent concentrations associated with Riley Park were sampled in November of 2004 and were below current drinking water standards for metals. |
| YES | Pool B | The groundwater associated with Pool B discharges to the Grand Calumet River. |

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

__X__ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

Constituent concentrations in well MW-13 (chromium, lead, and vanadium) are less than 10 times the IAWQS. However, the arsenic concentrations detected in well MW-03 are greater than 10 times the IAWQS.

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be **"currently acceptable"** (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

**X** If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be **"currently acceptable"**) - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):

A groundwater to surface water interface dilution factor was applied to the IAWQS values to account for the interaction of groundwater to surface water. Comparing the groundwater constituent concentrations to the adjusted IAWQS value determined that no constituents were in exceedence. Sampling of surface water in the Grand Calumet River in June of 2005 by EPA staff both upstream and downstream of the DuPont facility yielded concentrations of lead, arsenic and zinc below current drinking water maximum contaminant limits (MCLs).

DuPont will select and implement a remedy in the CMS/CMI phase of this project, to remove source metals contaminants from groundwater before entering the Grand Calumet River

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[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

__X__ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

Perimeter monitoring wells and PRB specific wells will be monitored by DuPont on a regular basis to ensure that plume concentrations and plume widths remain stabilize. A copy of the current site groundwater monitoring program which is being performed voluntarily, can be found in Appendix A of the Environmental Indicator Report submitted by DuPont. The USEPA acknowledges that dissolved metal ground-water loads will be sorbed onto existing fine-grained organic rich soils in the Grand Calumet River, therefore we anticipate that additional remediation and monitoring will be needed to prevent recontamination of sediments after the anticipated dredging of the river is complete.

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

__X__ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the **DuPont East Chicago Indiana Facility**, EPA ID# **IND005174254**, located **5215 Kennedy Avenue in East Chicago, Indiana**. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

_____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

_____ IN - More information is needed to make a determination.

Completed by (signature) _____ Date 6/15/05

(print) Brian P. Freeman

(title) Sr. Chemist, Corrective Action Project Manager.

Supervisor (signature) _____ Date _____

(print) George Hamper

(title) Chief, WPTD/ECAB Corrective Action Section

(EPA Region or State) Region 5

Locations where References may be found:

DuPont East Chicago Corrective Action Files
Federal Records Center
US EPA Region 5
77 W Jackson, 7th Floor
Chicago, IL 60604

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**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**
**Interim Final 2/5/99**
**RCRA Corrective Action**
**Environmental Indicator (EI) RCRIS code (CA 725)**
**Current Human Exposures Under Control**

Facility Name: DuPont East Chicago Facility
Facility Address: 5215 Kennedy Avenue, East Chicago, Indiana
Facility EPA #: IND 005 174 254

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water, sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

   √ If yes -check here and continue with #2 below.
   If no- re-evaluate existing data, or
   If data are not available skip to #6 and enter "IN" (more information needed) status code.

## BACKGROUND

### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EIs developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

### Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

### Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near- term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993 (GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

### Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

**Current Human Exposures Under Control**
**Environmental Indicator (EI) RCRIS Code (CA 725)**



2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated" above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

| Media | Yes | No | ? | Rationale/Key Contaminants |
|---|---|---|---|---|
| Groundwater | √ | | | Metals and some organics have been identified as constituents of potential concern (COPCs) in site-wide groundwater (Tables 5- 8). |
| Air (indoors)[2] | | √ | | Volatile organic compounds (VOCs) have been detected in groundwater at the site. However, locations where VOCs exceed screening levels do not extend under occupied buildings on- and off-site (Sec 5.2.3). |
| Surface Soil (e.g., <2 ft) | √ | | | Organics and metals exceeded screening levels in surface soil SWMUs and AOCs (Table 9). |
| Surface Water | | √ | | Not considered a media of concern. See rationale for more information |
| Sediment | | √ | | Not considered a media of concern. See rationale for more information |
| Subsurface Soil (e.g., >2 ft) | √ | | | Organics and metals exceeded screening levels in surface soil SWMUs and AOCs (Table 9). |
| Air (outdoors) | √ | | | COPCs in outdoor air include: arsenic and lead (Section 5.2.3) |

If no (for all media) -skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

√ If yes (for any media) -continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

If unknown (for any media) -skip to #6 and enter "IN" status code.

Rationale and Reference(s):

**For the purposes of explanation, the DuPont East Chicago site is divided into four distinct areas described as follows:**

1) **Area 1 - The Active Manufacturing Area (the southwest quadrant of the site.)**
2) **Area 2 - The Waste Disposal Area (the northern half of the site)**
3) **Area 3 – The Previously Active Manufacturing Area (the southeast quadrant of the site)**
4) **Area 4 – The Natural Area – an area east of the site owned by DuPont, but never used for any manufacturing or disposal activities.**

**Data Set for EI Evaluation**

Site data evaluated for this step included: Groundwater samples collected from between five and eight rounds of monitoring (depending on location) between November 1999 and November 2003; Sump water samples collected in 1990 and November 2004 from Riley Park basements; Shallow soil samples (less than 2 feet deep) and subsurface soil samples (within 12 feet bgs) collected during the 1999 Phase I RFI and 2003 Phase II RFI from 52 SWMUs and AOCs; and, Shallow soil samples collected from residential yards in Riley Park.

**Screening levels used to evaluate site data**

Concentrations of constituents detected in the EI evaluation data set were compared to appropriate screening levels to assess potential impact to human health and the environment and to identify COPCs. The following screening levels were utilized during the evaluation:

- Groundwater – Shallow groundwater is not used for drinking water or irrigation on or near the site; therefore, there are no appropriate risk-based levels for screening. However, groundwater from Pool A flows to the north toward Riley Park where some contact may occur with basement water. As a result, constituents detected in groundwater were compared to Indiana Groundwater Standards (IGS) or federal Maximum Contaminant Levels (MCLs). USEPA Region IX Preliminary Remediation Goals (PRGs) for Tap Water were used where IGS/MCLs were unavailable. The PRG represents a combined exposure including inhalation of volatile compounds and ingestion for residential tap water. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1 million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).

  Groundwater from Pool B may discharge to the East Branch of the Grand Calumet River. Therefore, groundwater concentrations were also compared to Indiana Water Quality Standards Tier I and Tier II Values for the Great Lakes Basin (IAWQS) (327 IAC 2) or federal Ambient Water Quality Criteria (AWQC) (40 CFR Part 131) where IAWQS were unavailable. The surface water quality criteria were based on protection of human health (nondrinking water and fish consumption). If criteria were not available from either source, then concentrations were compared to the IGS/MCL.

- Soil – On-site surface and subsurface soil concentrations were compared to USEPA Region IX PRGs for industrial soil. Off-site surface soil concentrations from Riley Park were compared to background concentrations from samples collected in areas not impacted by sump water discharges. The PRG represents a combined exposure including inhalation of particulates and volatile compounds, dermal absorption, and ingestion. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1 million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).

- Indoor Air - Because the site is industrial, the OSHA permissible exposure levels (PELs) and the American Conference of Governmental Industrial Hygienist (ACGIH) threshold limit values (TLVs) were used to develop appropriate indoor air target concentrations for potential on-site exposure rather than the residential indoor air target concentrations

provided in the draft guidance. Table 4 presents the equation used to develop the screening criteria and the occupational screening levels used in the equation.

**Constituents of Potential Concern**

**Groundwater**: For the purpose of the evaluation, groundwater was evaluated by groundwater flow components (Pool A or Pool B) rather than by SWMU or AOC. Groundwater expressed as seeps near the on-site landfill was also included in the evaluation. Previous environmental investigations conducted at the site have identified two VOCs and 16 inorganics as COPCs in Pool A groundwater. Arsenic is the primary COPC in Pool A groundwater. An interim remedial measure (IRM) has been installed along a portion of the northern site boundary to address migration of arsenic-contaminated groundwater toward Riley Park. Two VOCs, one pesticide and 16 inorganics have been identified as COPCs in Pool B groundwater.

**Indoor Air**: An evaluation of the vapor intrusion to indoor air from groundwater and soil pathways was conducted for the East Chicago facility following the principles outlined in the draft Guidance (*Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils, Subsurface Vapor Intrusion Guidance, November 2002*). The evaluation concluded that the potential for vapor intrusion into buildings at the site or off-site is incomplete under current land use conditions, because locations where these constituents are present in groundwater do not extend under or within 100 feet of occupied buildings.

**Surface soil**: The previous environmental investigations at the DuPont East Chicago facility have identified three VOCs, three pesticides/polychlorinated biphenyls (PCBs) and ten inorganics as COPCs in surface soil. The primary locations of these exceedances under current conditions occur in areas that have limited access; are located in remote portions of the site away from active manufacturing activities; or are covered by soil, gravel, concrete, or construction debris. Detected arsenic concentrations in Riley Park surface soil were either below or within the range of control (background) samples collected, indicating no appreciable accumulation of arsenic in soil near the location of periodic sump discharge. As a result, Riley Park surface soil was excluded as a media of concern.

**Surface Water and Sediment**: Sediment along and within the East Branch of the Grand Calumet System was not evaluated as part of this EI analysis because it is being managed under the Natural Resource Damage Assessment (NRDA) settlement. Surface water data for the purpose of exposure assessment has not been collected in the East Branch of the Grand Calumet System. However, exposure to surface water in the East Branch of the Grand Calumet System was evaluated for the EI analysis as part of the groundwater to surface water discharge pathway.

**Subsurface soil**: The previous environmental investigations at the DuPont East Chicago facility have identified one VOC and nine inorganics as COPCs in subsurface soil. COPCs would be accessible only during intrusive activities.

**Air (outdoors)**: For the purposes of assessing inhalation exposures via the soil-to-air pathway, the pathway-specific industrial soil PRG values provided in the USEPA Region IX PRG intercalc tables were utilized. Constituents that exceeded the pathway-specific soil PRGs were retained for evaluation in the EI determination (arsenic and lead).

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to

look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile organic compounds) does not present unacceptable risks.

3. Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table
Potential Human Receptors (Under Current Conditions)

| "Contaminated" Media | Resident | Worker | Day-Care | Constr-uction | Tres-Passer | Recre-ation | Food[3] |
|---|---|---|---|---|---|---|---|
| Groundwater | Yes | No | No | Yes | Yes | No | No |
| ~~Air (indoors)~~[2] | | | | | | | |
| Surface Soil (e.g., <2 ft) | No | Yes | No | Yes | Yes | No | No |
| ~~Surface Water~~ | | | | | | | |
| ~~Sediment~~ | | | | | | | |
| Subsurface Soil (e.g., >2 ft) | No | No | No | Yes | No | No | No |
| Air (outdoors) | No | Yes | No | Yes | Yes | No | No |

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.

2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media – Human Receptor combination (Pathway). N/L = Not Likely

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media- Human Receptor combinations (Pathways) do not have check spaces ("-"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary .

If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

√ If yes (pathways are complete for any "Contaminated" Media -Human Receptor combination) -continue after providing supporting explanation.

If unknown (for any "Contaminated" Media -Human Receptor combination) -skip to #6 and enter "IN" status code

Rationale and Reference(s):

**Potential human receptors include (Section 6.1):**

(1) **On-site Industrial Workers:** A portion of the DuPont East Chicago Facility is an active heavy industrial facility, and this use will continue (Figure 2). The industrial worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).

(2) **On-site Construction/Excavation Workers:** The on-site construction/excavation worker is potentially exposed to constituents in all environmental media while repairing subsurface utility lines, performing remedial activities or short-term construction. Subsurface soil depths for direct contact exposures by this receptor are defined as 2 to 12 feet bgs based on past activity at the facility and the location of utilities on-site. Groundwater occurs at depths ranging from 3 to 10 feet bgs at the site; therefore, direct contact with groundwater may also occur during intrusive activities

(3) **On-site Restoration Worker:** Restoration workers at the Natural Area may come into direct contact with contaminated media while removing exotic species, seeding, planting and while conducting species surveys. Therefore, on-site restoration workers are potential receptors. The restoration worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).

(4) **On-site Trespasser:** The main operating area of the site (including the previously active manufacturing area) is fenced and guarded, and access is controlled and limited to authorized personnel only. Trespassing, although sporadic, has occurred within the previously active manufacturing area. The on-site trespasser is assumed to be a youth aged 7 to 16 years. The on-site trespasser is potentially exposed to constituents in surface soil (0 to 2 feet bgs) at the site and groundwater expressed as seeps near the on-site landfill.

(5) **Riley Park Resident** - Groundwater is not used for domestic water supply, including irrigation, in the Riley Park area. If contact with facility-related constituents were to occur, it would be restricted primarily to basement water potentially affected by groundwater discharges and limited to a small subset of property owners in the southern part of the community (CH2M Hill, 1991). During the door-to-door survey conducted by CH2M Hill in 1991, 13 residences reported basement water due to a high water table that was not adequately removed by sump pumps. The amount of water in the basements ranged from seeps to several inches and occurred rarely or during heavy rains. Therefore, off-site adult and child (age zero to six years) residents exposed to basement sump water were considered potential receptors.

Recreational users of the East Branch of the Grand Calumet System are virtually nonexistent. Land access to the stream banks on the site is limited due to site security, vegetation, marshy areas, and steep embankments. Water access to the stream (in particular the reach adjacent to the site) is also limited due to the lack of public launching areas and the presence of low bridges spanning the river channel. To the extent that recreators may use the area, such use would be restricted to warm weather months. However, the general appearance of the waterway and riparian areas, fish advisory warnings, and the abundant water recreation opportunities at nearby more aesthetically desirable areas (e.g., Lake Michigan) would discourage use. Therefore, recreational users of the East Branch were not considered potential receptors.

Sensitive receptors (e.g., daycare) are not located on or adjacent to the site. Therefore, these receptors were not considered potential receptors.

**Complete Exposure Pathways by Media (Section 6.2):**

(1) **Groundwater**: The potential for exposure is low because groundwater is not used on-site for potable or industrial purposes and residential users have not been identified within a one-mile radius of the site. However, due to the shallow depth of groundwater in some portions of the site, exposure may occur during construction/excavation activities. In addition, the potential exists for occasional exposure to intermittent seeps near the on-site landfill during infrequent trespassing activities. The potential also exists for Riley Park residents to contact groundwater constituents present in basement sump water.

Potentially complete exposure pathways may include: on-site trespasser and off-site Riley Park resident: - incidental ingestion of and dermal contact with groundwater; and on-site

construction/excavation worker - incidental ingestion of and dermal contact with groundwater, and inhalation of vapor phase chemicals released from groundwater to a confined space (trench).

(2) **Surface Soil**: The potential for exposure to contaminants in surface soils is limited to on-site receptors because impacted soils are contained within the facility boundaries. Even on-site, the potential for exposure is low for most receptors under current conditions because the principal areas of surface soil contamination have limited access; are located in remote portions of the site away from active manufacturing activities; or are covered by soil, gravel, concrete, or construction debris. Furthermore, repair and extension of perimeter fencing along the previously active manufacturing area further limits site access. The receptor with the greatest potential for exposure is the current/future on-site construction/excavation worker, where a greater likelihood of direct contact with impacted soil is associated with intrusive activities.

Potentially complete exposure pathways may include the following: on-site industrial worker, on-site trespasser, on-site construction/excavation worker and on-site restoration worker: incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors.

(3) **Subsurface Soil**: Because subsurface soil contamination is only present on-site, and exposure to subsurface soil is only achieved during excavation and construction activities, the only potential receptor is the on-site construction/excavation worker.

Potentially complete exposure pathways may include incidental ingestion of and dermal contact with subsurface soil and inhalation of soil-derived particulates and vapors.

**Incomplete Exposure Pathways by Media (Section 6.3):**

(1) **Groundwater:** Groundwater is not used on-site for potable or industrial uses. Therefore, direct contact (ingestion or dermal contact) with groundwater for on-site industrial workers is incomplete. Potential exists for groundwater to discharge into the East Branch of the Grand Calumet. However, due to the effect of mixing zone dilution into the river and solute transport effects, overall exposure to this discharge is insignificant (DuPont, 2000). In addition, no likely potential receptors for the stream have been identified (see Section 6.3.1). Exposure pathways associated with food are incomplete.

(2) **Soil:** Since the day-to-day operations of the on-site industrial worker do not include intrusive activities, direct contact (ingestion or dermal contact) with subsurface soil is not anticipated and is incomplete. Likewise, if surface soil contamination exists in an area of the site, which is not routinely accessible to on-site industrial workers due to institutional or physical controls (e.g., locked areas or asphalt caps), then exposure pathways in those areas are incomplete as well. Exposure pathways associated with food are incomplete.

Footnotes:

[3] Crops are not grown, and animals are not raised for consumption on the DuPont Site

4 Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant" (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1 ) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) -skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

√ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) -continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

If unknown (for any complete pathway) -skip to #6 and enter "IN" status code

Rationale and Reference(s):

The following complete exposure pathways were evaluated in Step Four of the EI determination process:

**Ground water**: Under current land use conditions, groundwater is not used on-site for potable or industrial uses. Under future land use conditions, a deed restriction prohibiting the use of shallow groundwater will be put in place for the site. Due to the shallow depth of groundwater in some portions of the site, exposure may occur during construction/ excavation activities. Likewise, the potential exists for occasional exposure to intermittent seeps near the on-site landfill during infrequent trespassing activities. In the risk assessment, no unacceptable health risks (cancer risk range of 1x10-6 to 1x10-4 and total HI of less than 1) from exposure to shallow groundwater were identified for these potential receptors. Caner and non cancer health effects due to incidental ingestion of and dermal contact with groundwater in sump pumps in the basement of residents in Riley park area was found to be below 1x10-6 and 1 respectively.

**Surface soil**: No unacceptable health risks were identified for routine workers from surface soil in active manufacturing area (Exposure area 1). There are no current on-site industrial worker exposures to commercial/Industrial Re- Development area and restricted Use Areas (Exposure area 2). Overall risk due to exposure for future on-site industrial workers and trespassers to surface soil in this area is also considered to be insignificant.

**Subsurface soil**: Under both current and future land use conditions, the receptor with the greatest potential for exposure is the on-site construction/excavation worker, where a greater likelihood of direct contact with impacted surface and subsurface soil is associated with intrusive activities. Several units in exposure area 2 exceed cumulative cancer risk of 1e-04 due to number of contaminants and have been identified for remedy evaluation.

5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

   √ If yes (all "significant" exposures have been shown to be within acceptable limits) – continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

   ____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

   ____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

Risk characterization of exposure **Area 2** (described in Question 1 as the Waste Management Area) reveals that construction/excavation worker are at significant cancer risk associated with incidental ingestion of and dermal contact with subsurface soil and inhalation of soil derived particulates and vapor. The non-cancer hazard associated with sub-surface lead contamination is significantly high. With regard to the onsite construction/ excavation worker, DuPont has an established excavation permitting program in place at the site, which would continue in the future to ensure that appropriate measures are taken for personnel protection should such subsurface activity encounter impacted soils. Based on this health and safety plan, the significant exposure due to subsurface contamination is found to be acceptable.

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

**YE** -Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **the DuPont East Chicago** facility, EPA ID # **IND 005 174 254**, located at **5215 Kennedy Avenue in East Chicago, Indiana** under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

NO -"Current Human Exposures" are NOT "Under Control."

IN -More information is needed to make a determination.

Completed by Date 12/21/2004
(print) Brian P. Freeman
(title) Senior Chemist, Corrective Action Project Manager

Supervisor Date
(print)
(title)
US EPA Region 5

Locations where References may be found

US EPA Region 5
Federal Records Center
77 W. Jackson, 7th Floor
Chicago, IL 60604

Corrective Action Files
Waste Pesticides and Toxics Division
RCRA Enforcement and Compliance Assurance Branch
Corrective Action Section
77 W. Jackson, DE-9J
Chicago, IL 60604

Contact telephone and e-mail numbers

| | |
|---|---|
| (name) | Brian P. Freeman |
| (phone #) | 312-353-2720 |
| (e-mail) | freeman.brian@epa.gov |

**FINAL NOTE: The human exposures EI is a qualitative screening of exposures and the determinations within this document should not be used as the sole basis for restricting the scope of more detailed (e.g., site-specific) assessments of risk.**

# Table 4-1

## Groundwater/Surface Water Mixing Calculations

Current surface water flow of East Branch of Grand Calumet River at DuPont is about 300 MGD (U.S. Geological Survey, 1996)

Surface water flow of East Branch of Grand Calumet River at DuPont if discharge from U.S. Steel Corporation's discharge into the river was removed (80% of current flow) would be 60 MGD.

Groundwater discharge to East Branch of GCR
calculated by Q = k x i x A

where, k = hydraulic conductivity
i = groundwater gradient
A = area of groundwater discharge

k = 3.5E-03 cm/sec (from field slug tests)
i = 0.003 (from Nov, 1999 groundwater level measurements)
A = 2736 m (length of DuPont property) x 9.14 m (saturated thickness)

Q = 0.000035 m/sec x 86,400 sec/day x 0.003 x 25,007 sq m

= 226.86 cu m/day

= 59,936 GPD (gallons per day)

Ratio of SW flow to GW flow = 300/0.059936

**Ratio = 5000:1**

| Analyte | Maximum Concentration in Groundwater (ug/l)* | Concentration after Mixing with SW (ug/l)** | Conc after Mixing with 80% less SW (ug/l)*** | Surface Water Criteria (ug/l) |
|---|---|---|---|---|
| Arsenic | 18,000 | 3.6 | 18 | 150 |
| Lead | 108 | 0.02 | 0.11 | 2.5 |
| Zinc | 112,000 | 22.4 | 112 | 120 |
| Cadmium | 115 | 0.02 | 0.1 | 2.2 |

Notes:

* Highest concentration detected in November, 1999 sampling event.

** Assumes contaminant loading equally spread over entire length of property.

*** Assumes * and ** as well as reduction in river flow of 80%.

The surface water hydrology of the East Branch of the GCR is unique. Surface water flows opposite to the direction of historical flow into Lake Michigan. This flow reversal is a result of its connection to the IHC, a dredged industrial shipping channel that bisects the GCR and connects it with Lake Michigan. The resulting watershed area for the GCR is small (approximately 22 $mi^2$), and the headwaters of the East Branch are located around the historical junction of the GCR with Lake Michigan.

Figure 5-1 compares recorded flow in both the East Branch of the GCR and in the Little Calumet River (USGS 1999). The flow axes of these two rivers are parallel and are located approximately 2 miles from each other. A comparison of the two rivers illustrates the effects of both watershed changes and land use in the East Branch relative to the Little Calumet River. Principally:

- Base flow in the East Branch is very high relative to the catchment area, reflecting the fact that the majority of surface water in the system represents industrial and municipal wastewater discharges.

- Flows in the East Branch are largely unaffected by storm events, reflecting the small storm flows from the small catchment area despite the dominantly industrial and urban land use (which, because of large areas with impervious surfaces, tends to favor higher relative storm flows). Storm peak flow events over the period of record (1994–1996) are no greater than the variability in industrial and municipal wastewater discharges.

These characteristics suggest that storms are unlikely to significantly affect the surface water flow and sediment transport regime. Over the 5-year period of stream flow records, average daily discharge in the East Branch at the Industrial Highway gauge has ranged from 305 to 601 cfs, with a mean of 467 cfs; the highest recorded instantaneous measurement has been 891 cfs, which represents a *de facto* 5-year flood event. The relatively short gauging record may not be representative of larger storm events. FEMA

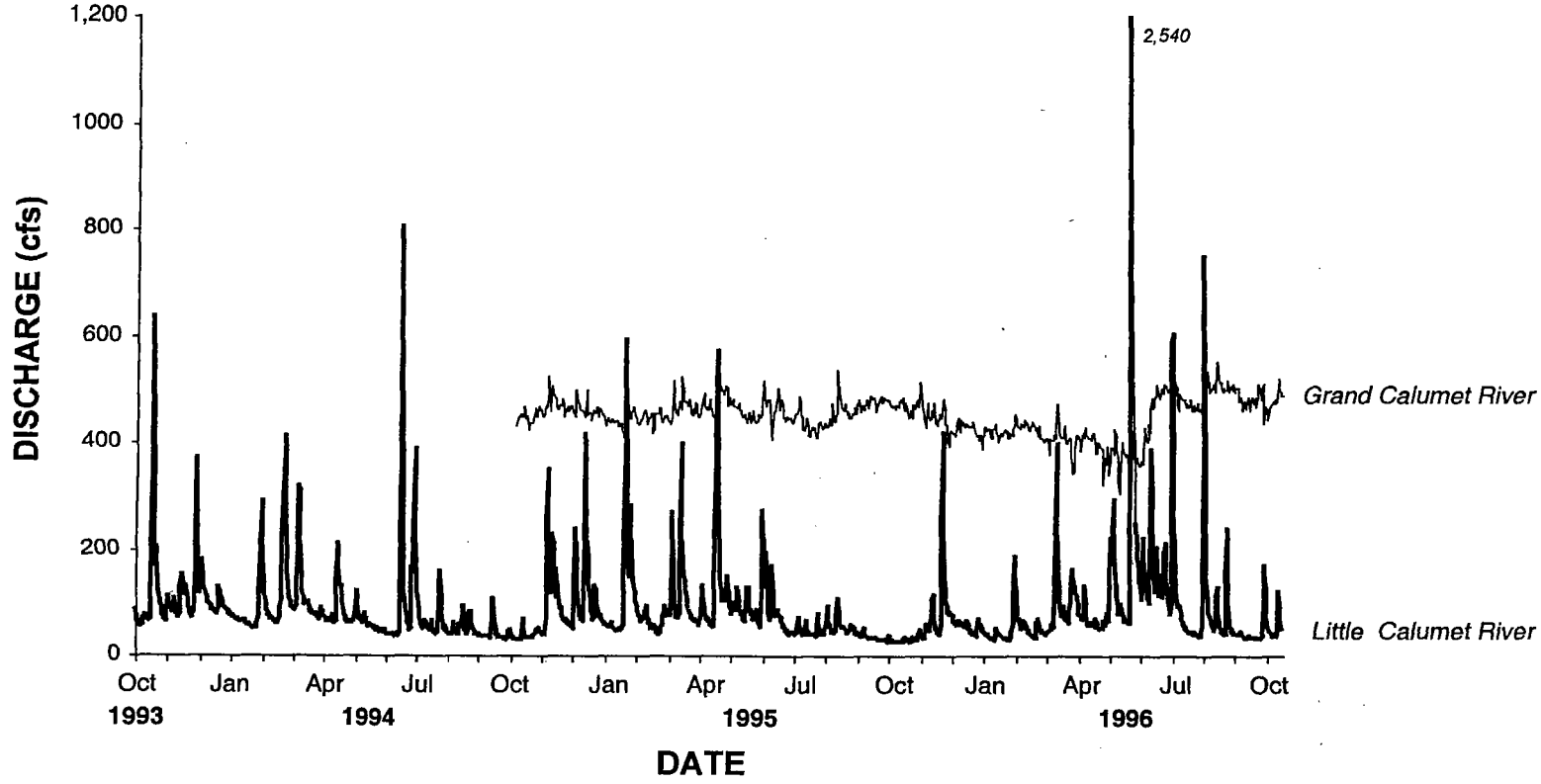


Figure 5-1.
STREAM FLOW COMPARISON OF THE GRAND CALUMET RIVER AT INDUSTRIAL HIGHWAY AND THE LITTLE CALUMET RIVER AT PORTER, INDIANA.

DuPont East Chicago Facility
Sediment Characterization Study

Charge number: 8601058.001 0501
Date prepared: 08/23/99
Prepared by: Betty Dowd

Exponent

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**Woodward-Clyde** **Memorandum**

To: Allan Egler
Larry Reitz
Don Johnson
Tim Dull

From: Paul Nickles

Office: Chicago

Date: December 6, 1999

Subject: Slug Testing Results, Dupont Chemical, East Chicago, Indiana.

OBJECTIVE:
To obtain a preliminary estimate of the hydraulic conductivity (K) of a clean, poorly graded, fine-grained sand aquifer. This data will be used in the design of an in-situ reactive slurry trench.

PROCEDURE
A falling head test was selected for this sight. Slug tests were performed on Piezometers PWB-3, PWB-11, and PWB-21.

**Falling-Head Test**
1) Prior to beginning test, static water level was recorded and the transducer was placed in the well (1 foot from bottom) and allowed to equilibrate with water. A Troll 4000 pressure transducer with datalogging capabilities was used to record data. A lap-top computer was used to pre-program the Troll 4000 prior to the test, and to communicate with the Troll in the field.

2) Two gallons of water were introduced instantaneously using a 2 gallon bucket and large funnel. This slug displaced the water level approximately 3.5-4.7 feet, depending on the accuracy of measurement and loading of slug in each well.

3) This procedure was performed three times at each piezometer location. The test ended when approximately 95% of the water recovered, approximately 25-30 minutes.

DATA ANALYSIS
Following field work, data was downloaded to a spreadsheet for analysis. The first parameter evaluated was the maximum level water had risen above the pretest static level prior to insertion of the slug, this value is $H_o$. This value was chosen based on the maximum change in water level in the well upon introducing the slug. The maximum change in water level ($H_o$) was 4.7 feet using 2 gallons of water.

Two analytical methods, the Bouwer and Rice method and the Hvorslev method were used for slug test analysis. Results were generated using ADEPT 1.1, a computer program for aquifer data evaluation.
Program analysis using both techniques were generated for all three tests at piezometer location PWB-11 (PWB11-1,2,3) and for the final test 3 at PWB-3, and PWB-21 locations. These two methods do not strictly require that a slug be introduced near-instantaneously to yield good hydraulic conductivity estimates. Values for the length and radius of the gravel pack were consistent with the length of screen and piezometer radius. This is due to natural filter pack construction on all piezometers tested. Aquifer thickness was chosen to be the length of the screened interval only, and slug length/diameter is the highest head of water introduced into a two-inch casing. Finally, the lower and upper limits of regression were varied to find the best-fit line.
Efforts were made to reproduce computer program results generated and check calculations. This was accomplished in part by running another computer program BRSLUG, a Bouwer-Rice slug test program, on PWB11-1 test data.

RESULTS
Hydraulic conductivity ranges from $3.11 \times 10^{-3}$ cm/sec at PWB-3 to $4.15 \times 10^{-3}$ cm/sec at PWB-11 using the Bouwer and Rice analytical method and data generated from test three.

Hydraulic conductivity ranges from $3.54 \times 10^{-3}$ cm/sec at PWB-3 to $4.52 \times 10^{-3}$ cm/sec at PWB-11 using the Hvorslev analytical method and data generated from test three.

Results for PWB-21 test three range from $3.48 \times 10^{-3}$ cm/sec (Bouwer and Rice) to $4.05 \times 10^{-3}$ cm/sec (Hvorslev) method.

Results generated from BRSLUG for PWB11-1 are $2.62 \times 10^{-3}$ cm/sec, this is comparable to results generated using ADEPT 1.1.

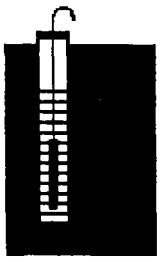
Published hydraulic-conductivity (K) values for poorly-graded fine sands range from $10^{-3}$ cm/sec to $10^{-1}$ cm/sec (Fetter, 1988). Thus, the hydraulic conductivity estimate obtained from this slug test falls within the lower boundaries of published K values. The effects of

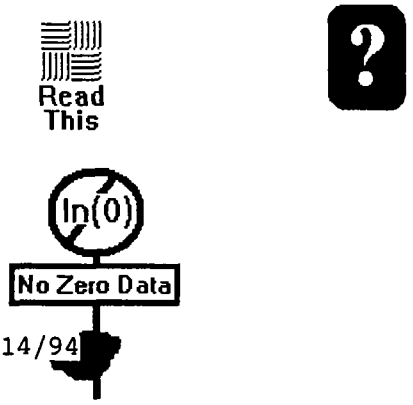
incomplete well development are difficult to avoid in most situations (length of screen) and all hydraulic-conductivity estimates of a particular formation should be viewed as lower bound.

PLN:PLN

Enclosures: Slug test analysis using ADEPT 1.1 with Mathcad 6.0 and BRSLUG.

References: Fetter, C, W, 1988 Applied Hydrogeology. Columbus, Ohio: Merrill Publishing Company.

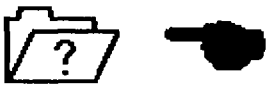





BOUWER.pwb11-1

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parent MenuREADPRN(pwb111)



number of data points n =60

2. Assign column numbers in which time and displacement data occur in the data file

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot ft$

4. Assign SGN = -1 for negative water level data (e.g., falling water level test and SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.

| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv 0.083 \cdot ft$ |
| gravel pack radius | $r_w \equiv .083 \cdot ft$ |
| distance from water table to bottom of screen | $H \equiv 18 \cdot ft$ |
| aquifer thickness (screened interval) | $b \equiv 10 \cdot ft$ |
| slug length | $\lambda \equiv 3.6 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$

| | |
|---|---|
| user-specified x-axis lower limit | $XLu \equiv 0.0$ |
| user-specified x-axis upper limit | $XUu \equiv 50.0$ |
| user-specified y-axis lower limit | $YLu \equiv 0.01$ |
| user-specified y-axis upper limit | $YUu \equiv 10.0$ |

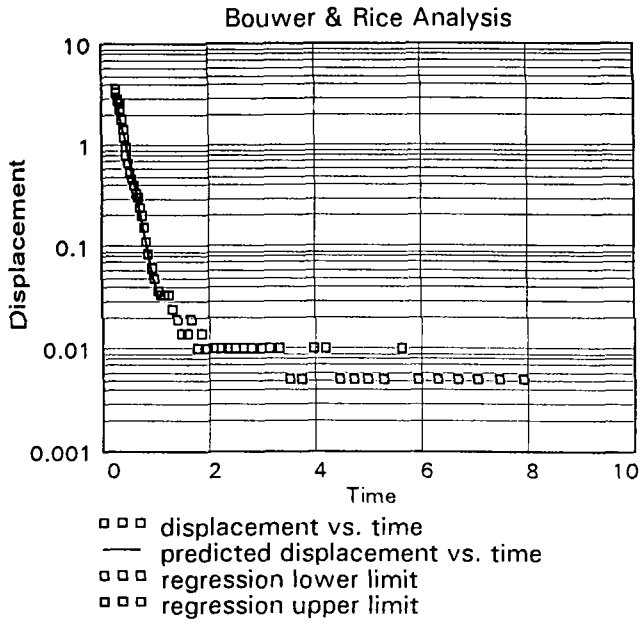
7. Plot of measured displacement vs. time on log-normal graph.

Vary $n_l$ and $n_u$ to find the best-fit line.

Full Screen View

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 4.32 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 1.83 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.9909$

Values of displacement and time values at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.28 \cdot min$ | $t_{n\,2} = 1.04 \cdot min$ |
| displacement range | $logy_{n\,1} = 1.18$ | $logy_{n\,2} = -3.3$ |

number of data points in regression analysis to determine best-fit line. $nn = 24$

slope of best-fit line $b_1 = -5.99 \cdot min^{-1}$

intercept of best-fit line $b_0 = 2.74$

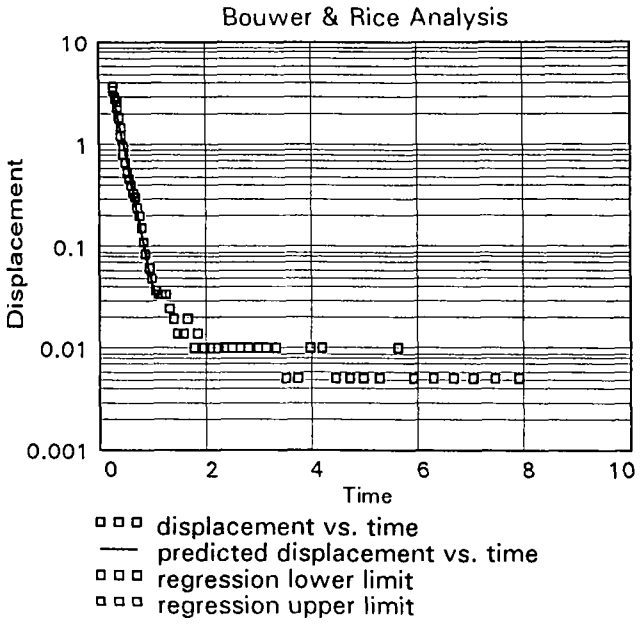
predicted initial displacement $hp = 15.53 \cdot ft$

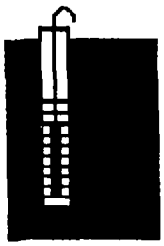
Hvorslev's lag time factor, $T_o$ $T_0 = 0.17 \cdot min$

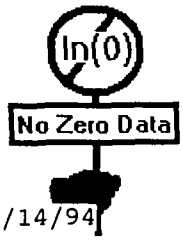
SUMMARY SHEET for Bouwer and Rice Slug Test Analysis.

| | |
|---|---|
| Name of data file | Bouwer1.prn |
| Number of data points in file | $n = 60$ |
| Units of displacement | $L1 = 1 \cdot ft$ |
| Units of time | $T1 = 1 \cdot min$ |
| Length of screen | $L = 10 \cdot ft$ |
| Piezometer radius | $r_c = 1 \cdot in$ |
| Gravel pack radius | $r_w = 1 \cdot in$ |
| Slug length | $\lambda = 3.6 \cdot ft$ |
| Slug diameter | $\delta = 0.17 \cdot ft$ |
| Value of $L/r_w$ | $F = 120.48$ |
| Distance from water table to bottom of screen | $H = 18 \cdot ft$ |
| Aquifer thickness (screened interval) | $b = 10 \cdot ft$ |
| Initial water level neglecting the effect of the gravel pack | $hp = 15.53 \cdot ft$ |
| Value of A coefficient | $Ax(F) = 4.84$ |
| Value of B coefficient | $Bx(F) = 0.89$ |
| Value of C coefficient | $Cx(F) = 4.61$ |
| Value of $\ln(R_e/r_w)$ | $Rerw = 4.12$ |
| Theoretical displacement height | $\Phi = 3.63 \cdot ft$ |
| Hydraulic conductivity estimate | $K = 4.32 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Hvorslev's lag time factor, $T_o$ | $T_o = 0.17 \cdot T1$ |
| Value of $y_t$ | $y_t = 0.04 \cdot ft$ |
| Value of $t_2$ | $t_2 = 1.04 \cdot min$ |
| Squared sum of errors | $SS_e = 1.83 \cdot 10^{-2}$ |
| Correlation coefficient | $R2 = 0.9909$ |
| Student's t-statistic on $R^2$ | $tR2 = 49.06$ |
| Criterion value for t-statistic at $\alpha = 0.05$ | $tn(nn) = 2.49$ |
| Lower limit of regression | $n_l = 2$ |
| Upper limit of regression | $n_u = 25$ |
| Number of data points in regression | $nn = 24$ |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis, continued.



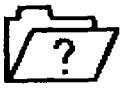





HVORSLEV.pwb11-1

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parentheses READPRN(pwb112)




number of data points n =30

2. Assign column numbers in which time and displacement data occur in the data fil

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

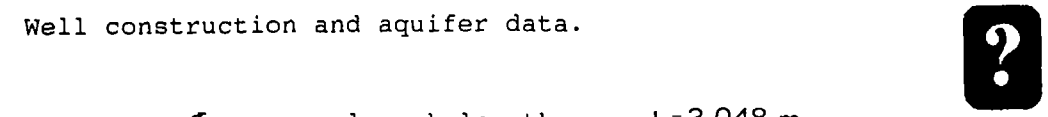
units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot ft$

4. Assign SGN = -1 for negative water level data (e.g. falling water level test an SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.



| | |
|---|---|
| gravel pack length | $L \equiv 3.048 \cdot m$ |
| piezometer radius | $r_c \equiv 2.5 \cdot cm$ |
| gravel pack radius | $r_w \equiv 2.5 \cdot cm$ |
| slug length | $\lambda \equiv 3.5 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Estimate of ratio of horizontal to vertical hydraulic conductivity.

$K_{ratio} \equiv 1$

7. Shape factor. Assign number of case to X. Only cases 2 and 4 allow for vertical/horizontal anisotropy.

$X \equiv 2$

Unconfined aquifer:

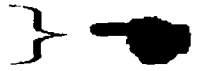
1. cased boring, bottom flush with casing.
2. cased boring or well with screen length L.

Confined aquifer:

3. screen length/saturated thickness < 0.2.
4. 0.2 <= screen length/saturated thickness <= 0.85.
5. cased boring, bottom flush with casing.

8. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$



user-specified x-axis lower limit $G1XLu \equiv 0.0$

user-specified x-axis upper limit $G1XUu \equiv 2000$

user-specified y-axis lower limit $G1YLu \equiv 0.01$

user-specified y-axis upper limit $G1YUu \equiv 1.0$

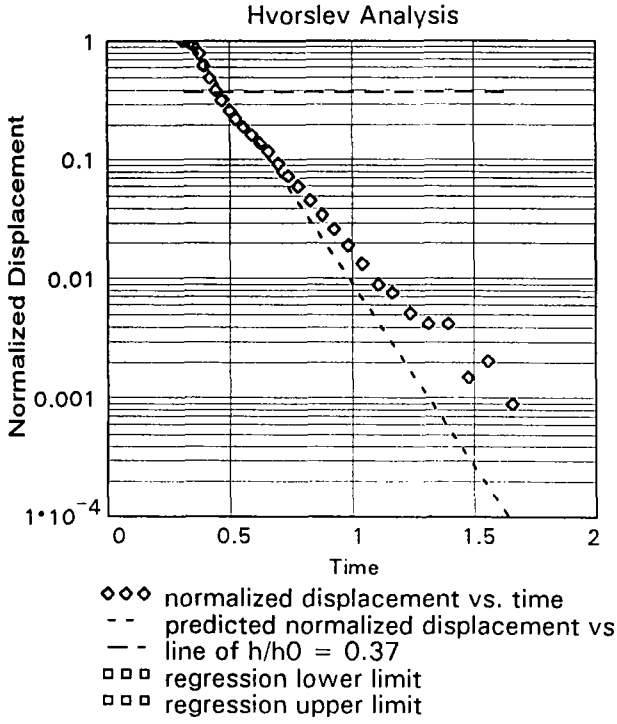
9. Plot of measured normalized
displacement vs. time on log-normal graph.

Full Screen View

Vary $n_l$ and $n_u$ to find the best-fit line.

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 5$




hydraulic conductivity

$K = 5.80 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 2.81 \cdot 10^{-3}$

correlation coefficient

$R2 = 0.9516$

Values of displacement and time at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.33 \cdot min$ | $t_{n\,2} = 0.4 \cdot min$ |
| displacement range | $(s_{n\,1}) = 0.97$ | $(s_{n\,2}) = 0.62$ |

number of data points in regression analysis to determine best-fit line. $nn = 4$

slope of best-fit line $b_1 = -7.07 \cdot min^{-1}$

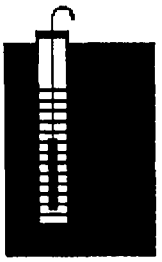
intercept of best-fit line $b_0 = 2.36$

predicted initial displacement $hp = 35.82 \cdot ft$

Hvorslev's lag time factor, $T_o$ $T_0 = 0.14 \cdot min$

SUMMARY SHEET for Hvorslev Slug Test Analysis.

| | |
|---|---|
| Name of data file | Hvorslev.prn |
| Number of data points in file | $n = 30$ |
| Units of displacement | $L1 = 0 \cdot m$ |
| Units of time | $T1 = 1 \cdot min$ |
| Piezometer radius | $r_c = 2.5 \cdot cm$ |
| Gravel pack radius | $r_w = 2.5 \cdot cm$ |
| Gravel pack length | $L = 3.05 \cdot m$ |
| Slug length | $\lambda = 1.07 \cdot m$ |
| Slug diameter | $\delta = 5.08 \cdot cm$ |
| Theoretical displacement height | $\Phi = 1.1 \cdot m$ |
| Ratio of horizontal to vertical hydraulic conductivity | $K_{ratio} = 1$ |
| Predicted displacement height | $hp = 10.92 \cdot m$ |
| Hydraulic conductivity estimate | $K = 5.80 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Value of Hvorslev's time lag factor | $T_o = 0.14 \cdot min$ |
| Squared sum of errors | $SS_e = 2.81 \cdot 10^{-3}$ |
| Correlation coefficient | $R2 = 0.9516$ |
| Lower regression limit | $n_l = 2$ |
| Upper regression limit | $n_u = 5$ |
| Number of data points in regression | $nn = 4$ |



BOUWER.pwb11-2

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parentheses M≡READPRN(pwb112)

number of data points n =41

2. Assign column numbers in which time and displacement data occur in the data file

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

units of time T1 ≡ 1·min

units of displacement L1 ≡ 1·ft

4. Assign SGN = -1 for negative water level data (e.g., falling water level test and SGN = 1 for positive data (e.g., rising water level test).

SGN ≡ 1

5. Well construction and aquifer data.

| | |
|---|---|
| gravel pack length | L ≡ 10·ft |
| piezometer radius | $r_c$ ≡ 0.083·ft |
| gravel pack radius | $r_w$ ≡ .083·ft |
| distance from water table to bottom of screen | H ≡ 18·ft |
| aquifer thickness (screened interval) | b ≡ 10·ft |
| slug length | λ ≡ 3.5·ft |
| slug diameter | δ ≡ 2·in |

6. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

Lim ≡ 1

user-specified x-axis lower limit XLu ≡ 0.0

user-specified x-axis upper limit XUu ≡ 50.0

user-specified y-axis lower limit YLu ≡ 0.01

user-specified y-axis upper limit YUu ≡ 10.0

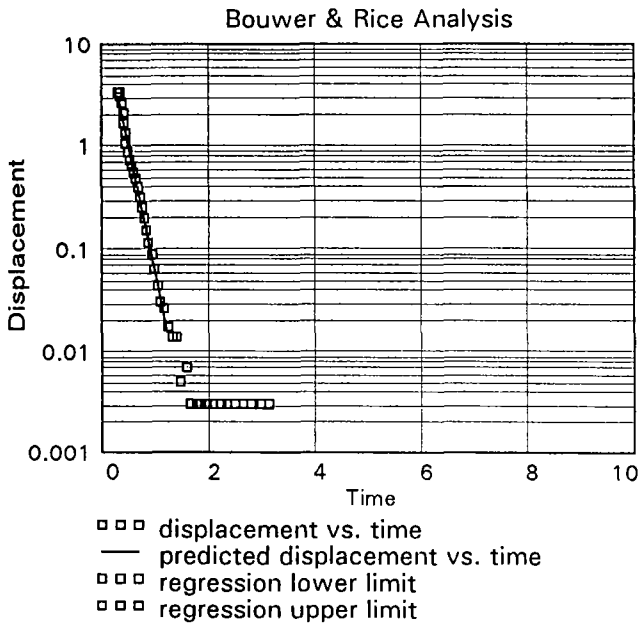
7. Plot of measured displacement vs. time on log-normal graph.

Vary $n_l$ and $n_u$ to find the best-fit line.

Full Screen View

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 4.15 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 1.69 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.9936$

Values of displacement and time values at regression range endpoints.

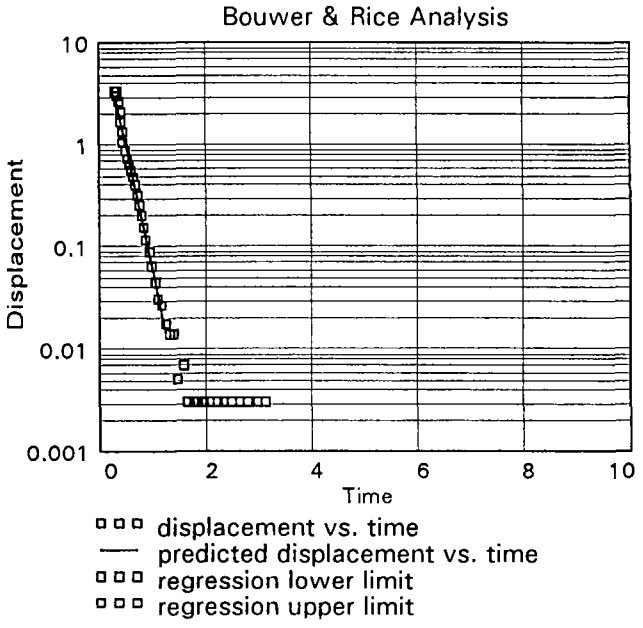
| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.33 \cdot min$ | $t_{n\,2} = 1.24 \cdot min$ |
| displacement range | $logy_{n\,1} = 1.18$ | $logy_{n\,2} = -4.07$ |

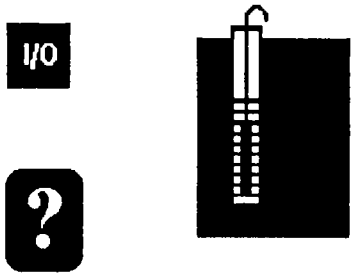
| | |
|---|---|
| number of data points in regression analysis to determine best-fit line. | $nn = 24$ |
| slope of best-fit line | $b_1 = -5.75 \cdot min^{-1}$ |
| intercept of best-fit line | $b_0 = 2.89$ |
| predicted initial displacement | $hp = 18.06 \cdot ft$ |
| Hvorslev's lag time factor, $T_o$ | $T_o = 0.17 \cdot min$ |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis.

| | |
|---|---|
| Name of data file | Bouwer1.prn |
| Number of data points in file | n =41 |
| Units of displacement | L1 =1·ft |
| Units of time | T1 =1·min |
| Length of screen | L =10·ft |
| Piezometer radius | $r_c$ =1·in |
| Gravel pack radius | $r_w$ =1·in |
| Slug length | λ =3.5·ft |
| Slug diameter | δ =0.17·ft |
| Value of $L/r_w$ | F =120.48 |
| Distance from water table to bottom of screen | H =18·ft |
| Aquifer thickness (screened interval) | b =10·ft |
| Initial water level neglecting the effect of the gravel pack | hp =18.06·ft |
| Value of A coefficient | Ax(F) =4.84 |
| Value of B coefficient | Bx(F) =0.89 |
| Value of C coefficient | Cx(F) =4.61 |
| Value of $\ln(R_e/r_w)$ | Rerw =4.12 |
| Theoretical displacement height | Φ =3.53·ft |
| Hydraulic conductivity estimate | $K = 4.15 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Hvorslev's lag time factor, $T_o$ | $T_o$ =0.17·T1 |
| Value of $y_t$ | $y_t$ =0.02·ft |
| Value of $t_2$ | $t_2$ =1.24·min |
| Squared sum of errors | $SS_e = 1.69 \cdot 10^{-2}$ |
| Correlation coefficient | R2 =0.9936 |
| Student's t-statistic on $R^2$ | tR2 =58.38 |
| Criterion value for t-statistic at α = 0.05 | tn(5%,nn) =2.49 |
| Lower limit of regression | $n_l$ =2 |
| Upper limit of regression | $n_u$ =25 |
| Number of data points in regression | nn =24 |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis, continued.






HVORSLEV.pwb11-2

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parentheses READPRN(pwb112)

number of data points $n = 41$

2. Assign column numbers in which time and displacement data occur in the data fil

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot m$

4. Assign SGN = -1 for negative water level data (e.g. falling water level test an
SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.

| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv 2.5 \cdot cm$ |
| gravel pack radius | $r_w \equiv 2.5 \cdot cm$ |
| slug length | $\lambda \equiv 3.5 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Estimate of ratio of horizontal to vertical hydraulic conductivity.

$K_{ratio} \equiv 1$

7. Shape factor. Assign number of case to X. Only cases 2 and 4 allow for vertical/horizontal anisotropy.

$X \equiv 2$

Unconfined aquifer:

1. cased boring, bottom flush with casing.
2. cased boring or well with screen length L.

Confined aquifer:

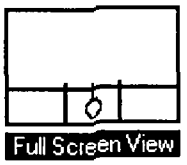
3. screen length/saturated thickness < 0.2.
4. 0.2 <= screen length/saturated thickness <= 0.85.
5. cased boring, bottom flush with casing.

8. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$

user-specified x-axis lower limit $G1XLu \equiv 0.0$
user-specified x-axis upper limit $G1XUu \equiv 2000$
user-specified y-axis lower limit $G1YLu \equiv 0.01$
user-specified y-axis upper limit $G1YUu \equiv 1.0$

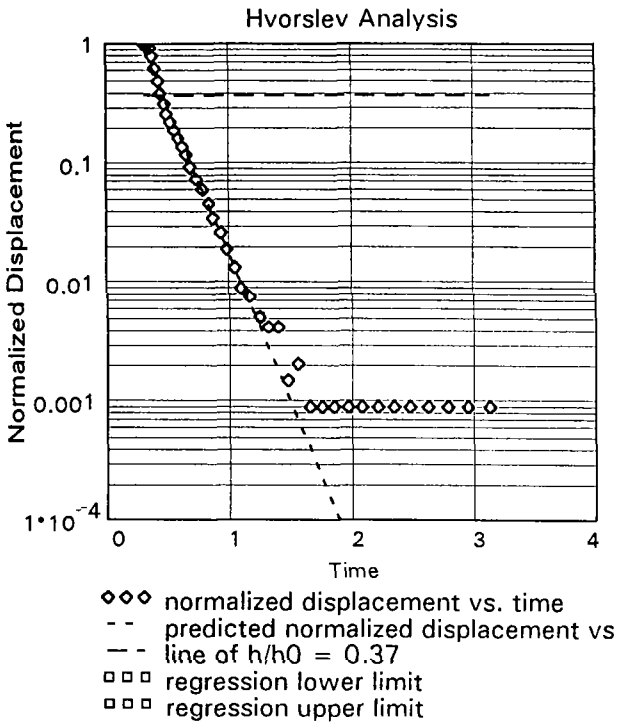
9. Plot of measured normalized displacement vs. time on log-normal graph.




Vary $n_l$ and $n_u$ to find the best-fit line.

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 4.72 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 1.69 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.9936$

Values of displacement and time at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.33 \cdot min$ | $t_{n\,2} = 1.24 \cdot min$ |
| displacement range | $(s_{n\,1}) = 0.97$ | $(s_{n\,2}) = 0.01$ |

number of data points in regression analysis to determine best-fit line. $nn = 24$

slope of best-fit line $b_1 = -5.75 \cdot min^{-1}$

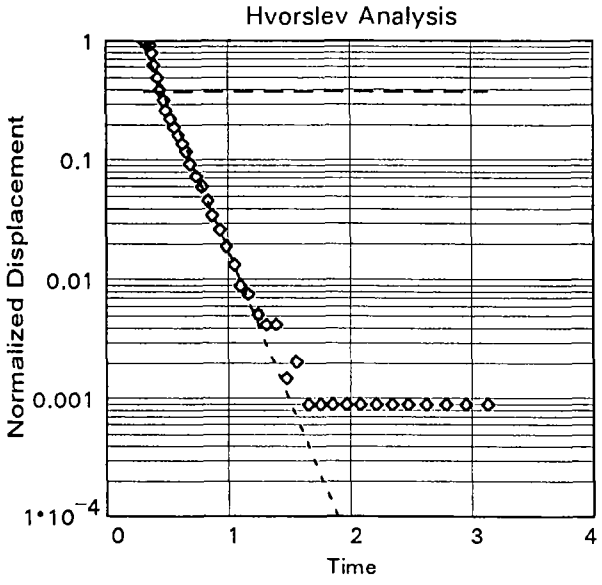
intercept of best-fit line $b_0 = 1.68$

predicted initial displacement $hp = 59.25 \cdot ft$

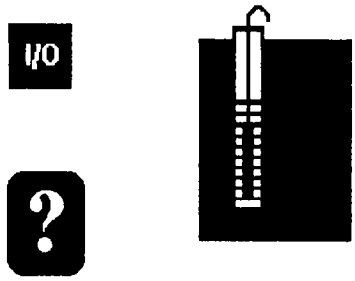
Hvorslev's lag time factor, $T_o$ $T_o = 0.17 \cdot min$

SUMMARY SHEET for Hvorslev Slug Test Analysis.

| | |
|---|---|
| Name of data file | Hvorslev.prn |
| Number of data points in file | $n = 41$ |
| Units of displacement | $L1 = 1 \cdot m$ |
| Units of time | $T1 = 1 \cdot min$ |
| Piezometer radius | $r_c = 2.5 \cdot cm$ |
| Gravel pack radius | $r_w = 2.5 \cdot cm$ |
| Gravel pack length | $L = 3.05 \cdot m$ |
| Slug length | $\lambda = 1.07 \cdot m$ |
| Slug diameter | $\delta = 5.08 \cdot cm$ |
| Theoretical displacement height | $\Phi = 1.1 \cdot m$ |
| Ratio of horizontal to vertical hydraulic conductivity | $K_{ratio} = 1$ |
| Predicted displacement height | $hp = 18.06 \cdot m$ |
| Hydraulic conductivity estimate | $K = 4.72 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Value of Hvorslev's time lag factor | $T_0 = 0.17 \cdot min$ |
| Squared sum of errors | $SS_e = 1.69 \cdot 10^{-2}$ |
| Correlation coefficient | $R2 = 0.9936$ |
| Lower regression limit | $n_l = 2$ |
| Upper regression limit | $n_u = 25$ |
| Number of data points in regression | $nn = 24$ |




◇◇◇ normalized displacement vs. time
- - predicted normalized displacement vs. time
— - line of h/h0 = 0.37
□□□ regression lower limit
□□□ regression upper limit




HVORSLEV.pwb11-3

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parentheses READPRN(pwb113)

number of data points $n = 46$

2. Assign column numbers in which time and displacement data occur in the data fil

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

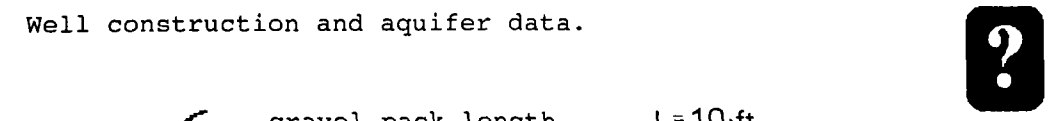
units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot m$

4. Assign SGN = -1 for negative water level data (e.g. falling water level test an
SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.



| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv 2.5 \cdot cm$ |
| gravel pack radius | $r_w \equiv 2.5 \cdot cm$ |
| slug length | $\lambda \equiv 4.3 \cdot m$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Estimate of ratio of horizontal to vertical hydraulic conductivity.

$K_{ratio} \equiv 1$

7. Shape factor. Assign number of case to X. Only cases 2 and 4 allow for vertical/horizontal anisotropy.

Unconfined aquifer:

1. cased boring, bottom flush with casing.
2. cased boring or well with screen length L.

$X \equiv 2$

Confined aquifer:

3. screen length/saturated thickness < 0.2.
4. 0.2 <= screen length/saturated thickness <= 0.85.
5. cased boring, bottom flush with casing.

8. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$

user-specified x-axis lower limit $G1XLu \equiv 0.0$
user-specified x-axis upper limit $G1XUu \equiv 2000$
user-specified y-axis lower limit $G1YLu \equiv 0.01$
user-specified y-axis upper limit $G1YUu \equiv 1.0$

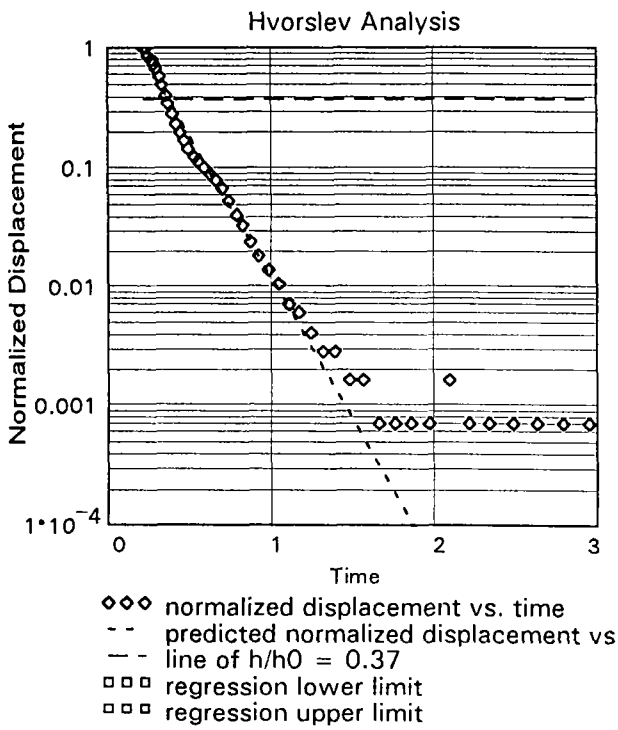
9. Plot of measured normalized displacement vs. time on log-normal graph.

Full Screen View

Vary $n_l$ and $n_u$ to find the best-fit line.

lower limit of regression $n_l = 2$

upper limit of regression $n_u = 29$




hydraulic conductivity

$K = 4.52 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 2.39 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.9889$

Values of displacement and time at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.24 \cdot min$ | $t_{n\,2} = 1.1 \cdot min$ |
| displacement range | $(s_{n\,1}) = 0.99$ | $(s_{n\,2}) = 0.01$ |

number of data points in regression analysis to determine best-fit line. $nn = 28$

slope of best-fit line $b_1 = -5.51 \cdot min^{-1}$

intercept of best-fit line $b_0 = 1.05$

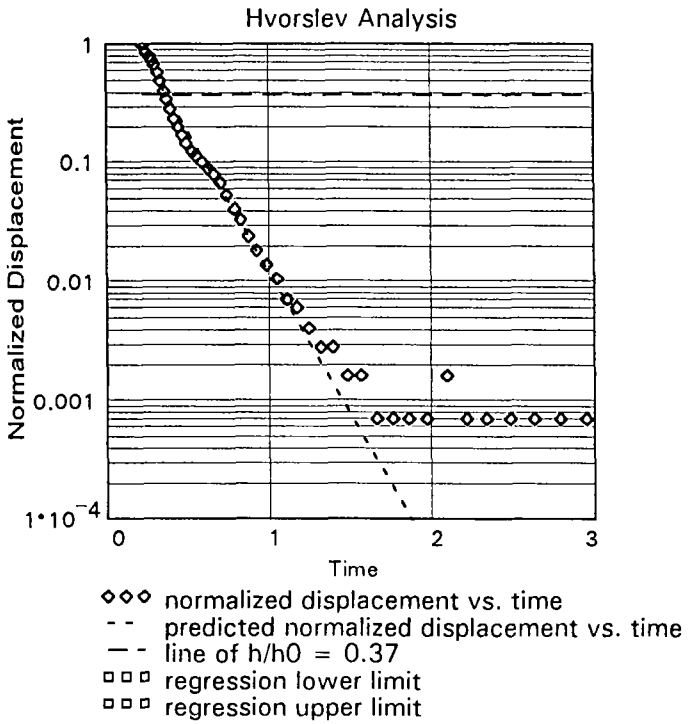
predicted initial displacement $hp = 40.3 \cdot ft$

Hvorslev's lag time factor, $T_o$ $T_0 = 0.18 \cdot min$

SUMMARY SHEET for Hvorslev Slug Test Analysis.

| | |
|---|---|
| Name of data file | Hvorslev.prn |
| Number of data points in file | $n = 46$ |
| Units of displacement | $L1 = 1 \cdot m$ |
| Units of time | $T1 = 1 \cdot min$ |
| Piezometer radius | $r_c = 2.5 \cdot cm$ |
| Gravel pack radius | $r_w = 2.5 \cdot cm$ |
| Gravel pack length | $L = 3.05 \cdot m$ |
| Slug length | $\lambda = 4.3 \cdot m$ |
| Slug diameter | $\delta = 5.08 \cdot cm$ |
| Theoretical displacement height | $\Phi = 4.44 \cdot m$ |
| Ratio of horizontal to vertical hydraulic conductivity | $K_{ratio} = 1$ |
| Predicted displacement height | $hp = 12.28 \cdot m$ |
| Hydraulic conductivity estimate | $K = 4.52 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Value of Hvorslev's time lag factor | $T_o = 0.18 \cdot min$ |
| Squared sum of errors | $SS_e = 2.39 \cdot 10^{-2}$ |
| Correlation coefficient | $R2 = 0.9889$ |
| Lower regression limit | $n_l = 2$ |
| Upper regression limit | $n_u = 29$ |
| Number of data points in regression | $nn = 28$ |

SUMMARY SHEET for Hvorslev Slug Test Analysis, continued.



BOUWER. pwb11-3

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parentMesREADPRN(pwb113)

number of data points n =43

2. Assign column numbers in which time and displacement data occur in the data file

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

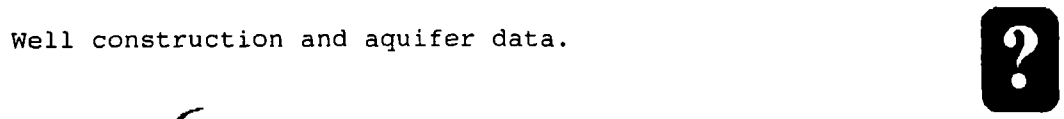
units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot ft$

4. Assign SGN = -1 for negative water level data (e.g., falling water level test and SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.



| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv 0.083 \cdot ft$ |
| gravel pack radius | $r_w \equiv .083 \cdot ft$ |
| distance from water table to bottom of screen | $H \equiv 20 \cdot ft$ |
| aquifer thickness (screened interval) | $b \equiv 10 \cdot ft$ |
| slug length | $\lambda \equiv 2 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$

| | |
|---|---|
| user-specified x-axis lower limit | $XLu \equiv 0.0$ |
| user-specified x-axis upper limit | $XUu \equiv 50.0$ |
| user-specified y-axis lower limit | $YLu \equiv 0.01$ |
| user-specified y-axis upper limit | $YUu \equiv 10.0$ |

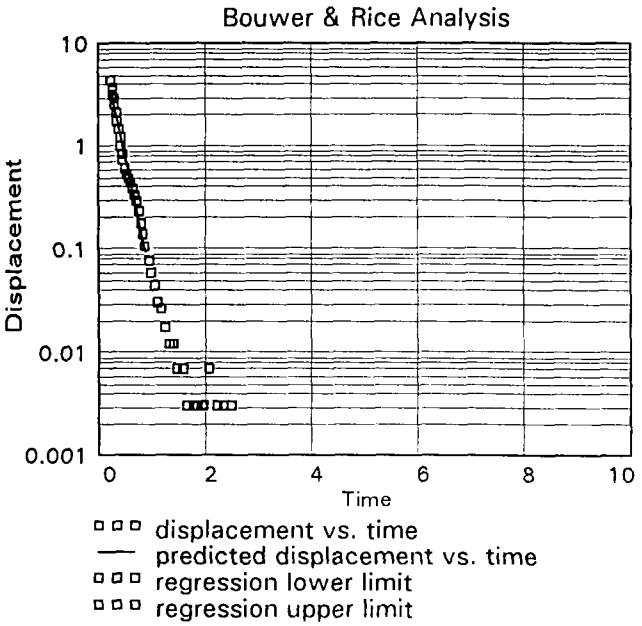
7. Plot of measured displacement vs. time on log-normal graph.

Vary $n_l$ and $n_u$ to find the best-fit line.

Full Screen View

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 4.15 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 2.63 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.9797$

Values of displacement and time values at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.24 \cdot min$ | $t_{n\,2} = 0.88 \cdot min$ |
| displacement range | $logy_{n\,1} = 1.45$ | $logy_{n\,2} = -2.26$ |

number of data points in regression analysis to determine best-fit line. $nn = 24$

slope of best-fit line $b_1 = -5.66 \cdot min^{-1}$

intercept of best-fit line $b_0 = 2.57$

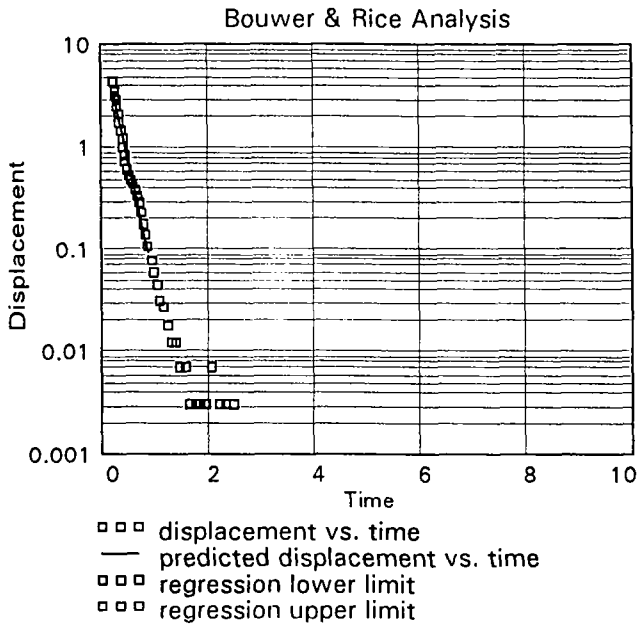
predicted initial displacement $hp = 13.13 \cdot ft$

Hvorslev's lag time factor, $T_o$ $T_o = 0.18 \cdot min$

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis.

| | |
|---|---|
| Name of data file | Bouwer1.prn |
| Number of data points in file | n =43 |
| Units of displacement | L1 =1·ft |
| Units of time | T1 =1·min |
| Length of screen | L =10·ft |
| Piezometer radius | $r_c$ =1·in |
| Gravel pack radius | $r_w$ =1·in |
| Slug length | λ =2·ft |
| Slug diameter | δ =0.17·ft |
| Value of $L/r_w$ | F =120.48 |
| Distance from water table to bottom of screen | H =20·ft |
| Aquifer thickness (screened interval) | b =10·ft |
| Initial water level neglecting the effect of the gravel pack | hp =13.13·ft |
| Value of A coefficient | Ax(F) =4.84 |
| Value of B coefficient | Bx(F) =0.89 |
| Value of C coefficient | Cx(F) =4.61 |
| Value of $\ln(R_e/r_w)$ | Rerw =4.19 |
| Theoretical displacement height | Φ =2.02·ft |
| Hydraulic conductivity estimate | $K = 4.15 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Hvorslev's lag time factor, $T_o$ | $T_o$ =0.18·T1 |
| Value of $y_t$ | $y_t$ =0.1·ft |
| Value of $t_2$ | $t_2$ =0.88·min |
| Squared sum of errors | $SS_e = 2.63 \cdot 10^{-2}$ |
| Correlation coefficient | R2 =0.9797 |
| Student's t-statistic on $R^2$ | tR2 =32.6 |
| Criterion value for t-statistic at α = 0.05 | tn(nn) =2.49 |
| Lower limit of regression | $n_l$ =2 |
| Upper limit of regression | $n_u$ =25 |
| Number of data points in regression | nn =24 |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis, continued.



BOUWER.pwb21-3

Date last modified: 10/14/94

1. Read in data file,
Supply file name in parentheses READPRN(pwb213)

number of data points $n = 41$

2. Assign column numbers in which time and displacement data occur in the data file

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

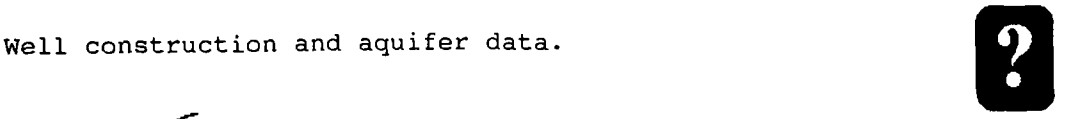
units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot ft$

4. Assign SGN = -1 for negative water level data (e.g., falling water level test and SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.



| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv 0.083 \cdot ft$ |
| gravel pack radius | $r_w \equiv .083 \cdot ft$ |
| distance from water table to bottom of screen | $H \equiv 18 \cdot ft$ |
| aquifer thickness (screened interval) | $b \equiv 10 \cdot ft$ |
| slug length | $\lambda \equiv 4.7 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$

| | |
|---|---|
| user-specified x-axis lower limit | $XLu \equiv 0.0$ |
| user-specified x-axis upper limit | $XUu \equiv 50.0$ |
| user-specified y-axis lower limit | $YLu \equiv 0.01$ |
| user-specified y-axis upper limit | $YUu \equiv 10.0$ |

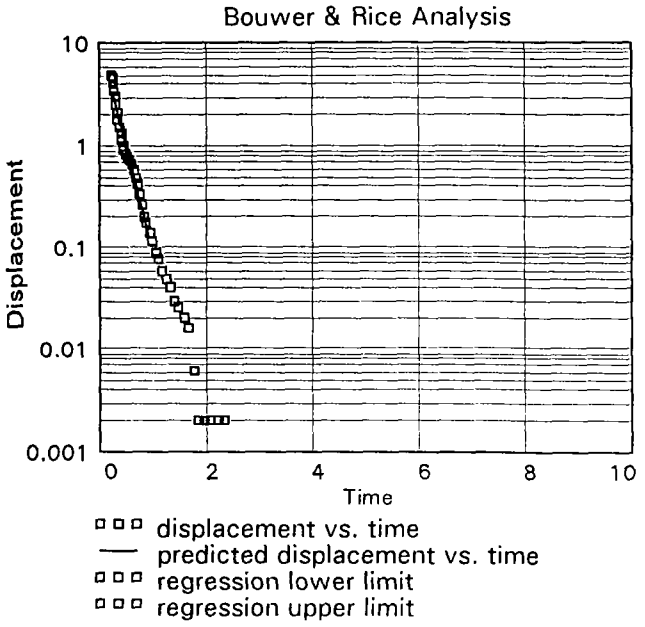
7. Plot of measured displacement vs. time on log-normal graph.

Vary $n_l$ and $n_u$ to find the best-fit line.

Full Screen View

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 3.48 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 2.53 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.9762$

Values of displacement and time values at regression range endpoints.

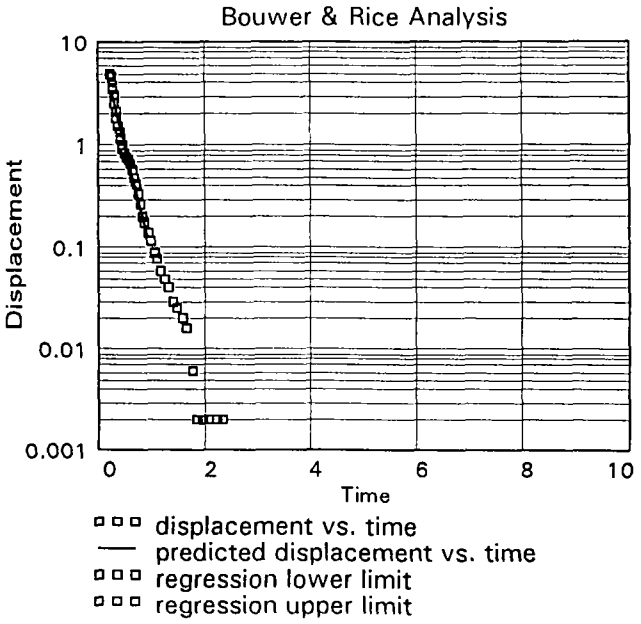
| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.25 \cdot min$ | $t_{n\,2} = 0.93 \cdot min$ |
| displacement range | $logy_{n\,1} = 1.51$ | $logy_{n\,2} = -2$ |

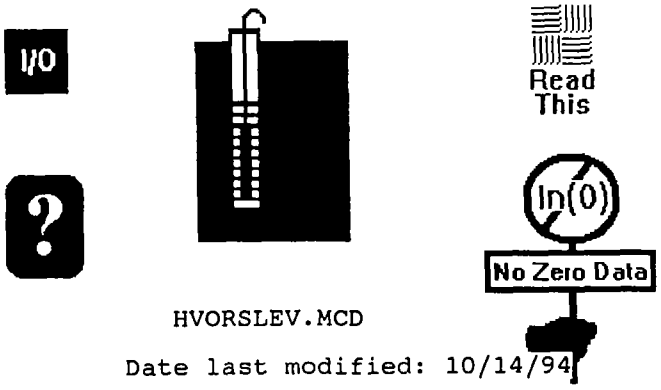
| | |
|---|---|
| number of data points in regression analysis to determine best-fit line. | $nn = 24$ |
| slope of best-fit line | $b_1 = -4.83 \cdot min^{-1}$ |
| intercept of best-fit line | $b_0 = 2.39$ |
| predicted initial displacement | $hp = 10.94 \cdot ft$ |
| Hvorslev's lag time factor, $T_o$ | $T_o = 0.21 \cdot min$ |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis.

| | |
|---|---|
| Name of data file | Bouwer1.prn |
| Number of data points in file | n =41 |
| Units of displacement | L1 =1 ·ft |
| Units of time | T1 =1 ·min |
| Length of screen | L =10 ·ft |
| Piezometer radius | $r_c$ =1 ·in |
| Gravel pack radius | $r_w$ =1 ·in |
| Slug length | λ =4.7 ·ft |
| Slug diameter | δ =0.17 ·ft |
| Value of $L/r_w$ | F =120.48 |
| Distance from water table to bottom of screen | H =18 ·ft |
| Aquifer thickness (screened interval) | b =10 ·ft |
| Initial water level neglecting the effect of the gravel pack | hp =10.94 ·ft |
| Value of A coefficient | Ax(F) =4.84 |
| Value of B coefficient | Bx(F) =0.89 |
| Value of C coefficient | Cx(F) =4.61 |
| Value of $\ln(R_e/r_w)$ | Rerw =4.12 |
| Theoretical displacement height | Φ =4.74 ·ft |
| Hydraulic conductivity estimate | $K = 3.48 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Hvorslev's lag time factor, $T_o$ | $T_o$ =0.21 ·T1 |
| Value of $y_t$ | $y_t$ =0.14 ·ft |
| Value of $t_2$ | $t_2$ =0.93 ·min |
| Squared sum of errors | $3 \cdot 10^{-2}$ |
| Correlation coefficient | 32 |
| Student's t-statistic on $R^2$ | =30.01 |
| Criterion value for t-st | = 0.05,nn) =2.49 |
| Lower limit of regression | $n_l$ =2 |
| Upper limit of regression | $n_u$ =25 |
| Number of data points in regression | nn =24 |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis, continued.






HVORSLEV.MCD

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parentheses READPRN(pwb213)

number of data points $n = 41$

2. Assign column numbers in which time and displacement data occur in the data fil

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

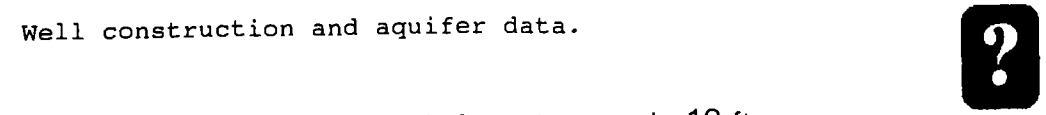
units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot m$

4. Assign SGN = -1 for negative water level data (e.g. falling water level test an SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.



| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv .083 \cdot ft$ |
| gravel pack radius | $r_w \equiv .083 \cdot ft$ |
| slug length | $\lambda \equiv 4.7 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Estimate of ratio of horizontal to vertical hydraulic conductivity.

$K_{ratio} \equiv 1$

7. Shape factor. Assign number of case to X. Only cases 2 and 4 allow for vertical/horizontal anisotropy.

Unconfined aquifer:

1. cased boring, bottom flush with casing.
2. cased boring or well with screen length L.

$X \equiv 2$

Confined aquifer:

3. screen length/saturated thickness < 0.2.
4. 0.2 <= screen length/saturated thickness <= 0.85.
5. cased boring, bottom flush with casing.

8. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$

user-specified x-axis lower limit $G1XLu \equiv 0.0$
user-specified x-axis upper limit $G1XUu \equiv 2000$
user-specified y-axis lower limit $G1YLu \equiv 0.01$
user-specified y-axis upper limit $G1YUu \equiv 1.0$

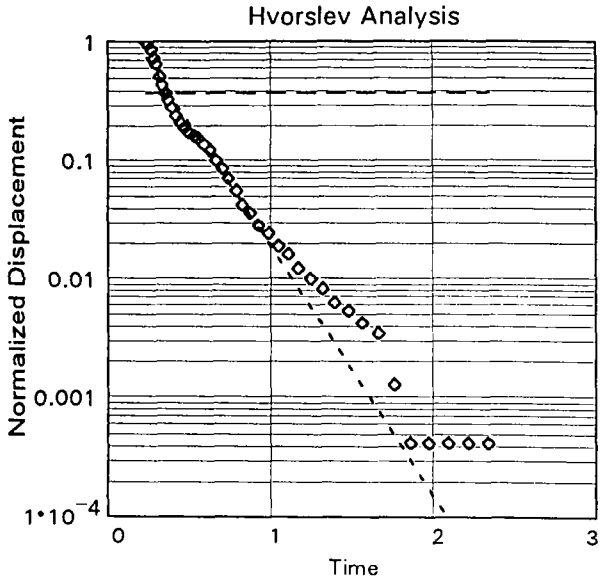
9. Plot of measured normalized displacement vs. time on log-normal graph.

Full Screen View

Vary $n_l$ and $n_u$ to find the best-fit line.

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 4.05 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 2.53 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.9762$

Values of displacement and time at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.25 \cdot min$ | $t_{n\,2} = 0.93 \cdot min$ |
| displacement range | $(s_{n\,1}) = 0.95$ | $(s_{n\,2}) = 0.03$ |

number of data points in regression analysis to determine best-fit line. $nn = 24$

slope of best-fit line $b_1 = -4.83 \cdot min^{-1}$

intercept of best-fit line $b_0 = 8.32 \cdot 10^{-1}$

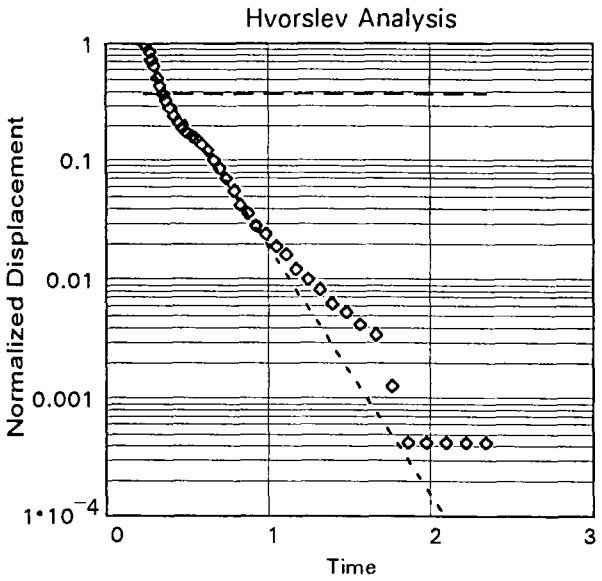
predicted initial displacement $hp = 35.88 \cdot ft$

Hvorslev's lag time factor, $T_o$ $T_o = 0.21 \cdot min$

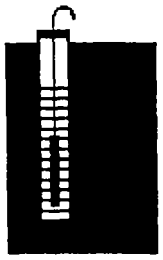
SUMMARY SHEET for Hvorslev Slug Test Analysis.

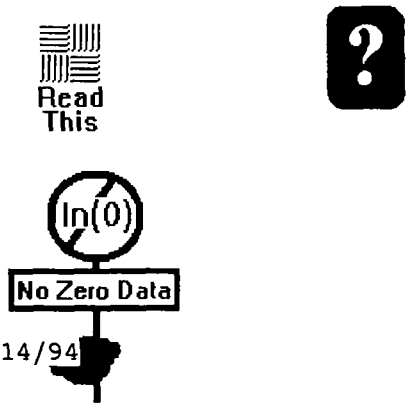
| | |
|---|---|
| Name of data file | Hvorslev.prn |
| Number of data points in file | $n = 41$ |
| Units of displacement | $L1 = 1 \cdot m$ |
| Units of time | $T1 = 1 \cdot min$ |
| Piezometer radius | $r_c = 2.53 \cdot cm$ |
| Gravel pack radius | $r_w = 2.53 \cdot cm$ |
| Gravel pack length | $L = 3.05 \cdot m$ |
| Slug length | $\lambda = 1.43 \cdot m$ |
| Slug diameter | $\delta = 5.08 \cdot cm$ |
| Theoretical displacement height | $\Phi = 1.44 \cdot m$ |
| Ratio of horizontal to vertical hydraulic conductivity | $K_{ratio} = 1$ |
| Predicted displacement height | $hp = 10.94 \cdot m$ |
| Hydraulic conductivity estimate | $K = 4.05 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Value of Hvorslev's time lag factor | $T_o = 0.21 \cdot min$ |
| Squared sum of errors | $SS_e = 2.53 \cdot 10^{-2}$ |
| Correlation coefficient | $R2 = 0.9762$ |
| Lower regression limit | $n_l = 2$ |
| Upper regression limit | $n_u = 25$ |
| Number of data points in regression | $nn = 24$ |

SUMMARY SHEET for Hvorslev Slug Test Analysis, continued.




◇◇◇ normalized displacement vs. time
- - predicted normalized displacement vs. time
— - line of h/h0 = 0.37
□□□ regression lower limit
□□□ regression upper limit

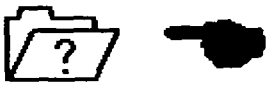





BOUWER.pwb3-3

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parent Mes READPRN(pwb33)




number of data points $n = 54$

2. Assign column numbers in which time and displacement data occur in the data file

time column $Col_t \equiv 1$

displacement column $Col_h \equiv 2$

3. Assign measurement units to time and displacement as T1 and L1, respectively.

units of time $T1 \equiv 1 \cdot min$

units of displacement $L1 \equiv 1 \cdot ft$

4. Assign SGN = -1 for negative water level data (e.g., falling water level test and SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.

| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv 0.083 \cdot ft$ |
| gravel pack radius | $r_w \equiv .083 \cdot ft$ |
| distance from water table to bottom of screen | $H \equiv 18 \cdot ft$ |
| aquifer thickness (screened interval) | $b \equiv 10 \cdot ft$ |
| slug length | $\lambda \equiv 4.7 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

$Lim \equiv 1$

| | |
|---|---|
| user-specified x-axis lower limit | $XLu \equiv 0.0$ |
| user-specified x-axis upper limit | $XUu \equiv 50.0$ |
| user-specified y-axis lower limit | $YLu \equiv 0.01$ |
| user-specified y-axis upper limit | $YUu \equiv 10.0$ |

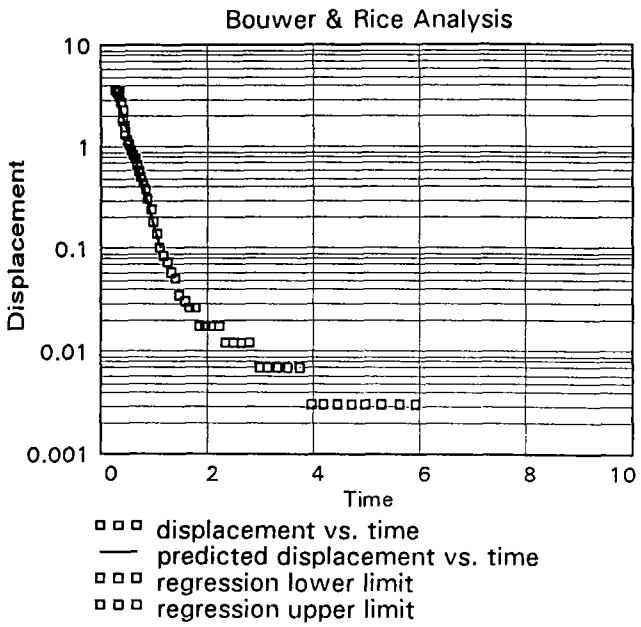
7. Plot of measured displacement vs. time on log-normal graph.

Vary $n_l$ and $n_u$ to find the best-fit line.

Full Screen View

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 3.11 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 1.53 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.987$

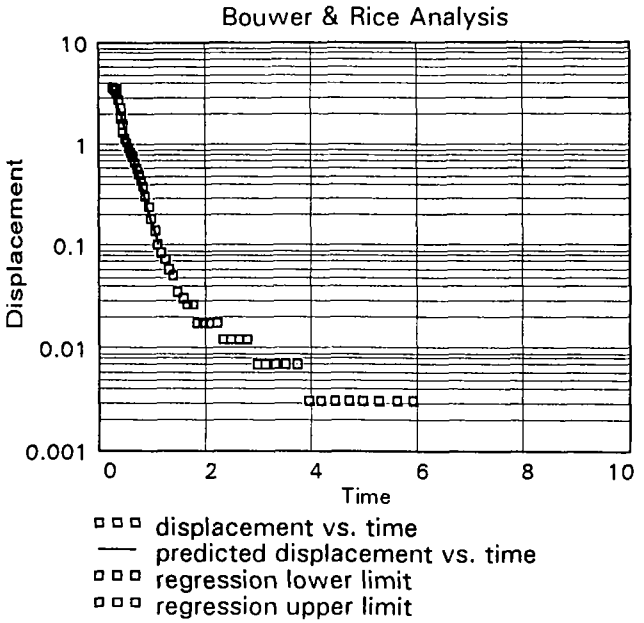
Values of displacement and time values at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.3 \cdot min$ | $t_{n\,2} = 1.1 \cdot min$ |
| displacement range | $logy_{n\,1} = 1.27$ | $logy_{n\,2} = -2.28$ |
| number of data points in regression analysis to determine best-fit line. | | $nn = 24$ |
| slope of best-fit line | | $b_1 = -4.31 \cdot min^{-1}$ |
| intercept of best-fit line | | $b_0 = 2.48$ |
| predicted initial displacement | | $hp = 11.96 \cdot ft$ |
| Hvorslev's lag time factor, $T_o$ | | $T_o = 0.23 \cdot min$ |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis.

| | |
|---|---|
| Name of data file | Bouwer1.prn |
| Number of data points in file | n =54 |
| Units of displacement | L1 =1·ft |
| Units of time | T1 =1·min |
| Length of screen | L =10·ft |
| Piezometer radius | $r_c$ =1·in |
| Gravel pack radius | $r_w$ =1·in |
| Slug length | λ =4.7·ft |
| Slug diameter | δ =0.17·ft |
| Value of $L/r_w$ | F =120.48 |
| Distance from water table to bottom of screen | H =18·ft |
| Aquifer thickness (screened interval) | b =10·ft |
| Initial water level neglecting the effect of the gravel pack | hp =11.96·ft |
| Value of A coefficient | Ax(F) =4.84 |
| Value of B coefficient | Bx(F) =0.89 |
| Value of C coefficient | Cx(F) =4.61 |
| Value of $\ln(R_e/r_w)$ | Rerw =4.12 |
| Theoretical displacement height | Φ =4.74·ft |
| Hydraulic conductivity estimate | $K = 3.11 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Hvorslev's lag time factor, $T_o$ | $T_o$ =0.23·T1 |
| Value of $y_t$ | $y_t$ =0.1·ft |
| Value of $t_2$ | $t_2$ =1.1·min |
| Squared sum of errors | $SS_e = 1.53 \cdot 10^{-2}$ |
| Correlation coefficient | R2 =0.987 |
| Student's t-statistic on $R^2$ | tR2 =40.87 |
| Criterion value for t-statistic at α = 0.05 | tn(nn) =2.49 |
| Lower limit of regression | $n_l$ =2 |
| Upper limit of regression | $n_u$ =25 |
| Number of data points in regression | nn =24 |

SUMMARY SHEET for Bouwer and Rice Slug Test Analysis, continued.



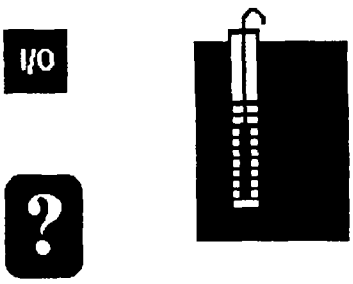
I/O

?

Read This

ln(0)

No Zero Data



HVORSLEV.pwb3-3

Date last modified: 10/14/94

1. Read in data file.
Supply file name in parentheses

MeREADPRN(pwb33)

number of data points $n = 54$

2. Assign column numbers in which time and displacement data occur in the data fil

| | |
|---|---|
| time column | $Col_t \equiv 1$ |
| displacement column | $Col_h \equiv 2$ |

3. Assign measurement units to time and displacement as T1 and L1, respectively.

| | |
|---|---|
| units of time | $T1 \equiv 1 \cdot min$ |
| units of displacement | $L1 \equiv 1 \cdot m$ |

4. Assign SGN = -1 for negative water level data (e.g. falling water level test an
SGN = 1 for positive data (e.g., rising water level test).

$SGN \equiv 1$

5. Well construction and aquifer data.

| | |
|---|---|
| gravel pack length | $L \equiv 10 \cdot ft$ |
| piezometer radius | $r_c \equiv 2.5 \cdot cm$ |
| gravel pack radius | $r_w \equiv 2.5 \cdot cm$ |
| slug length | $\lambda \equiv 4.7 \cdot ft$ |
| slug diameter | $\delta \equiv 2 \cdot in$ |

6. Estimate of ratio of horizontal to vertical hydraulic conductivity.

$K_{ratio} \equiv 1$

7. Shape factor. Assign number of case to X. Only cases 2 and 4 allow for vertical/horizontal anisotropy.

$X \equiv 2$

Unconfined aquifer:

1. cased boring, bottom flush with casing.
2. cased boring or well with screen length L.

Confined aquifer:

3. screen length/saturated thickness < 0.2.
4. 0.2 <= screen length/saturated thickness <= 0.85.
5. cased boring, bottom flush with casing.

8. Specify whether the computer should specify the graph limits (Lim=1) or you want to set the graph limits (Lim=2).

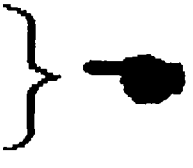
$Lim \equiv 1$

user-specified x-axis lower limit $G1XLu \equiv 0.0$

user-specified x-axis upper limit $G1XUu \equiv 2000$

user-specified y-axis lower limit $G1YLu \equiv 0.01$

user-specified y-axis upper limit $G1YUu \equiv 1.0$



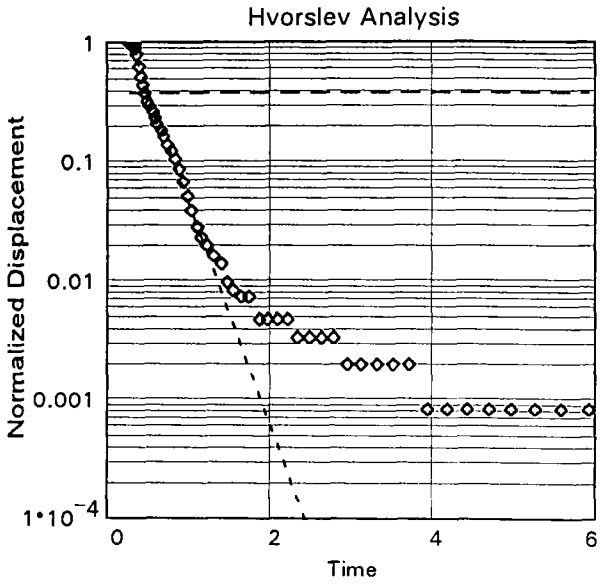
9. Plot of measured normalized
displacement vs. time on log-normal graph.

Full Screen View

Vary $n_l$ and $n_u$ to find the best-fit line.

lower limit of regression $n_l \equiv 2$

upper limit of regression $n_u \equiv 25$




hydraulic conductivity

$K = 3.54 \cdot 10^{-3} \cdot \frac{cm}{sec}$

squared sum of errors

$SS_e = 1.53 \cdot 10^{-2}$

correlation coefficient

$R2 = 0.987$

Values of displacement and time at regression range endpoints.

| | Beginning of range | End of range |
|---|---|---|
| time range | $t_{n\,1} = 0.3 \cdot min$ | $t_{n\,2} = 1.1 \cdot min$ |
| displacement range | $(s_{n\,1}) = 0.99$ | $(s_{n\,2}) = 0.03$ |

number of data points in regression analysis to determine best-fit line. $nn = 24$

slope of best-fit line $b_1 = -4.31 \cdot min^{-1}$

intercept of best-fit line $b_0 = 1.20$

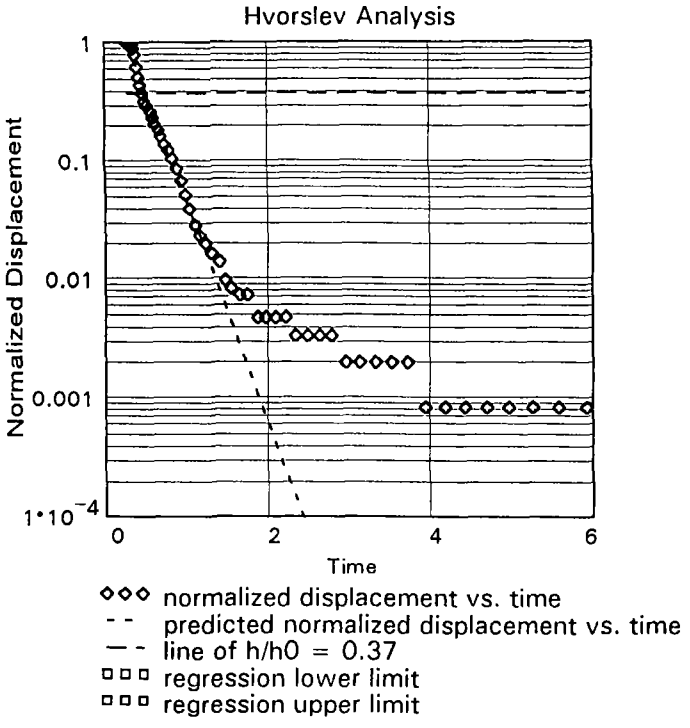
predicted initial displacement $hp = 39.22 \cdot ft$

Hvorslev's lag time factor, $T_o$ $T_o = 0.23 \cdot min$

SUMMARY SHEET for Hvorslev Slug Test Analysis.

| | |
|---|---|
| Name of data file | Hvorslev.prn |
| Number of data points in file | $n = 54$ |
| Units of displacement | $L1 = 1 \cdot m$ |
| Units of time | $T1 = 1 \cdot min$ |
| Piezometer radius | $r_c = 2.5 \cdot cm$ |
| Gravel pack radius | $r_w = 2.5 \cdot cm$ |
| Gravel pack length | $L = 3.05 \cdot m$ |
| Slug length | $\lambda = 1.43 \cdot m$ |
| Slug diameter | $\delta = 5.08 \cdot cm$ |
| Theoretical displacement height | $\Phi = 1.48 \cdot m$ |
| Ratio of horizontal to vertical hydraulic conductivity | $K_{ratio} = 1$ |
| Predicted displacement height | $hp = 11.96 \cdot m$ |
| Hydraulic conductivity estimate | $K = 3.54 \cdot 10^{-3} \cdot \frac{cm}{sec}$ |
| Value of Hvorslev's time lag factor | $T_o = 0.23 \cdot min$ |
| Squared sum of errors | $SS_e = 1.53 \cdot 10^{-2}$ |
| Correlation coefficient | $R2 = 0.987$ |
| Lower regression limit | $n_l = 2$ |
| Upper regression limit | $n_u = 25$ |
| Number of data points in regression | $nn = 24$ |

SUMMARY SHEET for Hvorslev Slug Test Analysis, continued.



## Horizontal and Vertical Hydraulic Conductivity

Within the study area, the Calumet aquifer, confining unit, and bedrock aquifer show demonstrably different ranges of horizontal and vertical hydraulic conductivities. Reported values for horizontal and vertical hydraulic conductivities in and near the study area are summarized in table 6.

Within the Calumet aquifer, Kay and others (1996, p. 32) noted a general trend of lower horizontal hydraulic conductivity from east to west. Geosciences Research Associates, Inc., (1988) indicate that the minor east-west variation in hydraulic conductivity coincides with a general westward thinning of the aquifer. They also observed a decrease in horizontal hydraulic conductivity with depth at one site in the study area that may coincide with a decrease in sand-grain size with depth. A 15:1 ratio of horizontal to vertical hydraulic conductivity was estimated for one aquifer test of the Calumet aquifer at the Midco I (plate 1) site (Geosciences Research Associates, Inc., 1987).

Horizontal hydraulic conductivities for the Calumet aquifer in Lake County were estimated from specific-capacity test data to range from 10 to 130 ft/d and averaged 60 ft/d (Rosenshein and Hunn, 1968). Kay and others (1996) measured horizontal hydraulic conductivities of the Calumet aquifer using slug-test methods that average rising and falling heads (Bouwer, 1989). Horizontal hydraulic conductivities in 10 wells screened in the Calumet aquifer in the study area ranged from 4.8 to 30 ft/d with an average of 17.9 ft/d (Kay and others, 1996, table 1). They also note that areas of the Calumet aquifer composed of fill deposits have more variable horizontal hydraulic conductivities. The highest horizontal hydraulic conductivity measured by Kay and others (1996, p. 32) for the Calumet aquifer was 360 ft/d in a well in northeastern Illinois that was screened in fill.

Duwelius (1996) investigated the hydraulic connection between the EB-GCR and the Calumet aquifer. Using slug-test methods that average falling head and rising head measurements, Duwelius calculated horizontal hydraulic conductivities for the streambed ranging from 0.01 to 1,200 ft/d and vertical hydraulic conductivities ranging from 0.3 to 73 ft/d (see Duwelius, 1996, p. 4-11 for details regarding methods for calculating horizontal and vertical hydraulic conductivities). Duwelius (1996) calculated the largest values of streambed hydraulic conductivity for locations composed of fill materials such as concrete and asphalt rubble. He also calculated the smallest streambed hydraulic conductivity values were at locations with soft fine-grained sediments.

In general, hydraulic conductivity estimates for the confining unit are several orders of magnitude less than those of the Calumet aquifer. Kay and others (1996, p. 30) reported a range of horizontal hydraulic conductivity for the confining unit in Cook County, Illlinois, immediately west of the study area, from approximately 0.00087 to 0.054 ft/d—these include values for the weathered upper parts of the confining unit under water-table conditions. Horizontal hydraulic conductivities for unweathered deeper parts of the confining unit probably are more representative of conditions in the study area, and range from 0.00087 to 0.0056 ft/d (Robert Kay, U.S. Geological Survey, written commun., 2002). Geosciences Research Associates, Inc. (1987 and 1988) reported horizontal hydraulic conductivity values in the confining unit in at Midco I and Midco II (plate 1) as ranging from 0.0003 to 0.0006 ft/d and vertical hydraulic conductivities ranging from 0.0002 to 0.003 ft/d. In general, hydraulic conductivity estimates for the confining unit are about 2 to 4 orders of magnitude less than those of the Calumet aquifer (table 6).

The horizontal hydraulic conductivity of the bedrock aquifer is more variable than the unconsolidated sediments. Kay and others (1996, p. 30), measured horizontal hydraulic conductivity values for the bedrock aquifer in Illinois ranging from 0.033 to 0.44 ft/d. Rosenshein and Hunn (1968) and Geosciences Research Associates, Inc. (1987) reported horizontal hydraulic conductivities for the bedrock aquifer in and south of the study area that ranged from 0.02 to 70 ft/d, depending on fracture and dissolution characteristics.

From: The 4565 NRDA Report - Grand Cal
2002

**Table 6.** Estimates of hydraulic conductivity of the Calumet aquifer, the streambed in the Grand Calumet River, the confining unit below the Calumet aquifer, and the bedrock aquifer, northwestern Indiana (Modified from table 6 in Fenelon and Watson, 1993)

[<, less than]

| Hydrologic unit | Location[1] | Aquifer test type | Hydraulic conductivity direction | Range of hydraulic conductivity (feet per day) |
|---|---|---|---|---|
| Calumet aquifer | Lake County, Indiana | Specific capacity | Horizontal | [2]10 - 130 |
| | Near Midco I | Aquifer test | Horizontal | [3]47 - 63 |
| | Near Midco I | Aquifer test | Vertical | [3]3 - 4 |
| | Near Midco I | Slug test | Horizontal | [3]3 - 84 |
| | Midco I | Slug test | Horizontal | [3]<1 - 21 |
| | Ninth Avenue Dump | Slug test | Horizontal | [4]<1 - 180 |
| | Midco II | Slug test | Horizontal | [5]2 - 26 |
| | Near Lake Michigan | Slug test | Horizontal | [6]<1 - 3 |
| | Lake County, Indiana | Slug test | Horizontal | [7]4.8 - 30 |
| | Cook County, Illinois | Slug test | Horizontal | [7]2 - 360 |
| | Illinois and Indiana | Not specified | Horizontal | [7]2.1 - 30 |
| Streambed | East Branch Grand Calumet River | Slug test | Horizontal | [8]0.01 - 1,200 |
| | East Branch Grand Calumet River | Slug test | Vertical | [8]0.3 - 73 |
| Confining unit | Lake County, Indiana | Specific capacity | Vertical | [2]0.0004 |
| | Midco I and II | Slug test | Horizontal | [3,5]0.0003 - 0.0006 |
| | Midco I and II | Permeameter test | Vertical | [3,5]0.0002 - 0.003 |
| | Cook County, Illinois | Slug test | Horizontal | [7]0.00087 - 0.054 |
| Bedrock aquifer | Lake County, Indiana | Specific capacity | Horizontal | [2]0.1 - 70 |
| | Midco I | Slug test | Horizontal | [3]0.02 |
| | Cook County, Illinois | Slug test | Horizontal | [7]0.033 - 0.44 |

[1]Locations of Midco I, Midco II, and Ninth Avenue Dump are shown in Plate 1. [2]Rosenshein and Hunn (1968).
[3]Geosciences Research Associates, Inc. (1987). [4]Warzyn Engineering, Inc. (1987).
[5]Geosciences Research Associates, Inc. (1988). [6]Baker/TSA Division (1984). [7]Kay and others (1996).
[8]Duwelius (1996).

## Horizontal and Vertical Gradients

Horizontal ground-water gradients in the Calumet aquifer are affected by the relief of the land surface and the variable water levels of the ground water, the GCR/IHC, and Lake Michigan. In the NRDA area, the land-surface relief north of the GCR is low, with a total relief of about 20 ft in undisturbed areas. South of the GCR to the drainage-basin divide with the LCR the surface relief is only slightly higher at about 30 ft.

The water table in the Calumet aquifer normally slopes toward the GCR, other streams and ditches, sewers, the IHC, and Lake Michigan. The slope of the water table near the GCR is nearly flat in the summers and generally increases during the winters (Fenelon and Watson, 1993, p. 25; Greeman, 1995, p. 28).

Fenelon and Watson (1993, p. 23) indicate that average horizontal hydraulic gradients in the Calumet aquifer generally fall within a narrow range. Gradients measured (a) during the fall of 1986, a period of very high lake levels (583.23 ft) and seasonally low ground-water levels, and (b) during the spring of 1989, when Lake Michigan levels were about average (579.50 ft) and ground-water levels were seasonally high, remained between 0.0005 to 0.003 ft/ft. Horizontal hydraulic gradients within about 500 feet of a ground-water discharge area to surface water only were slightly steeper, and approached 0.005 ft/ft (Fenelon and Watson, 1993, p. 23). Similarly, Greeman (1995, p. 28) reports the steepest horizontal hydraulic gradient, calculated from periodic data collected between 1986 and 1992, was less than 0.0038 ft/ft. Horizontal hydraulic gradients in the study area, based on water-level measurements obtained along eight transects during June 23-25, 1992, ranged from 0.00094 to 0.0051 ft/ft (Kay and others, 1996, table 2).

Kay and others (1996, p. 48) calculated the horizontal hydraulic gradient of the potentiometric surface of the Silurian-Devonian bedrock aquifer along an 8-mile east-west transect in northern Indiana and Illinois. The gradient dips westward toward a pumping center in the bedrock aquifer north of the confluence of the GCR and LCR in Illinois. Because the western 2 mi of this transect were in Illinois nearest the pumping center, the horizontal hydraulic gradient along the eastern 6 mi of this transect in the study area probably is less than the reported value of 0.0088 ft/ft (Robert Kay, U.S. Geological Survey, written commun., 2002).

Areas with upward vertical hydraulic gradients in the Calumet aquifer usually occur where ground water is discharging to surface water or drains, and downward vertical hydraulic gradients usually occur in recharge areas. Kay and others (1996, p. 54) calculated vertical hydraulic gradients in wells screened in the Calumet aquifer and located in the study area and in northeastern Illinois. Of 30 sets of paired wells, 16 sets had upward gradients and 14 sets had downward gradients. Downward gradients ranged from 0.00097 to 0.13 ft/ft and upward gradients ranged from 0.0012 to 0.33 ft/ft. As expected in a local flow regime in an unconfined aquifer, vertical flow direction and magnitude is approximately distributed equally between upward and downward directions.

Kay and others (1996, table 4) measured vertical hydraulic gradients between the water table and the middle of the confining unit, the base of the Calumet aquifer and the middle of the confining unit, and the middle of the confining unit and the top of the bedrock aquifer. These measurements were made in 5 well nests in the study area and 23 well nests in adjacent northeastern Illinois—vertical hydraulic gradients were downward in 4 of the 5 well nests in the study area and 20 of the 23 well nests in northeastern Illinois. Over half of these 28 measured vertical gradients were less than 0.2 ft/ft, and only one was greater than 0.9 ft/ft.

Kay and others (1996, table 4) also measured a downward vertical hydraulic gradient in 35 of 36 sets of paired wells measuring gradients between the Calumet aquifer and the underlying bedrock aquifer in northwestern Indiana and northeastern Illinois. The preponderance of downward vertical gradients between the Calumet aquifer, the confining unit, and the bedrock aquifer indicate the likelihood of downward flow from the Calumet aquifer through the confining unit and into the bedrock aquifer throughout the study area.

## Ground-Water-Flow Velocities

Kay and others (1996, table 2) calculated horizontal ground-water velocities through the Calumet aquifer along eight transects in the study area with velocities ranging from 0.027 to 0.34 ft/d (Kay and others, 1993, table 2). Fenelon and Watson (1993, p. 23) estimated an average horizontal ground-water velocity for the Calumet aquifer of 0.14 ft/d. They indicated that local, short-term (hours and days) velocities could be as great as from 0.55 to 0.82 ft/d, especially near discharge areas and particularly when Lake Michigan levels are low. Horizontal ground-water velocities for water-table conditions in a weathered portion of the confining unit in northeast Illinois were calculated by Kay and others (1996) to range from 0.00044 to 0.0010 ft/d. Confined flow conditions prevail for the confining unit in the study area. Horizontal ground-water velocities in the confining unit in the study area probably are substantially less than those calculated for Illinois ( Robert Kay, U.S. Geological Survey, written commun., 2002).

Vertical ground-water velocities through the confining unit were about from 10 to 100 times less than horizontal ground-water velocities through the Calumet aquifer. Kay and others (1996) estimated a vertical ground-water velocity of 0.038 ft/d directed principally downward through the weathered upper part of the confining unit in northeast Illinois and a downward vertical ground-water velocity of 0.0015 ft/d for the unweathered lower part of the confining unit. This latter velocity probably is more representative of flow through the confining unit in the study area. They also calculated horizontal ground-water velocities through the bedrock aquifer ranging from 0.014 to 0.029 ft/d.

In general, the reported values for hydraulic conductivity, hydraulic gradients, and ground-water velocities indicate the following:

(1) Hydraulic conductivities in the Calumet aquifer generally are 2 to 4 orders of magnitude greater than conductivities in the underlying clay confining unit. The high contrast in hydraulic conductivities between the Calumet aquifer and the underlying confining unit, combined with generally small (less than 0.2 ft/ft) vertical gradients, indicate that net exchange of ground water between the confining unit and the Calumet aquifer is minor as compared to the total amount of ground-water flow within the Calumet aquifer;

(2) Ground-water flow in the underlying confining unit is mostly vertical with relatively minor amounts of horizontal flow; and

(3) Although the net ground-water exchange between the Calumet aquifer and the confining unit is relatively small compared with the total amount of ground-water flow in the Calumet aquifer, the vertical gradients indicate that more ground water flows downward from the Calumet aquifer into the confining unit than flows upward from the confining unit into the Calumet aquifer.

## Water-Level Fluctuations

Ground-water levels in the study area commonly reach an annual maximum in June or July corresponding to periods of higher precipitation (National Oceanic and Atmospheric Administration, 1990) and moderate evapotranspiration. Annual minimum ground-water levels typically occur in September and October and often are followed by a rise during February or March because of recharge from the spring thaw.

Ground-water levels in the Calumet aquifer generally are stable and typically will vary less than 0.2 ft in a 4-day period (Greeman, 1995, p. 23), although larger fluctuations do occur, particularly in response to major precipitation events. Small diurnal fluctuations in ground-water levels because of evapotranspiration are common in wetlands and other vegetated areas. These small diurnal fluctuations can be seen in the hourly ground-water-level data (fig. 8) collected from well LK-13 (fig. 1) in a wetland area. During the day, water is absorbed by plant roots and transpired to the atmosphere from the leaves. The hydrograph in figure 8 shows how this activity lowers the water level several tenths of a foot each day. At night the plant activity decreases and water levels partially rebound (Greeman, 1995, p. 22), resulting in small daily declines of the water table. The almost 1-foot rise on May 11, 1991, indicates a water-level response to a precipitation event.

# ENVIRONMENTAL INDICATOR DETERMINATION REPORT

# CURRENT HUMAN EXPOSURES UNDER CONTROL (CA725) FOR DUPONT EAST CHICAGO EAST CHICAGO, INDIANA

Date: December 2004

Project No: 18983871


CORPORATE REMEDIATION GROUP
*An Alliance between*
*DuPont and URS Diamond*

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DuPont Engineering

December 16, 2004

Mr. Brian P. Freeman
Corrective Action Project Manager
U.S. Environmental Protection Agency – Region V
77 W. Jackson Blvd., DE-9J
Chicago, IL 60604-3590

**Environmental Indicator Determination Report**
**Current Human Exposures Under Control (CA725)**

Dear Mr. Freeman:

Over the last few months, we have answered EPA questions concerning the Environmental Indicator determination at the DuPont East Chicago facility that "current human exposures (are) under control." Soil and sump water samples from Riley Park were collected jointly with EPA to resolve the last lingering concern. We understand that the responsibility for EI determinations resides with the U.S. EPA and do not presume to usurp EPA authority or role. However, we believe that pulling together relevant data and using the EPA guidance and score sheet facilitates an appropriate, timely determination. As a result, we have enclosed three copies of this EI Determination Report (revised to address potential human health risk at Riley Park and to Natural Area restoration workers) for your review.

Our report concludes that releases or the potential for releases identified from Resource Conservation and Recovery Act (RCRA) correctives action units at the DuPont East Chicago facility do not constitute a significant threat to human health. As a result, you indicated that a positive EI determination had been reached for EI CA 725, and EPA approval was forthcoming.

If you have any questions, please call Alan Egler at (302) 892-1296.

Sincerely,

Hugh J. Campbell, Jr.
DuPont Corporate Remediation Group
Business Team Manager

cc: Kevin Garon, DuPont
Bernie Reilly, DuPont
Alan Egler, URS Diamond
Dana McCue, URS Diamond
Phillip Chen, URS Diamond

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**
**Interim Final 2/5/99**
**RCRA Corrective Action**
**Environmental Indicator (EI) RCRIS code (CA 725)**
**Current Human Exposures Under Control**

Facility Name: DuPont East Chicago Facility
Facility Address: 5215 Kennedy Avenue, East Chicago, Indiana
Facility EPA #: IND 005 174 254

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water, sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

   √ If yes -check here and continue with #2 below.
   If no- re-evaluate existing data, or
   If data are not available skip to #6 and enter "IN" (more information needed) status code.

## BACKGROUND

### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EIs developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

### Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

### Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near- term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993 (GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

### Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

**Current Human Exposures Under Control**
**Environmental Indicator (EI) RCRIS Code (CA 725)**



2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated" above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

| Media | Yes | No | ? | Rationale/Key Contaminants |
|---|---|---|---|---|
| Groundwater | √ | | | Metals and some organics have been identified as constituents of potential concern (COPCs) in site-wide groundwater (Tables 5- 8). |
| Air (indoors)[2] | | √ | | Volatile organic compounds (VOCs) have been detected in groundwater at the site. However, locations where VOCs exceed screening levels do not extend under occupied buildings on- and off-site (Sec 5.2.3). |
| Surface Soil (e.g., <2 ft) | √ | | | Organics and metals exceeded screening levels in surface soil SWMUs and AOCs (Table 9). |
| Surface Water | | √ | | Not considered a media of concern. See rationale for more information |
| Sediment | | √ | | Not considered a media of concern. See rationale for more information |
| Subsurface Soil (e.g., >2 ft) | √ | | | Organics and metals exceeded screening levels in surface soil SWMUs and AOCs (Table 9). |
| Air (outdoors) | √ | | | COPCs in outdoor air include: arsenic and lead (Section 5.2.3) |

If no (for all media) -skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

√ If yes (for any media) -continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

If unknown (for any media) -skip to #6 and enter "IN" status code.

Rationale and Reference(s):

**For the purposes of explanation, the DuPont East Chicago site is divided into four distinct areas described as follows:**

1) **Area 1 - The Active Manufacturing Area (the southwest quadrant of the site.)**
2) **Area 2 - The Waste Disposal Area (the northern half of the site)**
3) **Area 3 – The Previously Active Manufacturing Area (the southeast quadrant of the site)**
4) **Area 4 – The Natural Area – an area east of the site owned by DuPont, but never used for any manufacturing or disposal activities.**

**Data Set for EI Evaluation**

Site data evaluated for this step included: Groundwater samples collected from between five and eight rounds of monitoring (depending on location) between November 1999 and November 2003; Sump water samples collected in 1990 and November 2004 from Riley Park basements; Shallow soil samples (less than 2 feet deep) and subsurface soil samples (within 12 feet bgs) collected during the 1999 Phase I RFI and 2003 Phase II RFI from 52 SWMUs and AOCs; and, Shallow soil samples collected from residential yards in Riley Park.

**Screening levels used to evaluate site data**

Concentrations of constituents detected in the EI evaluation data set were compared to appropriate screening levels to assess potential impact to human health and the environment and to identify COPCs. The following screening levels were utilized during the evaluation:

- Groundwater – Shallow groundwater is not used for drinking water or irrigation on or near the site; therefore, there are no appropriate risk-based levels for screening. However, groundwater from Pool A flows to the north toward Riley Park where some contact may occur with basement water. As a result, constituents detected in groundwater were compared to Indiana Groundwater Standards (IGS) or federal Maximum Contaminant Levels (MCLs). USEPA Region IX Preliminary Remediation Goals (PRGs) for Tap Water were used where IGS/MCLs were unavailable. The PRG represents a combined exposure including inhalation of volatile compounds and ingestion for residential tap water. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1 million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).

  Groundwater from Pool B may discharge to the East Branch of the Grand Calumet River. Therefore, groundwater concentrations were also compared to Indiana Water Quality Standards Tier I and Tier II Values for the Great Lakes Basin (IAWQS) (327 IAC 2) or federal Ambient Water Quality Criteria (AWQC) (40 CFR Part 131) where IAWQS were unavailable. The surface water quality criteria were based on protection of human health (nondrinking water and fish consumption). If criteria were not available from either source, then concentrations were compared to the IGS/MCL.
- Soil – On-site surface and subsurface soil concentrations were compared to USEPA Region IX PRGs for industrial soil. Off-site surface soil concentrations from Riley Park were compared to background concentrations from samples collected in areas not impacted by sump water discharges. The PRG represents a combined exposure including inhalation of particulates and volatile compounds, dermal absorption, and ingestion. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1 million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).
- Indoor Air - Because the site is industrial, the OSHA permissible exposure levels (PELs) and the American Conference of Governmental Industrial Hygienist (ACGIH) threshold limit values (TLVs) were used to develop appropriate indoor air target concentrations for potential on-site exposure rather than the residential indoor air target concentrations

provided in the draft guidance. Table 4 presents the equation used to develop the screening criteria and the occupational screening levels used in the equation.

**Constituents of Potential Concern**

**Groundwater**: For the purpose of the evaluation, groundwater was evaluated by groundwater flow components (Pool A or Pool B) rather than by SWMU or AOC. Groundwater expressed as seeps near the on-site landfill was also included in the evaluation. Previous environmental investigations conducted at the site have identified two VOCs and 16 inorganics as COPCs in Pool A groundwater. Arsenic is the primary COPC in Pool A groundwater. An interim remedial measure (IRM) has been installed along a portion of the northern site boundary to address migration of arsenic-contaminated groundwater toward Riley Park. Two VOCs, one pesticide and 16 inorganics have been identified as COPCs in Pool B groundwater.

**Indoor Air**: An evaluation of the vapor intrusion to indoor air from groundwater and soil pathways was conducted for the East Chicago facility following the principles outlined in the draft Guidance (*Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils, Subsurface Vapor Intrusion Guidance, November 2002*). The evaluation concluded that the potential for vapor intrusion into buildings at the site or off-site is incomplete under current land use conditions, because locations where these constituents are present in groundwater do not extend under or within 100 feet of occupied buildings.

**Surface soil**: The previous environmental investigations at the DuPont East Chicago facility have identified three VOCs, three pesticides/polychlorinated biphenyls (PCBs) and ten inorganics as COPCs in surface soil. The primary locations of these exceedances under current conditions occur in areas that have limited access; are located in remote portions of the site away from active manufacturing activities; or are covered by soil, gravel, concrete, or construction debris. Detected arsenic concentrations in Riley Park surface soil were either below or within the range of control (background) samples collected, indicating no appreciable accumulation of arsenic in soil near the location of periodic sump discharge. As a result, Riley Park surface soil was excluded as a media of concern.

**Surface Water and Sediment**: Sediment along and within the East Branch of the Grand Calumet System was not evaluated as part of this EI analysis because it is being managed under the Natural Resource Damage Assessment (NRDA) settlement. Surface water data for the purpose of exposure assessment has not been collected in the East Branch of the Grand Calumet System. However, exposure to surface water in the East Branch of the Grand Calumet System was evaluated for the EI analysis as part of the groundwater to surface water discharge pathway.

**Subsurface soil**: The previous environmental investigations at the DuPont East Chicago facility have identified one VOC and nine inorganics as COPCs in subsurface soil. COPCs would be accessible only during intrusive activities.

**Air (outdoors)**: For the purposes of assessing inhalation exposures via the soil-to-air pathway, the pathway-specific industrial soil PRG values provided in the USEPA Region IX PRG intercalc tables were utilized. Constituents that exceeded the pathway-specific soil PRGs were retained for evaluation in the EI determination (arsenic and lead).

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to

look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile organic compounds) does not present unacceptable risks.

3. Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table
Potential Human Receptors (Under Current Conditions)

| **"Contaminated" Media** | **Resident** | **Worker** | **Day-Care** | **Constr-uction** | **Tres-Passer** | **Recre-ation** | **Food[3]** |
|---|---|---|---|---|---|---|---|
| Groundwater | **Yes** | **No** | **No** | **Yes** | **Yes** | **No** | **No** |
| ~~Air (indoors)[2]~~ | | | | | | | |
| Surface Soil (e.g., <2 ft) | **No** | **Yes** | **No** | **Yes** | **Yes** | **No** | **No** |
| ~~Surface Water~~ | | | | | | | |
| ~~Sediment~~ | | | | | | | |
| Subsurface Soil (e.g., >2 ft) | **No** | **No** | **No** | **Yes** | **No** | **No** | **No** |
| Air (outdoors) | **No** | **Yes** | **No** | **Yes** | **Yes** | **No** | **No** |

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.

2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media – Human Receptor combination (Pathway). N/L = Not Likely

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media- Human Receptor combinations (Pathways) do not have check spaces ("-"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary .

If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

√ If yes (pathways are complete for any "Contaminated" Media -Human Receptor combination) -continue after providing supporting explanation.

If unknown (for any "Contaminated" Media -Human Receptor combination) -skip to #6 and enter "IN" status code

Rationale and Reference(s):

**Potential human receptors include (Section 6.1):**

(1) **On-site Industrial Workers:** A portion of the DuPont East Chicago Facility is an active heavy industrial facility, and this use will continue (Figure 2). The industrial worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).

(2) **On-site Construction/Excavation Workers:** The on-site construction/excavation worker is potentially exposed to constituents in all environmental media while repairing subsurface utility lines, performing remedial activities or short-term construction. Subsurface soil depths for direct contact exposures by this receptor are defined as 2 to 12 feet bgs based on past activity at the facility and the location of utilities on-site. Groundwater occurs at depths ranging from 3 to 10 feet bgs at the site; therefore, direct contact with groundwater may also occur during intrusive activities

(3) **On-site Restoration Worker:** Restoration workers at the Natural Area may come into direct contact with contaminated media while removing exotic species, seeding, planting and while conducting species surveys. Therefore, on-site restoration workers are potential receptors. The restoration worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).

(4) **On-site Trespasser:** The main operating area of the site (including the previously active manufacturing area) is fenced and guarded, and access is controlled and limited to authorized personnel only. Trespassing, although sporadic, has occurred within the previously active manufacturing area. The on-site trespasser is assumed to be a youth aged 7 to 16 years. The on-site trespasser is potentially exposed to constituents in surface soil (0 to 2 feet bgs) at the site and groundwater expressed as seeps near the on-site landfill.

(5) **Riley Park Resident -** Groundwater is not used for domestic water supply, including irrigation, in the Riley Park area. If contact with facility-related constituents were to occur, it would be restricted primarily to basement water potentially affected by groundwater discharges and limited to a small subset of property owners in the southern part of the community (CH2M Hill, 1991). During the door-to-door survey conducted by CH2M Hill in 1991, 13 residences reported basement water due to a high water table that was not adequately removed by sump pumps. The amount of water in the basements ranged from seeps to several inches and occurred rarely or during heavy rains. Therefore, off-site adult and child (age zero to six years) residents exposed to basement sump water were considered potential receptors.

Recreational users of the East Branch of the Grand Calumet System are virtually nonexistent. Land access to the stream banks on the site is limited due to site security, vegetation, marshy areas, and steep embankments. Water access to the stream (in particular the reach adjacent to the site) is also limited due to the lack of public launching areas and the presence of low bridges spanning the river channel. To the extent that recreators may use the area, such use would be restricted to warm weather months. However, the general appearance of the waterway and riparian areas, fish advisory warnings, and the abundant water recreation opportunities at nearby more aesthetically desirable areas (e.g., Lake Michigan) would discourage use. Therefore, recreational users of the East Branch were not considered potential receptors.

Sensitive receptors (e.g., daycare) are not located on or adjacent to the site. Therefore, these receptors were not considered potential receptors.

**Complete Exposure Pathways by Media (Section 6.2):**

(1) **Groundwater**: The potential for exposure is low because groundwater is not used on-site for potable or industrial purposes and residential users have not been identified within a one-mile radius of the site. However, due to the shallow depth of groundwater in some portions of the site, exposure may occur during construction/excavation activities. In addition, the potential exists for occasional exposure to intermittent seeps near the on-site landfill during infrequent trespassing activities. The potential also exists for Riley Park residents to contact groundwater constituents present in basement sump water.

Potentially complete exposure pathways may include: on-site trespasser and off-site Riley Park resident: - incidental ingestion of and dermal contact with groundwater; and on-site

construction/excavation worker - incidental ingestion of and dermal contact with groundwater, and inhalation of vapor phase chemicals released from groundwater to a confined space (trench).

(2) **Surface Soil**: The potential for exposure to contaminants in surface soils is limited to on-site receptors because impacted soils are contained within the facility boundaries. Even on-site, the potential for exposure is low for most receptors under current conditions because the principal areas of surface soil contamination have limited access; are located in remote portions of the site away from active manufacturing activities; or are covered by soil, gravel, concrete, or construction debris. Furthermore, repair and extension of perimeter fencing along the previously active manufacturing area further limits site access. The receptor with the greatest potential for exposure is the current/future on-site construction/excavation worker, where a greater likelihood of direct contact with impacted soil is associated with intrusive activities.

Potentially complete exposure pathways may include the following: on-site industrial worker, on-site trespasser, on-site construction/excavation worker and on-site restoration worker: incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors.

(3) **Subsurface Soil**: Because subsurface soil contamination is only present on-site, and exposure to subsurface soil is only achieved during excavation and construction activities, the only potential receptor is the on-site construction/excavation worker.

Potentially complete exposure pathways may include incidental ingestion of and dermal contact with subsurface soil and inhalation of soil-derived particulates and vapors.

**Incomplete Exposure Pathways by Media (Section 6.3):**

(1) **Groundwater:** Groundwater is not used on-site for potable or industrial uses. Therefore, direct contact (ingestion or dermal contact) with groundwater for on-site industrial workers is incomplete. Potential exists for groundwater to discharge into the East Branch of the Grand Calumet. However, due to the effect of mixing zone dilution into the river and solute transport effects, overall exposure to this discharge is insignificant (DuPont, 2000). In addition, no likely potential receptors for the stream have been identified (see Section 6.3.1). Exposure pathways associated with food are incomplete.

(2) **Soil:** Since the day-to-day operations of the on-site industrial worker do not include intrusive activities, direct contact (ingestion or dermal contact) with subsurface soil is not anticipated and is incomplete. Likewise, if surface soil contamination exists in an area of the site, which is not routinely accessible to on-site industrial workers due to institutional or physical controls (e.g., locked areas or asphalt caps), then exposure pathways in those areas are incomplete as well. Exposure pathways associated with food are incomplete.

Footnotes:

[3] Crops are not grown, and animals are not raised for consumption on the DuPont Site

4 Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant" (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1 ) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) -skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

√ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) -continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

If unknown (for any complete pathway) -skip to #6 and enter "IN" status code

Rationale and Reference(s):

The following complete exposure pathways were evaluated in Step Four of the EI determination process:

**Ground water**: Under current land use conditions, groundwater is not used on-site for potable or industrial uses. Under future land use conditions, a deed restriction prohibiting the use of shallow groundwater will be put in place for the site. Due to the shallow depth of groundwater in some portions of the site, exposure may occur during construction/ excavation activities. Likewise, the potential exists for occasional exposure to intermittent seeps near the on-site landfill during infrequent trespassing activities. In the risk assessment, no unacceptable health risks (cancer risk range of 1x10-6 to 1x10-4 and total HI of less than 1) from exposure to shallow groundwater were identified for these potential receptors. Caner and non cancer health effects due to incidental ingestion of and dermal contact with groundwater in sump pumps in the basement of residents in Riley park area was found to be below 1x10-6 and 1 respectively.

**Surface soil**: No unacceptable health risks were identified for routine workers from surface soil in active manufacturing area (Exposure area 1). There are no current on-site industrial worker exposures to commercial/Industrial Re- Development area and restricted Use Areas (Exposure area 2). Overall risk due to exposure for future on-site industrial workers and trespassers to surface soil in this area is also considered to be insignificant.

**Subsurface soil**: Under both current and future land use conditions, the receptor with the greatest potential for exposure is the on-site construction/excavation worker, where a greater likelihood of direct contact with impacted surface and subsurface soil is associated with intrusive activities. Several units in exposure area 2 exceed cumulative cancer risk of 1e-04 due to number of contaminants and have been identified for remedy evaluation.

5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

   √ If yes (all "significant" exposures have been shown to be within acceptable limits) – continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

   ____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

   ____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

Risk characterization of exposure **Area 2** (described in Question 1 as the Waste Management Area) reveals that construction/excavation worker are at significant cancer risk associated with incidental ingestion of and dermal contact with subsurface soil and inhalation of soil derived particulates and vapor. The non-cancer hazard associated with sub-surface lead contamination is significantly high. With regard to the onsite construction/ excavation worker, DuPont has an established excavation permitting program in place at the site, which would continue in the future to ensure that appropriate measures are taken for personnel protection should such subsurface activity encounter impacted soils. Based on this health and safety plan, the significant exposure due to subsurface contamination is found to be acceptable.

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

YE -Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **the DuPont East Chicago** facility, EPA ID # **IND 005 174 254**, located at **5215 Kennedy Avenue in East Chicago, Indiana** under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

NO -"Current Human Exposures" are NOT "Under Control."

IN -More information is needed to make a determination.

Completed by Brian P. Freeman Date 12/21/2004
(print) Brian P. Freeman
(title) Senior Chemist, Corrective Action Project Manager

Supervisor George J. Hamper Date 12/21/04
(print) George J. Hamper
(title) Chief CA Section ECAB
US EPA Region 5

Locations where References may be found

US EPA Region 5
Federal Records Center
77 W. Jackson, 7th Floor
Chicago, IL 60604

Corrective Action Files
Waste Pesticides and Toxics Division
RCRA Enforcement and Compliance Assurance Branch
Corrective Action Section
77 W. Jackson, DE-9J
Chicago, IL 60604

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| | |
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**FINAL NOTE: The human exposures EI is a qualitative screening of exposures and the determinations within this document should not be used as the sole basis for restricting the scope of more detailed (e.g., site-specific) assessments of risk.**

# TABLE OF CONTENTS

Executive Summary ..... iv

1.0 Introduction ..... 1-1
1.1 Environmental Indicator Background ..... 1-1
1.2 Report Purpose and Contents ..... 1-1

2.0 Site History & Background ..... 2-1
2.1 Facility Location & Setting ..... 2-1
2.2 Current Land Use ..... 2-1
2.3 Groundwater and Water Supply ..... 2-2
2.4 Surface Water Features ..... 2-2
2.5 SWMUs and AOCs ..... 2-3

3.0 EI Determination Process ..... 3-1

4.0 Step One – Data Review ..... 4-1
4.1 Summary of Investigations ..... 4-1
4.2 Data Set for EI Determination ..... 4-2

5.0 Step Two – Risk-Based Screening ..... 5-1
5.1 Sources of Screening Criteria ..... 5-1
5.1.1 Groundwater ..... 5-1
5.1.2 Soil ..... 5-1
5.1.3 Indoor Air ..... 5-2
5.2 Screening Evaluation ..... 5-2
5.2.1 Exposure to Groundwater ..... 5-2
5.2.2 Exposure to Soil ..... 5-5
5.2.3 Exposure to Air ..... 5-6

6.0 Step Three – Complete Exposure Pathways ..... 6-1
6.1 Potential Receptors ..... 6-1
6.2 Potentially Complete Exposure Pathways ..... 6-3
6.2.1 Groundwater ..... 6-3
6.2.2 Surface Soil ..... 6-3
6.2.3 Subsurface Soil ..... 6-4
6.3 Incomplete Pathways ..... 6-4
6.3.1 Groundwater ..... 6-4
6.3.2 Soil ..... 6-4

7.0 Step Four – Exposure Analysis ..... 7-1
7.1 Groundwater Exposure Pathways ..... 7-1
7.1.1 On-Site Construction/Excavation Worker ..... 7-1
7.1.2 On-Site Trespasser ..... 7-2

7.1.3 Resident in Riley Park ..... 7-2
7.2 Surface Soil Exposure Pathways ..... 7-3
7.2.1 On-Site Workers ..... 7-3
7.2.2 On-Site Trespassers ..... 7-4
7.3 Subsurface Soil Exposure Pathways ..... 7-5
7.4 Summary of Exposure Analysis ..... 7-5

8.0 Step Five – Risk Characterization ..... 8-1
8.1 Risk Characterization Process ..... 8-1
8.2 Risk Characterization Results ..... 8-2

9.0 Step Six – EI Determination ..... 9-1

10.0 References ..... 10-1

## TABLES


| | |
|---|---|
| Table 1 | SWMUs Identified at the DuPont East Chicago Facility |
| Table 2 | AOCs Identified at the DuPont East Chicago Facility |
| Table 3 | Descriptions of AOCs 1, 2, 3, and 10 |
| Table 4 | Occupational Indoor Air Screening Level Calculation |
| Table 5 | COPCs in Groundwater, Pool A |
| Table 6 | COPCs in Riley Park Sumps |
| Table 7 | COPCs in Groundwater, Pool B |
| Table 8 | COPCs in Groundwater, Intermittent Seeps |
| Table 9 | SWMU and AOC COPCs in Soil |
| Table 10 | November 2004 Riley Park Surface Soil Data |
| Table 11 | Summary of Perimeter Monitoring Well Groundwater Statistics |
| Table 12 | Summary of Health Risks, Intermittent Exposure to Basement Water |
| Table 13 | Summary of Exposure Point Concentrations |
| Table 14 | Intake Assumptions, Exposure to Soil |
| Table 15 | Summary of Risk Characterization Results in Soil |


## FIGURES


| | |
|---|---|
| Figure 1 | Site Location Map |
| Figure 2 | Preliminary Conceptual Site Model |
| Figure 3 | Phase I and Phase II RFI Sample Locations |
| Figure 4 | Riley Park Basement Sump Summary Information |
| Figure 5 | Human Health Conceptual Exposure Model |


## APPENDICES


| | |
|---|---|
| Appendix A | Phase I and Phase II RFI Analytical Results |
| Appendix B | Riley Park Risk Characterization Calculations |
| Appendix C | SWMU 4 Risk Characterization Calculations |

# EXECUTIVE SUMMARY

E.I. DuPont de Nemours and Company (DuPont) conducted an evaluation of the environmental indicator (EI) "current human exposures under control" (EI RCRIS Code CA725) for the DuPont East Chicago Facility. The EI determination evaluation was completed in accordance with the guidance established by the United States Environmental Protection Agency (USEPA) (USEPA, 1999) and is summarized in the scoresheet beginning on the following page.

The EI determination process concluded that current conditions with regard to the potential for releases identified from Resource Conservation and Recovery Act (RCRA) corrective action units at the DuPont East Chicago Facility do not constitute a significant threat to human health. Reasonably expected exposures above screening levels were found to be acceptable (i.e., did not exceed USEPA acceptable risk levels). As a result, a positive EI determination for EI CA725 was reached.

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**
**Interim Final 2/5/99**
**RCRA Corrective Action**
**Environmental Indicator (EI) RCRIS code (CA 725)**
**Current Human Exposures Under Control**

Facility Name: DuPont East Chicago Facility
Facility Address: 5215 Kennedy Avenue, East Chicago, Indiana
Facility EPA #: IND 005 174 254

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water, sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

   √ If yes -check here and continue with #2 below.
   If no- re-evaluate existing data, or
   If data are not available skip to #6 and enter "IN" (more information needed) status code.

## BACKGROUND

### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EIs developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

### Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

### Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near- term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993 (GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

### Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

**Current Human Exposures Under Control**
**Environmental Indicator (EI) RCRIS Code (CA 725)**

**Page 2**

2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated" above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

| Media | Yes | No | ? | Rationale/Key Contaminants |
|---|---|---|---|---|
| Groundwater | √ | | | Metals and some organics have been identified as constituents of potential concern (COPCs) in site-wide groundwater (Tables 5- 8). |
| Air (indoors)[2] | | √ | | Volatile organic compounds (VOCs) have been detected in groundwater at the site. However, locations where VOCs exceed screening levels do not extend under occupied buildings on- and off-site (Sec 5.2.3). |
| Surface Soil (e.g., <2 ft) | √ | | | Organics and metals exceeded screening levels in surface soil SWMUs and AOCs (Table 9). |
| Surface Water | | √ | | Not considered a media of concern. See rationale for more information |
| Sediment | | √ | | Not considered a media of concern. See rationale for more information |
| Subsurface Soil (e.g., >2 ft) | √ | | | Organics and metals exceeded screening levels in surface soil SWMUs and AOCs (Table 9). |
| Air (outdoors) | √ | | | COPCs in outdoor air include: arsenic and lead (Section 5.2.3) |

If no (for all media) -skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

√ If yes (for any media) -continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

If unknown (for any media) -skip to #6 and enter "IN" status code.

Rationale and Reference(s):

**Data Set for EI Evaluation**

Site data evaluated for this step included: Groundwater samples collected from between five and eight rounds of monitoring (depending on location) between November 1999 and November 2003; Sump water samples collected in 1990 and November 2004 from Riley Park basements; Shallow soil samples (less than 2 feet deep) and subsurface soil samples (within 12 feet bgs) collected during the 1999 Phase I RFI and 2003 Phase II RFI from 52 SWMUs and AOCs; and, Shallow soil samples collected from residential yards in Riley Park.

**Screening levels used to evaluate site data**

Concentrations of constituents detected in the EI evaluation data set were compared to appropriate screening levels to assess potential impact to human health and the environment and to identify COPCs. The following screening levels were utilized during the evaluation:

- Groundwater – Shallow groundwater is not used for drinking water or irrigation on or near the site; therefore, there are no appropriate risk-based levels for screening. However, groundwater from Pool A flows to the north toward Riley Park where some contact may occur with basement water. As a result, constituents detected in groundwater were compared to Indiana Groundwater Standards (IGS) or federal Maximum Contaminant Levels (MCLs). USEPA Region IX Preliminary Remediation Goals (PRGs) for Tap Water were used where IGS/MCLs were unavailable. The PRG represents a combined exposure including inhalation of volatile compounds and ingestion for residential tap water. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1 million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).

  Groundwater from Pool B may discharge to the East Branch of the Grand Calumet River. Therefore, groundwater concentrations were also compared to Indiana Water Quality Standards Tier I and Tier II Values for the Great Lakes Basin (IAWQS) (327 IAC 2) or federal Ambient Water Quality Criteria (AWQC) (40 CFR Part 131) where IAWQS were unavailable. The surface water quality criteria were based on protection of human health (nondrinking water and fish consumption). If criteria were not available from either source, then concentrations were compared to the IGS/MCL.

- Soil – On-site surface and subsurface soil concentrations were compared to USEPA Region IX PRGs for industrial soil. Off-site surface soil concentrations from Riley Park were compared to background concentrations from samples collected in areas not impacted by sump water discharges. The PRG represents a combined exposure including inhalation of particulates and volatile compounds, dermal absorption, and ingestion. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1 million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).

- Indoor Air - Because the site is industrial, the OSHA permissible exposure levels (PELs) and the American Conference of Governmental Industrial Hygienist (ACGIH) threshold limit values (TLVs) were used to develop appropriate indoor air target concentrations for potential on-site exposure rather than the residential indoor air target concentrations provided in the draft guidance. Table 4 presents the equation used to develop the screening criteria and the occupational screening levels used in the equation.

**Constituents of Potential Concern**

Groundwater: For the purpose of the evaluation, groundwater was evaluated by groundwater flow components (Pool A or Pool B) rather than by SWMU or AOC. Groundwater expressed as seeps near the on-site landfill was also included in the evaluation. Previous environmental investigations conducted at the site have identified two VOCs and 16 inorganics as COPCs in Pool A groundwater. Arsenic is the primary COPC in Pool A groundwater. An interim remedial measure (IRM) has been installed along a portion of

the northern site boundary to address migration of arsenic-contaminated groundwater toward Riley Park. Two VOCs, one pesticide and 16 inorganics have been identified as COPCs in Pool B groundwater.

**Indoor Air**: An evaluation of the vapor intrusion to indoor air from groundwater and soil pathways was conducted for the East Chicago facility following the principles outlined in the draft Guidance (*Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils, Subsurface Vapor Intrusion Guidance, November 2002*). The evaluation concluded that the potential for vapor intrusion into buildings at the site or off-site is incomplete under current land use conditions, because locations where these constituents are present in groundwater do not extend under or within 100 feet of occupied buildings.

**Surface soil**: The previous environmental investigations at the DuPont East Chicago facility have identified three VOCs, three pesticides/polychlorinated biphenyls (PCBs) and ten inorganics as COPCs in surface soil. The primary locations of these exceedances under current conditions occur in areas that have limited access; are located in remote portions of the site away from active manufacturing activities; or are covered by soil, gravel, concrete, or construction debris. Detected arsenic concentrations in Riley Park surface soil were either below or within the range of control (background) samples collected, indicating no appreciable accumulation of arsenic in soil near the location of periodic sump discharge. As a result, Riley Park surface soil was excluded as a media of concern.

**Surface Water and Sediment**: Sediment along and within the East Branch of the Grand Calumet System was not evaluated as part of this EI analysis because it is being managed under the Natural Resource Damage Assessment (NRDA) settlement. Surface water data for the purpose of exposure assessment has not been collected in the East Branch of the Grand Calumet System. However, exposure to surface water in the East Branch of the Grand Calumet System was evaluated for the EI analysis as part of the groundwater to surface water discharge pathway.

**Subsurface soil**: The previous environmental investigations at the DuPont East Chicago facility have identified one VOC and nine inorganics as COPCs in subsurface soil. COPCs would be accessible only during intrusive activities.

**Air (outdoors)**: For the purposes of assessing inhalation exposures via the soil-to-air pathway, the pathway-specific industrial soil PRG values provided in the USEPA Region IX PRG intercalc tables were utilized. Constituents that exceeded the pathway-specific soil PRGs were retained for evaluation in the EI determination (arsenic and lead).

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile organic compounds) does not present unacceptable risks.

**Current Human Exposures Under Control**
**Environmental Indicator (EI) RCRIS code (CA 725)**
**Page 3**

3. Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table
Potential Human Receptors (Under Current Conditions)

| **"Contaminated" Media** | **Resident** | **Worker** | ~~**Day-Care**~~ | **Constr-uction** | **Tres-Passer** | ~~**Recre-ation**~~ | ~~**Food**~~[3] |
|---|---|---|---|---|---|---|---|
| Groundwater | **Yes** | **No** | | **Yes** | **Yes** | | |
| ~~Air (indoors)~~[2] | | | | | | | |
| Surface Soil (e.g., <2 ft) | **No** | **Yes** | | **Yes** | **Yes** | | |
| ~~Surface Water~~ | | | | | | | |
| ~~Sediment~~ | | | | | | | |
| Subsurface Soil (e.g., >2 ft) | **No** | **No** | | **Yes** | **No** | | |
| Air (outdoors) | **No** | **Yes** | | **Yes** | **Yes** | | |

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.

2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media –Human Receptor combination (Pathway). N/L = Not Likely

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media- Human Receptor combinations (Pathways) do not have check spaces ("-"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary .

If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

√ If yes (pathways are complete for any "Contaminated" Media -Human Receptor combination) -continue after providing supporting explanation.

If unknown (for any "Contaminated" Media -Human Receptor combination) -skip to #6 and enter "IN" status code

Rationale and Reference(s):

**Potential human receptors include (Section 6.1):**

(1) **On-site Industrial Workers:** A portion of the DuPont East Chicago Facility is an active heavy industrial facility, and this use will continue (Figure 2). The industrial worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).

(2) **On-site Construction/Excavation Workers:** The on-site construction/excavation worker is potentially exposed to constituents in all environmental media while repairing subsurface utility lines, performing remedial activities or short-term construction. Subsurface soil depths for direct contact exposures by this receptor are defined as 2 to 12 feet bgs based on past activity at the facility and the location of utilities on-site. Groundwater occurs at depths ranging from 3 to 10 feet bgs at the site; therefore, direct contact with groundwater may also occur during intrusive activities

(3) **On-site Restoration Worker:** Restoration workers at the Natural Area may come into direct contact with contaminated media while removing exotic species, seeding, planting and while conducting species surveys. Therefore, on-site restoration workers are potential receptors. The restoration worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).

(4) **On-site Trespasser:** The main operating area of the site (including the previously active manufacturing area) is fenced and guarded, and access is controlled and limited to authorized personnel only. Trespassing, although sporadic, has occurred within the previously active manufacturing area. The on-site trespasser is assumed to be a youth aged 7 to 16 years. The on-site trespasser is potentially exposed to constituents in surface soil (0 to 2 feet bgs) at the site and groundwater expressed as seeps near the on-site landfill.

(5) **Riley Park Resident** - Groundwater is not used for domestic water supply, including irrigation, in the Riley Park area. If contact with facility-related constituents were to occur, it would be restricted primarily to basement water potentially affected by groundwater discharges and limited to a small subset of property owners in the southern part of the community (CH2M Hill, 1991). During the door-to-door survey conducted by CH2M Hill in 1991, 13 residences reported basement water due to a high water table that was not adequately removed by sump pumps. The amount of water in the basements ranged from seeps to several inches and occurred rarely or during heavy rains. Therefore, off-site adult and child (age zero to six years) residents exposed to basement sump water were considered potential receptors.

Recreational users of the East Branch of the Grand Calumet System are virtually nonexistent. Land access to the stream banks on the site is limited due to site security, vegetation, marshy areas, and steep embankments. Water access to the stream (in particular the reach adjacent to the site) is also limited due to the lack of public launching areas and the presence of low bridges spanning the river channel. To the extent that recreators may use the area, such use would be restricted to warm weather months. However, the general appearance of the waterway and riparian areas, fish advisory warnings, and the abundant water recreation opportunities at nearby more aesthetically desirable areas (e.g., Lake Michigan) would discourage use. Therefore, recreational users of the East Branch were not considered potential receptors.

Sensitive receptors (e.g., daycare) are not located on or adjacent to the site. Therefore, these receptors were not considered potential receptors.

**Complete Exposure Pathways by Media (Section 6.2):**

(1) **Groundwater**: The potential for exposure is low because groundwater is not used on-site for potable or industrial purposes and residential users have not been identified within a one-mile radius of the site. However, due to the shallow depth of groundwater in some portions of the site, exposure may occur during construction/excavation activities. In addition, the potential exists for occasional exposure to intermittent seeps near the on-site landfill during infrequent trespassing activities. The potential also exists for Riley Park residents to contact groundwater constituents present in basement sump water.

Potentially complete exposure pathways may include: on-site trespasser and off-site Riley Park resident: - incidental ingestion of and dermal contact with groundwater; and on-site construction/excavation worker - incidental ingestion of and dermal contact with groundwater, and inhalation of vapor phase chemicals released from groundwater to a confined space (trench).

(2) **Surface Soil**: The potential for exposure to contaminants in surface soils is limited to on-site receptors because impacted soils are contained within the facility boundaries. Even on-site, the potential for exposure is low for most receptors under current conditions because the principal areas of surface soil contamination have limited access; are located in remote portions of the site away from active manufacturing activities; or are covered by soil, gravel, concrete, or construction debris. Furthermore, repair and extension of perimeter fencing along the previously active manufacturing area further limits site access. The receptor with the greatest potential for exposure is the current/future on-site construction/excavation worker, where a greater likelihood of direct contact with impacted soil is associated with intrusive activities.

Potentially complete exposure pathways may include the following: on-site industrial worker, on-site trespasser, on-site construction/excavation worker and on-site restoration worker: incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors.

(3) **Subsurface Soil**: Because subsurface soil contamination is only present on-site, and exposure to subsurface soil is only achieved during excavation and construction activities, the only potential receptor is the on-site construction/excavation worker.

Potentially complete exposure pathways may include incidental ingestion of and dermal contact with subsurface soil and inhalation of soil-derived particulates and vapors.

**Incomplete Exposure Pathways by Media (Section 6.3):**

(1) **Groundwater:** Groundwater is not used on-site for potable or industrial uses. Therefore, direct contact (ingestion or dermal contact) with groundwater for on-site industrial workers is incomplete. Potential exists for groundwater to discharge into the East Branch of the Grand Calumet. However, due to the effect of mixing zone dilution into the river and solute transport effects, overall exposure to this discharge is insignificant (DuPont, 2000). In addition, no likely potential receptors for the stream have been identified (see Section 6.3.1). Exposure pathways associated with food are incomplete.

(2) **Soil:** Since the day-to-day operations of the on-site industrial worker do not include intrusive activities, direct contact (ingestion or dermal contact) with subsurface soil is not anticipated and is incomplete. Likewise, if surface soil contamination exists in an area of the site, which is not routinely accessible to on-site industrial workers due to institutional or physical controls (e.g., locked areas or asphalt caps), then exposure pathways in those areas are incomplete as well. Exposure pathways associated with food are incomplete.

Footnotes:
[3]Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

**Current Human Exposures Under Control**
**Environmental Indicator (EI) RCRIS code (CA 725)**
**Page 4**

4 Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant" (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1 ) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) -skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

√ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) -continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

not significant

If unknown (for any complete pathway) -skip to #6 and enter "IN" status code

Rationale and Reference(s):
The following complete exposure pathways were evaluated in Step Four of the EI determination process:

**Groundwater:**

- ❑ On-Site Construction/Excavation Worker - incidental ingestion of and dermal contact with groundwater, and inhalation of vapor phase chemicals released from groundwater to a confined space (trench);
- ❑ On-Site Trespasser - incidental ingestion of and dermal contact with groundwater; and
- ❑ Resident in Riley Park – incidental ingestion of and dermal contact with groundwater.

**Surface Soil:**

- ❑ On-Site Industrial Worker - incidental ingestion of and dermal contact with surface soil; and inhalation of soil-derived particulates and vapors.
- ❑ On-Site Construction/Excavation Worker - incidental ingestion of and dermal contact with surface soil; and inhalation of soil-derived particulates and vapors;
- ❑ On-Site Restoration Worker - incidental ingestion of and dermal contact with surface soil; and inhalation of soil-derived particulates and vapors; and
- ❑ On-Site Trespasser - incidental ingestion of and dermal contact with surface soil; and inhalation of soil-derived particulates and vapors.

**Subsurface Soil:**

- ❑ On-Site Construction/Excavation Worker - incidental ingestion of and dermal contact with subsurface soil; and inhalation of soil-derived particulates and vapors.

Only on-site trespasser exposure to **surface soil** in the fenced main operating portion of the site was reasonably expected to be significant. Therefore, further evaluation of this pathway is appropriate for those constituents whose maximum detected concentration exceeded screening levels.

Additional information regarding exposure pathway analysis is provided in Section 7 of the EI Report prepared by URS Diamond for DuPont.

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

**Current Human Exposures Under Control**
**Environmental Indicator (EI) RCRIS code (CA 725)**
**Page 5**

5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

√ If yes (all "significant" exposures have been shown to be within acceptable limits) –continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

Section 8 of the EI Report prepared by URS Diamond for DuPont details the risk characterization conducted for the on-site trespasser exposure pathway **(incidental ingestion of and dermal contact with surface soil; and inhalation of soil-derived particulates and vapors)**. The risk characterization process included the calculation of hazard quotients (HQs) for noncancer effects of chemicals and excess cancer risks for carcinogenic effects of chemicals, for the on-site trespasser exposure pathway. The risk characterization utilized the following components in the calculations:

- ❑ Exposure point concentrations for constituents in surface soil were calculated as the ninety-five percent (95%) upper confidence limit (UCL) on the mean (USEPA, 1989) (Table 13). Statistical treatment was not conducted for constituents with less than six samples in a data set; therefore, the maximum detected concentration was used as the exposure point concentration. Calculations are presented in the *Human Health Baseline Risk Assessment* (BLRA) (DuPont , 2004).
- ❑ Conservative exposure assumptions (exposure frequency of 1 day per month for 5 months, exposure duration of 10 years, 25% of body surface area exposed) (Table 14).
- ❑ USEPA-recommended toxicity factors (cancer slope factors and non-cancer reference doses) (Table 14 of BLRA, DuPont, 2004); and
- ❑ Standard USEPA risk assessment equations (USEPA, 1989) (Appendix C).

All results were within USEPA's acceptable risk levels (risk 1E-06 to 1E-04, HQ<1). Therefore, the risk characterization results support the following conclusion that exposure to surface soil does not pose unacceptable risk to on-site trespassers via direct contact or inhalation pathways.

Risk characterization calculations for SWMU 4 (Insecticide Disposal Area) are presented as Appendix C of this report. Calculations for additional SWMUs and AOCs presented in Table 15 can be found in Appendix E of the BLRA (DuPont, 2004).

**Current Human Exposures Under Control**
**Environmental Indicator (EI) RCRIS code (CA 725)**
**Page 6**

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

> **YE** -Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **the DuPont East Chicago** facility, EPA ID # **IND 005 174 254**, located at **5215 Kennedy Avenue in East Chicago, Indiana** under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.
>
> NO -"Current Human Exposures" are NOT "Under Control."
>
> IN -More information is needed to make a determination.

Completed by (signature) Date
(print)
(title)

Supervisor {signature) Date
print)
(title)
(EPA Region or State)

Locations where References may be found:
CH2M Hill, 1991. *Phase II Groundwater Assessment*, East Chicago Plant, East Chicago, Indiana, DuPont, Volumes I and II. August.
CH2M Hill, 1997. Current Conditions Report for the DuPont East Chicago Facility. October.
DuPont, 1999. Phase I RFI Work Plan, DuPont East Chicago Facility, East Chicago, Indiana. May.
DuPont, 2000. Phase I RFI Report, DuPont East Chicago Facility, East Chicago, Indiana. September.
DuPont, 2004a. Phase II RFI Report, DuPont East Chicago Facility, East Chicago, Indiana. April.
DuPont, 2004b. Environmental Indicator Determination Report, Current Human Exposures Under Control (CA 725) for DuPont East Chicago, East Chicago, Indiana. September.

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**FINAL NOTE: The human exposures EI is a qualitative screening of exposures and the determinations within this document should not be used as the sole basis for restricting the scope of more detailed (e.g., site-specific) assessments of risk.**

# 1.0 INTRODUCTION

## 1.1 Environmental Indicator Background

The E.I. DuPont de Nemours and Company (DuPont) East Chicago Facility has been designated by the United States Environmental Protection Agency (USEPA) as one of the Corrective Action (CA) Baseline facilities as part of the agency's efforts to comply with the 1993 Government Performance Results Act (GPRA). Compliance with the GPRA for the Resource Conservation and Recovery Act (RCRA) CA Program is measured by achieving a positive determination with two environmental indicators (EIs): migration of contaminated groundwater under control and current human exposures under control. As a "Baseline" facility, it is desired that compliance with the two relevant EIs be achieved by 2005.

Currently the GPRA EIs are the most important regulatory driver outside of the RCRA Hazardous Waste Permit for DuPont. The two primary performance goals of the EI determination program are positive determinations for "groundwater contamination under control" (EI RCRIS Code CA750) and "current human exposures under control" (EI RCRIS Code CA725).

## 1.2 Report Purpose and Contents

The objective of this report was to provide the results of the EI CA725 determination completed for the DuPont East Chicago Facility. The EI CA750 determination has been completed in a separate report. The DuPont East Chicago Facility presently has an insufficient (IN) EI compliance determination for CA725 and CA750. This determination was chosen because at that time a positive EI determination (YE) was not fully supportable.

This report includes:

- Site history and background (Section 2),
- Overview of EI determination process (Section 3),
- Step One: Data review and usability (Section 4),
- Step Two: Risk-based screening (Section 5),
- Step Three and Step Four: Exposure assessment (Section 6 and Section 7),
- Step Five: Risk Characterization (Section 8)
- Step Six: EI determination conclusion (Section 9), and
- References used in this report (Section 10).

# 2.0 SITE HISTORY & BACKGROUND

The following sections include a brief summary of the DuPont East Chicago Facility history. Information contained in these sections is summarized from the *Phase I RCRA Facility Investigation (RFI) Work Plan* and *Phase I RFI Report*, submitted to the USEPA in May 1999 and September 2000, respectively.

## 2.1 Facility Location & Setting

The DuPont East Chicago facility is located at 5215 Kennedy Avenue, East Chicago, in Lake County, Indiana (see Figure 1). Of the 440 acres, roughly 430 acres are contiguous and constitute the "facility." The site is bounded on the north by Riley Park (a residential community) and various commercial properties such as a salvage yard and trucking facility, the south by the East Branch of the Grand Calumet River, the east by commercial properties (including the City of East Chicago Solid Waste Transfer Station), and the west by Kennedy Avenue and the former USS Lead Refinery.

The Grasselli Corporation constructed an inorganic chemical manufacturing facility at the site in 1892. Development occurred primarily within the western part of the property. The southern part of the developed area was used primarily for manufacturing purposes and is sometimes referred to as the primary manufacturing area (see Figure 2). The northwest quadrant of the property and the eastern edge of the developed area were used for waste management purposes. The eastern part of the property, sometimes referred to as the "natural area," is not developed and is currently being managed under the approved natural resource damage assessment (NRDA) settlement for the site. These areas are illustrated on the surface of the three-dimensional representation of the facility depicted in Figure 2.

The land surface within the active and previously active manufacturing areas and at almost all of the waste management areas consists of fill of one kind or another. Vegetative cover is becoming established throughout the waste management areas. Precipitation readily infiltrates the permeable fill and sand deposits present at the site. Storms generate little runoff because of infiltration and the nearly flat topography.

## 2.2 Current Land Use

Currently, the facility manufactures a colloidal silica product (Ludox®) and a sodium silicate solution. These products are used in x-ray film; photographic paper; pigments; nonslip coatings; low phosphate detergents; and metal castings for aerospace, medical, and recreational products. Manufacturing operations, including support activities, cover 28 acres in the southwest corner of the site. The work force consisted of about 40 employees in early 2000 when the business was sold to W.R. Grace Company. No other manufacturing activities currently occur elsewhere on the site.

A 6-foot-high fence topped with razor wire surrounds the main operating area of the site, including the previously active manufacturing area. The fence and property perimeter are patrolled routinely to control trespassing and monitor the condition of the fence.

## 2.3 Groundwater and Water Supply

Groundwater is present 0 to 10 feet below ground surface (bgs) in the thin sand unit underlying the site. The water table is generally encountered 3 to 10 feet bgs. Groundwater flow is away from an east-west groundwater divide that runs through the developed part of the site (see Figure 2). On the south side of the divide, groundwater flows south toward and discharges into the East Branch of the Grand Calumet River. On the north side of the divide, groundwater flows to the north toward Riley Park, the salvage yard, and the trucking operations. In the current conditions report (CCR), water level data showed the presence of a local groundwater depression in Riley Park (Figure 2-9 of the CCR) caused by the combined effects of infiltration into sewers and basement sump pumping (CH2M Hill, 1997). It is believed that sewers in the southern half of Riley Park intercept a portion of the groundwater flow migrating north from the site. Groundwater is not used for drinking water, including irrigation, on or near the site. Lake Michigan is the source of domestic water supply for the City of East Chicago and surrounding communities (Hammond, Whiting, Gary). The shallow groundwater in the Calumet Aquifer is not used as a potable water supply. The bedrock aquifer, about 150 feet bgs, is used in limited capacity for industrial water (CH2M Hill, 1997).

Based on these flow dynamics, the groundwater system has been subdivided into two pools: Pool A located to the north of the divide and Pool B located to the south of the divide. However, localized mounding of groundwater occurs in the vicinity of the on-site industrial landfill. In this area, there appears to be a localized flow component in an easterly direction toward the natural area. This area has a potential for release to intermittent surface water that may pond on the land surface during wet periods (DuPont, 2000).

In the Phase I RFI report, DuPont found that groundwater containing levels of dissolved arsenic exceeding the screening criteria was migrating to the north towards Riley Park. Although no unacceptable risk to Riley Park residents from potential exposure to contaminated groundwater was identified, DuPont constructed a permeable reactive barrier (PRB) in May 2002 as an interim remedial measure (IRM) to reduce arsenic concentrations in groundwater. The PRB parallels the northern property line (200 feet set back from the property fence line) and laterally overlaps the Riley Park residential area. Quarterly groundwater monitoring of 11 on-site wells is conducted to monitor remedy effectiveness.

## 2.4 Surface Water Features

The Grand Calumet System (which comprises the East Branch, West Branch, and Indiana Harbor Canal) is the predominant surface water feature within the region. In the early 1800s, the smaller natural river (referred to as the Grand Calumet River) flowed to the east, discharging to Lake Michigan in Gary. In the early 1900s, the Indiana Harbor Canal was dug between Lake Michigan and the river to provide a shipping canal for local industry.

The course of the East Branch of the Grand Calumet River was modified during the construction of the U.S. Steel Gary Works facility and at several locations during

construction of Interstate 90 in 1956. The latter activities affected the location of the waterway adjacent to the DuPont property. As a result, the channel was shifted south and reinforced along the southeastern edge of the property. Evidence of filling along the northern channel on the site can be seen in aerial photographs taken in the early 1960s (CH2M Hill, 1997).

Today, flow from the East Branch joins flow from the West Branch just west of the DuPont East Chicago facility at the southern end of the Indiana Harbor Canal. The canal conveys the combined flow north-northeast from there to Lake Michigan. In 1996, more than 99% of the effluent discharge to the East Branch of the Grand Calumet System was from the U.S. Steel Gary Works facility and the Gary Sanitary District upstream of the site (CH2M Hill, 1997). The East Branch also receives intermittent discharges from storm drains and combined sewer overflows during significant rainfall events. However, stormwater runoff represents only a small fraction of flow within the waterway (CH2M Hill, 1997).

The Grand Calumet System from Gary to the Indiana Harbor Canal, which includes the East Branch, was assessed by the IDEM as not supporting the following designated uses: aquatic life, fish consumption, and recreational contact (IDEM, 2002). The Indiana State Department of Health (ISDH) has issued a no fish consumption advisory (do not eat) for all fish types in the Grand Calumet River/Indiana Harbor Canal. A general carp fish consumption advisory has also been issued for all Indiana rivers and streams only (ISDH, 2001).

## 2.5 SWMUs and AOCs

Fifty-five SWMUs and 44 AOCs were identified at the site using information contained in the CCR (CH2M Hill, 1997); historic aerial photographs; and the definitions provided in the *Federal Register* for July 15, 1985, July 27, 1990, and May 1, 1996. Clarification of these determinations was offered by DuPont personnel. The locations and boundaries of SWMUs and AOCs based on this review are illustrated in Figures 3-1, 3-2a, and 3-2b and Appendix B of the Phase I RFI report (DuPont, 2000). Brief descriptions of the SWMUs and AOCs are provided in Tables 1 through 3 of this report. Supplemental information, where available, is provided in the CCR (CH2M Hill, 1997).

To establish investigation priorities at the site, the SWMUs and AOCs identified in the CCR were ranked using the process described in the Phase I RFI work plan (DuPont, 1999). Individual SWMU and AOC prioritization work sheets were completed (see Appendix B of the Phase I RFI work plan), and 57 SWMUs/AOCs were categorized as having either a high or uncertain potential for release. These units and areas were targeted for investigation in the Phase I RFI. Other SWMUs/AOCs were categorized as having low or no potential for release.

At the completion of the Phase I RFI, 22 of the original 57 SWMUs and AOCs investigated remain ranked as high for one or more pathways (DuPont, 2000). In addition, seven other SWMUs and AOCs were re-ranked as "unknown" because mitigating factors (vegetative cover, limited access, or grain size) that prompted the pre-Phase I RFI rankings to "low" have been reconsidered. The Phase II RFI investigated the

release to air potential at these units (SWMUs 1A, 1B, 1I, 2C, 8, 10A, 10D, 12A and 12B and AOC 2B).

# 3.0 EI DETERMINATION PROCESS

In 1999, the USEPA developed guidance to assist in the EI determination process (USEPA, 1999). The guidance document provides the EI evaluator with a scoresheet to document EI determinations. This scoresheet is completed in the following stepped approach:

- Step 1 – *Has all available relevant/significant information on known and reasonably suspected releases... subject to RCRA Corrective Action... been considered in this EI determination?*
- Step 2 – *Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated" above appropriately risk-based "levels"...from releases subject to RCRA Corrective Action?*
- Step 3 – *Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?*
- Step 4 – *Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant"?*
- Step 5 – *Can the "significant" exposures (identified in #4) be shown to be within acceptable limits?*
- Step 6 – *EI Determination Conclusion*

A more detailed description of each step completed for this process is included in the following sections of this report. This report completes Steps 1 through Step 6.

# 4.0 STEP ONE – DATA REVIEW

Step one in the EI determination process asks the following question:

> *Has all available relevant/significant information on known and reasonably suspected releases... subject to RCRA Corrective Action... been considered in this EI determination?*

This section therefore presents a review of applicable investigations conducted at the DuPont East Chicago Facility. In reviewing the data, only releases from units subject to RCRA corrective action authority (e.g., solid waste management units (SWMUs) and Areas of Concern (AOCs)) were considered in the evaluation.

## 4.1 Summary of Investigations

Previous environmental studies conducted at the DuPont East Chicago Facility are briefly described in Table 4-1 of the CCR. Investigations performed by DuPont (and others) are summarized below:

- 1990 Phase II Environmental Site Assessment (CH2M Hill)
  - Groundwater
  - Riley Park sumps and sewers
- 1991-1992 Spring Water Quality Assessment (CH2M Hill)
  - Seep water
- 1992 Phase III Environmental Site Assessment (CH2M Hill)
  - Groundwater
  - In situ goundwater
  - Soil (two surface soil, 55 subsurface soil)
- 1998-1999 Sediment Characterization Study (Exponent)
  - Surface water (Grand Calumet River in 1998 and 1999 and wetlands sampling in 1998)
  - Sediment (wetlands sampling in 1998)
- 1999-2001 Phase I RFI (URS Diamond)
  - Groundwater (installation of seven new wells and five rounds of groundwater monitoring from 29 wells)
  - Soil (180 surface and subsurface soil samples from 137 locations)
- 2000 Environmental Baseline Assessment (URS Diamond)
  - Groundwater (five wells located within Active Manufacturing Area)
  - Surface soil (30 locations within Active Manufacturing Area)
- 2002-2003 Post-IRM Groundwater Monitoring
  - Groundwater monitoring (up to nine wells depending on the event)

- ❑ 2002 Natural Area Assessment (URS Diamond)
  - Two rounds of groundwater monitoring from 11 wells located within the Natural Area and along the perimeter of the site
  - Soil (13 surface and/or subsurface soil samples from 13 locations) to assess placement of security fencing
- ❑ 2003 Phase II RFI (URS Diamond)
  - One round of groundwater monitoring from 13 wells located at the site perimeter
  - Soil (131 surface and/or subsurface soil samples from 71 locations)
- ❑ 2004 Riley Park Sampling (USEPA / URS Diamond)
  - Riley Park Sump Water (four basement sumps sampled)
  - Surface soil (nine samples collected from 4 residences to evaluate the periodic discharge of basement sump water onto the ground surface).

With the exception of the RFI, environmental investigations conducted at the site were not designed to address the presence or absence of releases at specific SWMUs or AOCs, or to determine the nature and extent of contamination at those units. However, the analytical data collected during these investigations generated the quality of data (Level III or IV) that is acceptable for preliminary risk evaluation purposes. Therefore, in some cases, these data are applicable to the EI determination.

## 4.2 Data Set for EI Determination

The following environmental quality data was utilized in the EI determination:

- ❑ Groundwater samples collected from between five and eight rounds of monitoring (depending on location) between November 1999 and November 2003
- ❑ Sump water samples collected in 1990 and 2004 from Riley Park basements
- ❑ Shallow soil samples (less than 2 feet deep) and subsurface soil samples (within 12 feet bgs) collected during the 1999 Phase I RFI and 2003 Phase II RFI from 52 SWMUs and AOCs; and shallow soil samples collected during the 2004 Riley Park Sampling Event.

Analytical data results are tabulated by media in Appendix A.

The following environmental quality data was considered but was not included in the EI determination data set because they are not applicable, sample locations in relation to SWMUs and AOCs are not known, or more recent and complete data sets were available:

- ❑ Groundwater data collected prior to the Phase I RFI.
- ❑ Soil samples collected during the 1992 Phase III Environmental Site Assessment.
- ❑ Soil samples collected during the 2000 environmental baseline assessment and 2002 Natural Area assessment (samples were not collected to evaluate releases from SWMUs or AOCs).
- ❑ Subsurface soil samples (> 12 feet below ground surface (bgs)). Deep soil is not considered a significant source of ground surface emissions.

- Surface water sample collected from an upgradient location within the East Branch of the Grand Calumet System is not representative of potential site impact and, therefore, is not appropriate for the EI determination.
- Sediment along and within the East Branch of the Grand Calumet System was not evaluated as part of EI analysis because it is being managed under the Natural Resource Damage Assessment (NRDA) settlement; therefore, data collected during the Exponent investigation was not utilized.
- Seep samples collected from three springs in the Natural Area between 1991 and 1992 (managed under the NRDA settlement).
- Historical data collected by others prior to Phase II Environmental Site Assessments (e.g., USGS data).

# 5.0 STEP TWO – RISK-BASED SCREENING

Step two of the EI determination process asks the following question:

> *Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated" above appropriately risk-based "levels"...from releases subject to RCRA Corrective Action?*

This section therefore presents the risk-based screening levels appropriate for current land- and groundwater-use at the DuPont East Chicago Facility and the media screening process.

## 5.1 Sources of Screening Criteria

The following appropriate risk-based screening levels were identified for use in the EI determination process based on current actual land and water uses:

### 5.1.1 Groundwater

Shallow groundwater is not used for drinking water or irrigation on or near the site; therefore, there are no appropriate risk-based levels for screening. However, groundwater from Pool A flows to the north toward Riley Park where some contact may occur with basement water. As a result, constituents detected in groundwater were compared to Indiana Groundwater Standards (IGS) or federal Maximum Contaminant Levels (MCLs). USEPA Region IX Preliminary Remediation Goals (PRGs) for Tap Water were used where IGS/MCLs were unavailable. The PRG represents a combined exposure including inhalation of volatile compounds and ingestion for residential tap water. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1 million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).

Groundwater from Pool B may discharge to the East Branch of the Grand Calumet River. Therefore, groundwater concentrations were also compared to Indiana Water Quality Standards Tier I and Tier II Values for the Great Lakes Basin (IAWQS) (327 IAC 2) or federal Ambient Water Quality Criteria (AWQC) (40 CFR Part 131) where IAWQS were unavailable. The surface water quality criteria were based on protection of human health (nondrinking water and fish consumption). If criteria were not available from either source, then concentrations were compared to the IGS/MCL.

### 5.1.2 Soil

On-site surface and subsurface soil concentrations were compared to USEPA Region IX PRGs for industrial soil. Off-site surface soil concentrations (Riley Park) were compared to background soil concentrations in samples collected in areas that were not impacted by sump water discharges. The PRG represents a combined exposure including inhalation of particulates and volatile compounds, dermal absorption, and ingestion. For the purposes of this evaluation, PRGs were based on an excess cancer risk of $10^{-6}$ (1 in 1

million) and a hazard quotient for noncancer effects of 0.1 to account for additivity (USEPA Region IX, 2002).

### 5.1.3 Indoor Air

Although the subsurface vapor guidance (*Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils, Subsurface Vapor Intrusion Guidance, November 2002*) is specific to residential sites, the general principles can be adjusted for other land uses (i.e., industrial, commercial). The USEPA does not expect this guidance to be used in primarily occupational settings. The Occupational Safety and Health Administration (OSHA) and USEPA have agreed that OSHA generally will take the lead role in addressing occupational exposures (USEPA, 2002a).

Because the site is industrial, the OSHA permissible exposure levels (PELs) and the American Conference of Governmental Industrial Hygienist (ACGIH) threshold limit values (TLVs) were used to develop appropriate indoor air target concentrations for potential on-site exposure rather than the residential indoor air target concentrations provided in the draft guidance. Table 4 presents the equation used to develop the screening criteria and the occupational screening levels used in the equation.

Volatile constituents have been reported in on-site groundwater. However, the potential for vapor intrusion into buildings at the site or off-site is incomplete under current land use conditions because locations where these constituents are present in groundwater do not extend under or within 100 feet of occupied buildings.

Soil data were excluded from the indoor air evaluation. The draft vapor intrusion guidance does not recommend the use of soil concentrations because of the large uncertainties associated with using them.

## 5.2 Screening Evaluation

### 5.2.1 Exposure to Groundwater

For the purpose of the evaluation, groundwater was evaluated by groundwater flow components (Pool A or Pool B) rather than by SWMU or AOC. Groundwater expressed as seeps near the on-site landfill was also included in the evaluation. Tables 5 through 8 detail the evaluation.

#### Pool A

Groundwater has been collected from up to 13 monitoring well Pool A locations at the site since 1999, resulting in up to 131 groundwater samples for trace metals analysis (i.e., antimony, arsenic, barium, cadmium, chromium, copper, nickel, lead, selenium, vanadium, and zinc), major inorganics (e.g., cyanide), common metals (e.g., total and dissolved iron) and water quality parameters (e.g., chloride). Monitoring well locations are shown in Figure 3. Groundwater samples from select locations were also analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticide/herbicides, and polychlorinated biphenyls (PCBs). Table 5 compares the results for constituents measured in groundwater to IGS/MCLs or PRGs for tap water where

IGS/MCLs are unavailable. Because groundwater is not used for drinking water or irrigation at or near the site, the comparison to conservative health-protective screening levels for drinking water serves only as a rough guide to constituent concentrations rather than a measure of potential health risk. As shown in the table, the following COPCs were identified:

- VOCs
  - Chloroethane
  - 1,1-Dichloroethane
- Inorganics
  - Antimony
  - Arsenic (total and dissolved)
  - Boron (total and dissolved)
  - Cadmium (total and dissolved)
  - Chloride
  - Chromium
  - Fluoride
  - Iron (total and dissolved)
  - Lead (total and dissolved)
  - Manganese (total and dissolved)
  - Nickel (total and dissolved)
  - Selenium
  - Sulfate
  - Sulfide
  - Vanadium
  - Zinc (total and dissolved)

In addition to the constituents listed above, 1,2-dichloropropane was nondetect at detection limits that exceeded the PRG in more than one sample. The constituent is not suspected to be site-related; therefore, it was not retained in the risk assessment.

As previously discussed, groundwater from Pool A flows to the north toward Riley Park where some contact may occur with basement water. Of the COPCs identified for Pool A above, only arsenic, iron and sulfate exceeded IGS/MCLs in Riley Park sumps (Table 6). Sump locations are detailed in Figure 4. An IRM has been installed along the northern property line to address migration of arsenic-contaminated groundwater toward Riley Park.

### Pool B

Groundwater has been collected from up to 16 monitoring well Pool B locations at the site since 1999, resulting in up to 90 groundwater samples for trace metals analysis (i.e., antimony, arsenic, barium, cadmium, chromium, copper, nickel, lead, selenium, vanadium, and zinc), major inorganics (e.g., cyanide), common metals (e.g., total and dissolved iron) and water quality parameters (e.g., chloride). Monitoring well locations are shown in Figure 3. Groundwater samples from select locations were also analyzed for VOCs, SVOCs, pesticide/herbicides, and PCBs. Table 7 compares the results for constituents measured in groundwater to IGS/MCLs or PRGs for tap water where IGS/MCLs are unavailable. Because groundwater is not used for drinking water or irrigation at or near the site, the comparison to conservative health-protective screening levels for drinking water serves only as a rough guide to constituent concentrations rather than a measure of potential health risk. As shown in the table, the following COPCs were identified:

- VOCs
  - 1,2-Dichloroethane
  - Dichlorodifluoromethane
- Pesticides
  - 4,4'-DDD
- Inorganics
  - Aluminum (total and dissolved)
  - Antimony (total and dissolved)
  - Arsenic (total and dissolved)
  - Barium
  - Boron (total and dissolved)
  - Cadmium (total and dissolved)
  - Chloride
  - Fluoride
  - Iron (total and dissolved)
  - Lead (total and dissolved)
  - Manganese (total and dissolved)
  - Nickel (total and dissolved)
  - Sulfate
  - Sulfide
  - Vanadium (total and dissolved)
  - Zinc (total and dissolved)

In addition to the constituents listed above, the following constituents were nondetect at detection limits that exceeded the screening level in more than one sample: benzo(a)pyrene, pentachlorophenol, and thallium (four samples analyzed). None of these constituents are suspected to be site-related; therefore, they were not retained in the EI evaluation.

As previously discussed, groundwater from Pool B may discharge to the East Branch of the Grand Calumet River. Therefore, concentrations of constituents measured in groundwater wells from this pool were also compared to IAWQS with an applied conservative site-specific dilution factor to account for groundwater and surface water interaction. The surface water quality criteria are based on the protection of human health (nondrinking water and fish consumption). The dilution factor was calculated using conservative assumptions and site-specific hydraulic information (see Table 4-1 in the Phase I RFI report). The use of a conservative dilution factor is consistent with current USEPA RCRA EI guidance. No COPCs were identified (see Table 7).

### Intermittent Seeps

Groundwater from the localized mounding near the on-site landfill may express itself at the ground surface as intermittent seeps. Therefore, concentrations of constituents detected in groundwater monitoring wells located near this mounding (MW-8, MW-9, and MW-18) were also compared to IGS/MCLs. The following constituents exceeded screening levels (see Table 8):

- VOCs
  - Chloroethane
  - 1,1-Dichloroethane
- Inorganics
  - Arsenic (total and dissolved)
  - Boron (total and dissolved)
  - Cadmium
  - Fluoride
  - Iron (total and dissolved)
  - Lead
  - Manganese (total and dissolved)
  - Nickel (total and dissolved)
  - Selenium
  - Vanadium
  - Zinc (total and dissolved)

## 5.2.2 Exposure to Soil

### On-Site Surface Soil

Between 1999 and 2003, 156 surface soil samples (less than 2 feet bgs) were collected at the site from 152 soil boring locations. Soil boring locations are shown in Figure 3. Samples were analyzed for the following parameters: selected trace metals (e.g., arsenic, lead), selected coal and ash constituents, selected inorganic acid constituents (e.g., chloride and sulfate), cyanide, VOCs (e.g., Freon®, trichloroethene, chloroform), SVOCs, a few pesticides, and one herbicide. Appendix B in the *Human Health Baseline Risk Assessment* (BLRA) (DuPont ,2004) compares the detected constituents to PRGs for industrial soil for each applicable SWMU and AOC. As shown in the tables in Appendix B, the COPCs listed below were identified in surface soil at the site. Exceedances at each applicable SWMU and/or AOC (21 total) are indicated in Table 9. SWMUs and/or AOCs without an exceedance are also indicated in the table.

- VOCs
  - 1,1,2,2-Tetrachloroethane
  - Trichloroethene
  - Tetrachloroethene
- Pesticides/PCBs
  - Aroclor 1254
  - Aroclor 1260
  - 4,4'-DDT
- Inorganics
  - Antimony
  - Arsenic
  - Barium
  - Cadmium
  - Chromium
  - Copper
  - Iron
  - Lead
  - Manganese
  - Zinc

### On-Site Subsurface Soil

Between 1999 and 2003, 185 subsurface soil samples (greater than 2 feet bgs) were collected at the site from 113 soil boring locations. Soil boring locations are shown in Figure 3. Samples were analyzed for the following parameters: selected trace metals (e.g., arsenic, lead), selected coal and ash constituents, selected inorganic acid constituents (e.g., chloride and sulfate), cyanide, VOCs (e.g., Freon®, trichloroethene, chloroform), SVOCs, a few pesticides, and one herbicide. Appendix B in the BLRA compares the detected constituents to PRGs for industrial soil and MGVs for each applicable SWMU and AOC. As shown in the tables in the appendix, the COPCs listed below were identified in subsurface soil at the site based on PRG exceedances. Exceedances at each applicable SWMU and/or AOC (28 total) are indicated in Table 9. SWMUs and/or AOCs without an exceedance are also indicated in the table.

- ❑ VOCs
  - Trichloroethene
- ❑ Inorganics
  - Antimony
  - Arsenic
  - Cadmium
  - Chromium
  - Copper
  - Iron
  - Lead
  - Manganese
  - Zinc

### Riley Park Surface Soil

In November 2004, nine surface soil samples were collected from four residences in the 4900 Block of Riley Park to evaluate periodic discharge of arsenic-containing sump water onto surface soil. Soil samples were split between USEPA and DuPont for analysis. The results of these analyses are summarized in Table 10. As shown in the table, the detected arsenic concentrations were either below or within the range of control (background) samples collected indicating no appreciable accumulation of arsenic in soil near the sump discharge. As a result, Riley Park surface soil was excluded as a media of concern.

## 5.2.3 Exposure to Air

### Indoor Air

Volatile constituents have been reported in on-site groundwater. However, the potential for vapor intrusion into buildings at the site or off-site is incomplete under current land use conditions because locations where these constituents are present in groundwater do not extend under or within 100 feet of occupied buildings. Therefore, vapor intrusion of VOCs from groundwater to indoor area is not expected to be a potential concern. As previously discussed, soil was excluded as a media of concern.

### Outdoor Air

Most SWMUs, where constituents in surface soil exceed screening levels, are covered by building foundations, asphalt, concrete or crushed stone, or are located in remote/inactive portions of the facility; thereby, minimizing potential exposure to soil. In addition to

these covers, excavation limitations are in place to ensure the appropriate personal protective equipment (PPE) is used if soil is disturbed.

As previously discussed, the multi-pathway soil PRG includes the inhalation of particulates and volatile compounds. For the purposes of assessing inhalation exposures via the soil-to-air pathway, the pathway-specific industrial soil PRG values provided in the USEPA Region IX PRG intercalc tables were utilized. Constituents that exceeded the pathway-specific soil PRGs were retained for evaluation in the EI determination. The following constituents exceeded the soil-to-air pathway PRG: arsenic and lead.

Similar to the arguments presented above for indoor air, the groundwater to outdoor air pathway is not of a concern.

# 6.0 STEP THREE – COMPLETE EXPOSURE PATHWAYS

Step three of the EI determination process asks the following question:

> *Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?*

An exposure pathway consists of the following:

- Source of constituents;
- Mechanism of constituent release to the environment;
- Transport or exposure medium containing the constituents;
- Exposure point where humans (receptors) can contact the exposure medium; and
- Exposure route (e.g., inhalation or ingestion).

All of these elements must be present for an exposure to occur. Figure 5 depicts exposure pathways by which human receptors may be exposed to constituents in environmental media under current land- and water-use conditions. The purpose of this model for the EI determination process is to identify chemical sources and exposure pathways that may result in human exposure.

This section therefore presents the potential receptors for the current land- and groundwater-uses and complete exposure pathways for each receptor.

## 6.1 Potential Receptors

Potential receptors are defined as human populations or individuals and environmental systems that are susceptible to contaminant exposure from the DuPont East Chicago Facility. As part of the EI determination process, only current land- and water-use conditions were considered in determining exposure scenarios. However, future land use is anticipated to be no different than current, in that manufacturing operations will continue and use of the property will remain non-residential. The following potential human receptors were identified given the site setting and land uses at and adjacent to the site:

- *On-Site Industrial Worker*
  A portion of the site is an active heavy industrial facility; this use will continue. Therefore, on-site industrial workers are potential receptors. The industrial worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).
- *On-Site Construction/Excavation Worker*
  The on-site construction/excavation worker is potentially exposed to constituents in all environmental media while repairing subsurface utility lines, performing remedial activities or short-term construction. Subsurface soil depths for direct contact exposures by this receptor are defined as 2 to 12 feet bgs based on past activity at the facility and the location of utilities on-site. Groundwater occurs at

depths ranging from 3 to 10 feet bgs at the site; therefore, direct contact with groundwater may also occur during intrusive activities.

- *On-Site Restoration Worker*
  Restoration workers at the Natural Area may come into direct contact with contaminated media while removing exotic species, seeding, planting and while conducting species surveys. Therefore, on-site restoration workers are potential receptors. The restoration worker is potentially exposed to constituents in surface soil (0 to 2 feet bgs).

- *On-Site Trespasser*
  The main operating area of the site (including the previously active manufacturing area) is fenced and guarded, and access is controlled and limited to authorized personnel only. Trespassing, although sporadic, has occurred within the previously active manufacturing area. The on-site trespasser is assumed to be a youth aged 7 to 16 years. The on-site trespasser is potentially exposed to constituents in surface soil (0 to 2 feet bgs) at the site and groundwater expressed as seeps near the on-site landfill.

- *Off-Site Resident*
  Groundwater is not used for domestic water supply, including irrigation, in the Riley Park area. If contact with facility-related constituents were to occur, it would be restricted primarily to basement water potentially affected by groundwater discharges and limited to a small subset of property owners in the southern part of the community (CH2M Hill, 1991). During the door-to-door survey conducted by CH2M Hill in 1991, 13 residences reported basement water due to a high water table that was not adequately removed by sump pumps. The amount of water in the basements ranged from seeps to several inches and occurred rarely or during heavy rains. Therefore, off-site adult and child (age zero to six years) residents exposed to basement sump water were considered potential receptors.

Recreational users of the East Branch of the Grand Calumet System are virtually nonexistent. Land access to the stream banks on the site is limited due to site security, vegetation, marshy areas, and steep embankments. Water access to the stream (in particular the reach adjacent to the site) is also limited due to the lack of public launching areas and the presence of low bridges spanning the river channel. To the extent that recreators may use the area, such use would be restricted to warm weather months. However, the general appearance of the waterway and riparian areas, fish advisory warnings, and the abundant water recreation opportunities at nearby more aesthetically desirable areas (e.g., Lake Michigan) would discourage use. Therefore, recreational users of the East Branch were not considered potential receptors.

Sensitive receptors (e.g., daycare) are not located on or adjacent to the site. Therefore, these receptors were not considered potential receptors.

## 6.2 Potentially Complete Exposure Pathways

Consistent with the EI determination process, potentially complete exposure pathways identified in Figure 5 were further evaluated to determine if exposures can be reasonably expected to occur under current conditions at the site. The rationale for identifying pathways as incomplete is described in Section 6.3 of this report.

### 6.2.1 Groundwater

The potential for exposure is low since groundwater is not used on-site for potable or industrial purposes and residential users have not been identified within a one-mile radius of the site. However, due to the shallow depth of groundwater in some portions of the site and presence of groundwater seeps near the on-site landfill exposure may occur during trespassing and excavation/utility activities. In addition, the potential exists for Riley Park residents to contact groundwater constituents present in basement sump water.

Complete exposure pathways, therefore include the following:

- On-site Construction/Excavation Worker - incidental ingestion of and dermal contact with groundwater; and, inhalation of vapor phase chemicals released from groundwater to a confined space (trench)
- On-site Trespasser - incidental ingestion of and dermal contact with groundwater.
- Off-site Riley Park Resident –incidental ingestion of and dermal contact with groundwater.

### 6.2.2 Surface Soil

The potential for exposure to contaminants in surface soils is limited to on-site receptors because impacted soils are contained within the facility boundaries. Even on-site, the potential for exposure is low for most receptors under current conditions because the principal areas of surface soil contamination have limited access; are located in remote portions of the site away from active manufacturing activities; or are covered by soil, gravel, concrete, or construction debris. Furthermore, repair and extension of perimeter fencing along the previously active manufacturing area further limits site access. The receptor with the greatest potential for exposure is the on-site construction/excavation worker, where a greater likelihood of direct contact with impacted soil is associated with intrusive activities. Complete exposure pathways may include the following:

- On-Site Industrial Worker – Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors
- On-Site Construction/Excavation Worker – Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors
- On-Site Restoration Worker - Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors
- On-Site Trespasser – Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors

### 6.2.3 Subsurface Soil

Because subsurface soil contamination is only present on-site and exposure to subsurface soil only occurs during excavation and construction activities, the only potential receptor is the on-site construction/excavation worker. Therefore, complete exposure pathways may include incidental ingestion of and dermal contact with subsurface soil and inhalation of soil-derived particulates and vapors.

## 6.3 Incomplete Pathways

Mitigating factors were used in the evaluation of the completeness of an exposure pathway. The evaluation of mitigating factors uses logical and scientifically defensible reasoning based on a broader, more site-specific understanding of the conceptual site model to predict more accurately the potential effects of evaluated releases.

Mitigating factors may include caps and covers that minimize the potential for direct contact, ground water use restrictions, institutional controls established to minimize worker exposure and potential trespassers; or waste management records identifying the types of wastes handled at a unit.

Application of mitigating factors is consistent with the approach used in GPRA EI determinations. Current human exposures are considered to be controlled if there is not a complete exposure pathway.

### 6.3.1 Groundwater

Groundwater is not used on-site for potable or industrial uses. Therefore, direct contact (ingestion or dermal contact) with groundwater for on-site industrial workers is incomplete. Potential exists for groundwater to discharge into the East Branch of the Grand Calumet. However, due to the effect of mixing zone dilution into the river and solute transport effects, overall exposure to this discharge is insignificant (DuPont, 2000). In addition, no likely potential receptors for the stream have been identified.

Exposure pathways associated with food are incomplete.

### 6.3.2 Soil

Since the day-to-day operations of the on-site industrial worker do not include intrusive activities, direct contact (ingestion or dermal contact) with subsurface soil is not anticipated and is incomplete. Likewise, if surface soil contamination exists in an area of the site, which is not routinely accessible to on-site industrial workers due to institutional or physical controls (e.g., locked areas or asphalt caps), then exposure pathways in those areas are incomplete as well. For instance, within the active manufacturing area the presence of either asphalt or backfill limits the potential for exposure.

Exposure pathways associated with food are incomplete.

# 7.0 STEP FOUR – EXPOSURE ANALYSIS

The screening process used in step two and step three may yield an incomplete picture that over- or underestimates the conditions associated with that unit for posing a potential adverse effect on human health. As a result, step four of the EI determination process asks the following question:

> *Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant"?*

This section therefore considers the unit- or site-specific activity patterns and physical conditions that exist at the site or unit and focuses on whether potential exposure pathways and receptors can be reasonably expected to be significant.

## 7.1 Groundwater Exposure Pathways

The potentially complete exposure pathways for groundwater may include:

- On-site Construction/Excavation Worker - incidental ingestion of and dermal contact with groundwater, and inhalation of vapor phase chemicals released from groundwater to a confined space (trench);
- On-site Trespasser: - incidental ingestion of and dermal contact with groundwater and
- Off-site Riley Park Resident - incidental ingestion of and dermal contact with groundwater.

### 7.1.1 On-Site Construction/Excavation Worker

Since impacted groundwater underlies much of the DuPont East Chicago facility, there are potentially complete exposure pathways for on-site construction/excavation workers engaged in excavation activities where the water table might be encountered. With regard to the on-site construction worker, the exposure pathway is not significant due to a rigorous system of policies and procedures employed at the facility to protect against unacceptable human exposures. The DuPont East Chicago facility has utilized a permitting process, which requires DuPont East Chicago Environmental Affairs' authorization for any intrusive activities (boring, drilling, excavation, etc.) into the soils or building foundations at the facility. The purpose of the permitting process is to ensure that:

- Appropriate measures are taken for personnel protection should such subsurface activity encounter impacted soils or groundwater [i.e., personal protective equipment (PPE)].
- Construction methods are conducive to protection of the groundwater from contamination or transfer of contaminants laterally or vertically.

- Construction practices are carried out so as to minimize the generation of potentially impacted media and to ensure that such media are properly characterized and disposed of in accordance with regulatory requirements.

Due to the strict adherence to the intrusive activity permitting process that is required at the DuPont East Chicago facility, the potential exposure of on-site construction/excavation workers to impacted groundwater is not significant.

### 7.1.2 On-Site Trespasser

Complete exposure pathways for an on-site trespasser exist in areas where the potential for exposure to seep water may occur (e.g., on-site landfill) during recreational activities. On-site trespassers are assumed to be a youth age 7 to 16 years of age (exposure duration of 10 years) with an exposure frequency of 40 days per year (typical for a recreational scenario). Average concentrations of constituents detected in seep water and shallow groundwater in this area were up to 8 times above the MCL for drinking water ingestion (i.e., arsenic) (Table 6). However, the incidental ingestion of contaminated groundwater due to accidental splashing or hand to face contact (40 times less), indicates that the exposure is insignificant.

### 7.1.3 Resident in Riley Park

On-site groundwater gradients indicate that groundwater from the northern property line of the DuPont East Chicago Facility is migrating toward the Riley Park area where flow may be intercepted by underground sanitary sewers or basement sumps in homes along the southern edge of Riley Park (DuPont, 2000). Potential for contact with basement sump water exists for Riley Park residents. Therefore, this complete exposure pathway was evaluated during the EI determination using sump water data collected from the 4900 block of Riley Park in 1990 and November 2004 (Table 6) and perimeter monitoring well data (MW-1, MW-10, MW-11, MW-21 through MW-25) (Table 11).

Groundwater quality in Pool "A" migrating toward the Riley Park area has been relatively stable with respect to metals concentrations for more than a decade. As a result, significant changes were not observed between sump concentrations measured in 1990 and 2004. Arsenic concentrations exceeded the MCL for this constituent, and iron and zinc exceeded USEPA Region IX PRGs for tap water in sump water samples collected. Possible sources of inorganics in groundwater include iron slag that was reportedly used as fill in the area or releases from materials in the northern portion of the site. Concentrations below or near screening levels suggest that intermittent physical contact with water seeping into basements would not likely present an unacceptable health hazard. Even though arsenic has been detected in sump water approximately four (4) times the MCL, the incidental ingestion of this water due to accidental splashing or hand to face contact would be approximately 20 times less than would occur if the sump water were to be used as a source of drinking water (i.e. 50 milliliters (mL)/hour times 2 hours/day = 100 mL/day; versus 2,000 mL/day); and this potential exposure is therefore insignificant.

Of the constituents detected in the perimeter monitoring wells, arsenic exceeded screening levels by the greatest margin. However, as mentioned in the Phase I RFI

report, the most likely exposure scenario indicates that there would not be an unacceptable human health risk due to this migration because (1) the exposure potential is minimal (incidental ingestion and reduced frequency), (2) the groundwater is not used for domestic purposes (including irrigation), and (3) dilution effects will reduce constituent levels at downgradient locations (DuPont, 2000). Furthermore, the PRB wall installed at the northern perimeter of the site was designed to significantly reduce arsenic migration in groundwater.

In further support the position that exposure to sump water would not represent a significant risk, DuPont has gone through the exercise of examining what the hypothetical risk to Riley Park residents might be if one were to assume that the concentrations of constituents in perimeter monitoring wells were to be representative of those occurring in the sumps themselves. In conducting this hypothetical assessment, it was assumed that residents (both adults and children) could contact the sump water for a two-hour period, ten times each year, over their entire lifetime. It also was assumed that the residents would be exposed by dermal contact with, and incidental ingestion of, the sump water. Inhalation was not considered, as the only constituents of interest in this groundwater plume are metals, which are non-volatile.

After going through this exercise, it was determined that the incremental cancer risks associated with exposure to sump water (assuming that they contained perimeter well levels of metals) would fall within USEPA's acceptable risk range of $1 \times 10^{-4}$ to $1 \times 10^{-6}$, and would have hazard indices less than 1.0. These results are shown in attached Table 12, and the supporting calculations are shown in Appendix B. As a result of this evaluation coupled with current sump water data, risk associated with exposure of residents to basement sump water is considered to be insignificant.

## 7.2 Surface Soil Exposure Pathways

The potentially complete exposure pathways for surface soil may include:

- On-Site Industrial Worker – Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors
- On-Site Construction/Excavation Worker – Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors
- On-Site Restoration Worker - Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors
- On-Site Trespasser – Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors

### 7.2.1 On-Site Workers

#### Industrial and Construction/Excavation Workers

Institutional controls are in place to prevent disturbance of soil (both surface and subsurface) such that on-site receptors will not become exposed to contaminants in excess of screening criteria. These controls include permits, security patrols, and deed restrictions. Permits are required for various activities at the site. Specifically,

excavation permits are required for an intrusive activity (Section 7.1). The permit process is a defined process where work locations are checked against site-wide maps. All available site environmental data, soil characterization and utility information are also reviewed to ensure appropriate PPE is used to prevent exposure. The site is fenced and security controls access onsite 24 hours a day. Routine security patrols are also conducted throughout the site. In addition, Plant and Area orientations are required for all workers prior to commencing work onsite.

Areas where surface soil exceeds screening criteria are located in remote or inactive portions of the plant; are paved or covered by old foundation and existing buildings; either heavily vegetated or a gravel cover is present; or access is restricted due to security fencing. Even in the highly unlikely event that a worker encountered impacted surface soil, the exposure frequency and duration assumptions inherent in the derivation of the risk-based criteria used to identify "contamination" are considerably greater in magnitude than the exposure a worker could realistically attain.

Due to the strict adherence to the intrusive activity permitting process that is required at the DuPont East Chicago facility and the location of surface soil exceedances, potential on-site industrial worker and on-site construction/excavation worker exposures to impacted surface soil are not significant.

#### Restoration Workers

Waste management activities have not occurred in the Natural Area. Therefore, analytical data are not available to directly evaluate the potential significance of worker exposure to impacted surface soil. As a result, analytical data from SWMUs and AOCs located directly adjacent to the Natural Area were used in the exposure evaluation (SWMUs 1C, 1L, 10A, 10C, 10D and 20 and AOCs 11 and 12). At these units, average concentrations of constituents detected in surface soil were above or slightly above screening criteria. However, similar to the rationale presented above for the industrial and construction/excavation worker scenarios, the exposure frequency and duration assumptions inherent in the derivation of the risk-based criteria used to identify "contamination" are considerably greater in magnitude than the exposure a worker could realistically attain. For instance, restoration worker activities typically involve an exposure frequency considerably less than the 250 days per year assumed for the default industrial exposure. Furthermore, Plant and Area orientations are required for all workers prior to commencing work onsite. As a result, potential on-site restoration worker exposures to impacted surface soil are not expected to be significant.

### 7.2.2 On-Site Trespassers

Trespassing has also been observed within the fenced main operating portion of the site (including the previous manufacturing area and waste management areas) due to breaches in the fence line where access may occur. Such trespassing has been sporadic and recently breaches in the fence were repaired. Assuming that a trespasser event still occurred one (1) day per month during warm weather months (or five (5) times a year) and contact with surface soil occurred for one (1) hour each event, total exposure would be five (5) hours per year compared to 2,000 hours per year for default industrial exposure. Therefore, industrial soil USEPA Region IX PRGs can be considered about

400 times too conservative for evaluating potential exposure to surface soil in this area. However, the average concentration of arsenic in surface soil at SWMU 4 (Insecticide Disposal Area) (12,534 mg/k) exceeded the PRG by a factor of approximately 7,300 (Appendix B of the BLRA, DuPont, 2004). As a result, further evaluation of this pathway is appropriate for those constituents whose maximum detected concentration exceeded screening levels. SWMU 4, where the maximum detected concentration of arsenic was reported in surface soil at the site, was conservatively chosen for the EI evaluation to draw conclusions regarding overall risk at the site.

Even though the average concentration of lead (10,316 mg/kg) detected in the main operating areas of the site was approximately 14 times above the USEPA Region IX PRG in surface soil samples collected, overall exposure is considered insignificant due to the following:

- The limited event frequency (five (5) events per year) would allow the clearance of lead from the blood between each event;
- Those units where lead in surface soil exceeds screening criteria consists of less than 10% of the potential surface area for exposure (within main operating areas); and
- The potential for direct contact is further limited due to the presence of a ground cover (construction debris, concrete slab, or moderate vegetative cover) over a majority of these units, in particular those where the highest concentrations of lead have been detected (i.e., SWMUs 4, 7, and 10D).

## 7.3 Subsurface Soil Exposure Pathways

The potentially complete exposure pathways for subsurface soil may include the on-site construction/excavation worker - incidental ingestion of and dermal contact with subsurface soil and inhalation of soil-derived particulates and vapors.

The permitting process described in Section 7.1 for intrusive activities would preclude access to impacted soils without protective measures, such as PPE, to prevent exposures. Due to the strict adherence to the intrusive activity permitting process that is required at the DuPont East Chicago facility, potential on-site construction/excavation worker exposures to impacted subsurface soil are not significant.

## 7.4 Summary of Exposure Analysis

The following complete exposure pathways were evaluated in Step Four of the EI determination process:

- On-site Industrial Worker - Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors.
- On-site Construction/Excavation Worker - incidental ingestion of and dermal contact with soil (surface and subsurface) and groundwater; inhalation of soil-derived particulates and vapors; and inhalation of vapor phase chemicals released from groundwater to a confined space (trench).

- On-site Restoration Worker - Incidental ingestion of and dermal contact with surface soil and inhalation of soil-derived particulates and vapors.
- On-Site Trespasser - incidental ingestion of and dermal contact with surface soil and groundwater; and inhalation of soil-derived particulates and vapors.
- Off-site Riley Park Resident – incidental ingestion of and dermal contact with groundwater.

Only on-site trespasser exposure to surface soil in the fenced main operating portion of the site could be expected to be significant. Therefore, further evaluation of this pathway is appropriate for those constituents whose maximum detected concentration exceeded screening levels.

# 8.0 STEP FIVE – RISK CHARACTERIZATION

Step five of the EI determination process quantitatively evaluates the specifics of reasonably anticipated exposures exceeding screening levels. Specifically,

> *Can the "significant" exposures (identified in #4) be shown to be within acceptable limits?*

This section therefore details the risk characterization conducted for the on-site trespasser exposure pathway.

## 8.1 Risk Characterization Process

Risk characterization includes the calculation of hazard quotients (HQs) for noncancer effects of chemicals and excess cancer risks for carcinogenic effects of chemicals, for all exposure pathways and receptors. HQs are the ratio of the estimated chemical intake to the non-cancer reference dose. A HQ of 1 or less indicates that no unacceptable health risk is expected from the exposure conditions evaluated. A HQ above 1 does not indicate an actual health threat exists, but indicates cause for concern for potential adverse health effects.

Cancer risks are expressed as the excess probability of experiencing cancer as a result of the exposure. Cancer risks are calculated by multiplying the chemical intake by the cancer slope factor. USEPA's target acceptable excess cancer risk range is 1E-06 to 1E-04 (1 in 1,000,000 to 1 in 10,000) (USEPA, 1989).

Chemical-specific HQs and cancer risks are summed for each pathway to yield a cumulative hazard index (HI) for noncancer effects and total excess cancer risk for each receptor.

The risk characterization utilized the following components in the calculations:

- Exposure point concentrations for constituents in surface soil were calculated as the ninety-five percent (95%) upper confidence limit (UCL) on the mean (USEPA, 1989) (Table 13). Statistical treatment was not conducted for constituents with less than six samples in a data set; therefore, the maximum detected concentration was used as the exposure point concentration. Calculations are presented in the BLRA (DuPont, 2004).
- Conservative exposure assumptions (exposure frequency for the on-site trespasser of 1 day per month for 5 months, exposure duration of 10 years, 25% of body surface area exposed) (Table 14).
- USEPA-recommended toxicity factors (cancer slope factors and non-cancer reference doses) (Table 14 of BLRA, DuPont, 2004); and
- Standard USEPA risk assessment equations (USEPA, 1989) (Appendix C).

Oral toxicity values used to evaluate dermal absorption were adjusted for use in the risk evaluation using the recommended criteria as found in technical support documentation for the USEPA Region IX Preliminary Remediation Goal Table (USEPA Region IX,

2002). Following the guidance document, toxicity values were adjusted for gastrointestinal absorption only where chemical-specific gastrointestinal absorption values were less than 50%. Only one metal, cadmium, met this criteria.

## 8.2 Risk Characterization Results

The total HI and total excess cancer risks calculated for the on-site trespasser is summarized in Table 15 for each SWMU and AOC. All results were within USEPA's acceptable risk levels (risk 1E-06 to 1E-04, HQ<1). Therefore, the risk characterization results support the conclusion that exposure to surface soil does not pose unacceptable risk to on-site trespassers via direct contact or inhalation pathways.

Risk characterization calculations for SWMU 4 are presented as Appendix C of this report. Calculations for additional SWMUs and AOCs presented in Table 15 can be found in Appendix E of the BLRA (DuPont, 2004).

# 9.0 STEP SIX – EI DETERMINATION

The evaluation completed in steps one through six of the EI determination process results in one of three potential responses:

- "YE" (yes, "current human exposures under control" has been verified),
- "NO" ("current human exposures" are not "under control"), or
- "IN" (more information is needed to make a determination.

A positive CA725 EI determination **(YE)** was achieved for the DuPont East Chicago Facility as summarized in the USEPA scoresheet included in the Executive Summary of this report and depicted in the flowchart below. A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)) (USEPA, 1999).

Facility Name: DuPont East Chicago
EPA ID#: IND 005 174 254
City/State: East Chicago, Indiana

CURRENT HUMAN EXPOSURES UNDER CONTROL (CA 725)

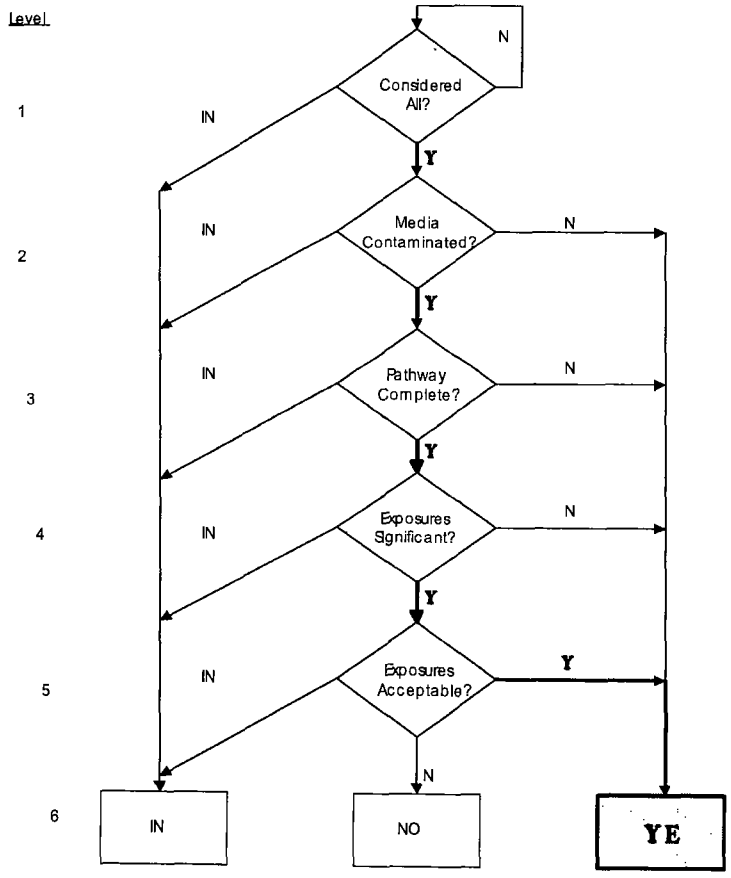

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**Table 1**
**SWMUs Identified at the DuPont East Chicago Facility**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| SWMU | Name | Description of Unit | Rationale for Unit Designation and Supplemental Comments |
|---|---|---|---|
| 1 | Northern Onsite Waste Management Area | | |
| 1A | Ash Landfill/Stoker Grate Area | Historic Land Disposal Area | |
| 1B | Calcium Sulfate and TSP Area | Historic Land Disposal Area | |
| 1C | Rubble Fill Area | Historic Land Disposal Area | |
| 1D | Silica/Calcium Sulfate Area | Historic Land Disposal Area for Waste Filtercake | |
| 1E | Calcium Fluoride Area | Historic Land Disposal Area | |
| 1F | Zinc Mud Area | Historic Land Disposal Area | |
| 1G | General Refuse Area | Historic Land Disposal Area and Historic Open Burning Area | |
| 1H | PCB Storage Area in Rubble Fill Area | In Rubble Fill Area | Wastes stored in this area |
| 1I | Miscellaneous Pits and Piles—North | Historic Land Disposal Area, red tainted area, located within SWMU 1A, the Ash Landfill/Stoker Grate Area. | This unit is contained in SWMU 1A and may be addressed as part of that SWMU |
| 1J | Miscellaneous Pits and Piles—South | Historic Land Disposal Area (red tainted area) | This unit is contained in SWMU 1A and may be addressed as part of that SWMU |
| 1K | Spill Areas—South of Ash Landfill/Stoker Grate Area | Historic Land Disposal Area | Facility records do not indicate the contents of the material placed in this area. The area is contained in the Ash Landfill/Stoker Grate Area |
| 1L | New Landfill | Active Landfill for Wastewater Treatment Filter Cake | Closure activities also being addressed in an Interim Closure Plan being prepared at IDEM's request |
| 2 | Coal and Fly Ash Piles | | |
| 2A | Far West Pile | Former Fuel and Ash waste piles for Coal-fired Boiler Operations | |
| 2B | West Pile | Former Fuel and Ash waste piles for Coal-fired Boiler Operations | |
| 2C | East Pile | Former Fuel and Ash waste piles for Coal-fired Boiler Operations | |
| 2D | Far East Pile | Former Fuel and Ash waste piles for Coal-fired Boiler Operations | |
| 3 | Disposal Area Near Former Chrome Outfall | Historic Land Disposal Area | |
| 4 | Insecticide Disposal Area | Historic Land Disposal Area | |
| 5 | PCB Electrical Storage Yard | Building with concrete floor and curb near Contact No. 1 | PCB waste and electrical equipment reportedly stored in this area |

Table 1

**SWMUs Identified at the DuPont East Chicago Facility**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| SWMU | Name | Description of Unit | Rationale for Unit Designation and Supplemental Comments |
|---|---|---|---|
| 6 | Hazardous Waste Storage Areas | | |
| 6A | Waste Solvent Tank | Former above ground waste solvent tank (4000-gal, lined carbon, steel) | Received waste solvents from AgChem production |
| 6B | AgChem Drum Storage | Former drum storage area | |
| 6C | Reagent Drum Storage | Former drum storage area | |
| 6D | Flue Dust Storage in Adhesives Building | Former drum storage area | |
| 6E | Flue Dust Storage near North Warehouse | Former drum storage area | |
| 7 | Abandoned Chemical Storage Building-"The Morgue" | Former building which received wastes and had a wood floor. Referred to as "The Morgue" | |
| 8 | Zinc Roaster Sinter Area | Historic Land Disposal Area | |
| 9 | Incinerators | | |
| 9A | Northwest Incinerator | Former solid waste incinerator | Reportedly burned paper wastes from the plant. Ceased operations some time before the mid-1970s. Incinerator was dismantled and removed. |
| 9B | Incinerator West of Freon Warehouse | Former solid waste incinerator | Reportedly burned paper wastes from the plant. Ceased operations some time before the mid-1970s. Incinerator was dismantled and removed. |
| 10 | HCl Neutralization Pit | | Received acids that were neutralized with limestone in the pit. Also received arsenic, chromium, and antimony pentachloride catalyst. |
| 10A | North Pit | Former industrial waste neutralization pit | |
| 10B | West Pit | Former industrial waste neutralization pit | |
| 10C | South Pit | Former industrial waste neutralization pit | |
| 10D | Far North Pit | Former industrial waste neutralization pit | |
| 11 | Sulfamic Acid Pits (2) | Surface impoundments, concrete-lined pits | Received process waste and spilled sulfamic acid. Used for acid neutralization. |
| 12 | Antimony Pentachloride Settling Basin | | Antimony pentachloride catalyst disposed in basin |
| 12A | North Basin | Surface Impoundment | |
| 12B | South Basin | Former Surface Impoundment | |
| 13 | Colloidal Silica Settling Pits (2) | Flow through surface impoundments for settling solids (silica particles) before influent enters EVC wastewater treatment system | |

Table 1

**SWMUs Identified at the DuPont East Chicago Facility**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| SWMU | Name | Description of Unit | Rationale for Unit Designation and Supplemental Comments[1] |
|---|---|---|---|
| 14 | Chrome Outfall and Impoundment | Former ditch that was closed creating an impoundment, and was subsequently backfilled | The blowdown may have contained chrome at some time. The impoundment reportedly received overflow from neutralization pits. |
| 15 | Former Wastewater Treatment System (Outfall 002) | Wastewater treatment system and discharge to Outfall 002 to the Grand Calumet River | Part of the wastewater treatment system regulated under the NPDES program. |
| 16 | Environmental Control System and Outfall 003 (Current Wastewater Treatment System) | Wastewater Treatment System Referred to as EVC and discharge to Outfall 003 | Regulated under the NPDES program. |
| 17 | Process Sewers | | |
| 17A | Existing | Current process sewers | |
| 17B | Abandoned | Former abandoned sewer lines | |
| 18 | Sanitary Sewers | | Addressed under the East Chicago Sanitary District regulations. |
| 18A | Existing | Existing sanitary sewers | |
| 18B | Abandoned | Abandoned sanitary sewers | |
| 19 | Building Maintenance Areas | Former cleaning solvent units, paints, and waste oils from maintenance operations stored within facility buildings | Most of these units were located inside buildings that have since been demolished. The exact locations of specific units are not known. |
| 20 | I-90 Fill Area | GCR was relocated for construction of I-90 by COE/DOT circa 1956, and fill was placed in this area based on aerial photo | |
| 21 | Lead Arsenate Sludge Disposal Area | Lead Arsenate sludge | AgChem Manufacturing |
| 22 | Former River Intake Canal | Earthen Canal and Former Land Disposal Area | Filled with debris from main office building demolition |

[1]Designations are based on U.S. EPA's definition of SWMU and AOC from the July 15, 1985 (50 FR 28712), July 27, 1990 (55 FR 30798), and May 1, 1996 (61 FR 1943 *Federal Registers*.
Source: *Phase I Groundwater Assessment Report* (CH2M HILL 1990), review of aerial photographs of the East Chicago facility (1927, 1939, 1949, 1958, 1961, 1964, 1965, 1970, 1973, 1975,

Table 2

**AOCs Identified at the DuPont East Chicago Facility**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| AOC | Name | Description of Area | Rationale for Unit Designation and Supplemental Comments[1] |
|---|---|---|---|
| 1 (A–G) | Vehicle Loading/ Unloading Areas | Loading and unloading areas (concrete, paved, dirt, or gravel) near various manufacturing buildings | Areas where spills were reported. |
| 2 (A–G) | Railroad Loading and Unloading Areas | Loading and unloading for bulk chemicals from railcars near various manufacturing processes/buildings | Areas where spills were reported. |
| 3 (A–J) | Aboveground Storage Tanks | Aboveground storage tank holding raw materials or products associated with various manufacturing operations | Areas where spills were reported. |
| 4 | Tank Car Neutralization Impoundment | One-time neutralization of fluorosulfonic acid offloaded from tank car into bermed area | This was a one-time occurrence. Fluorosulfonic acid was neutralized. |
| 5 | Beneath Former Contact No.1 | Ground beneath former Contact No. 1 process area where vegetative cover has not been reestablished | Facility records do not indicate the contents of the material placed in this area. |
| 6 | Zinc Crude Milling Area | Process area | Spills reportedly occurred in this processing area. |
| 7 | Former Commercial Packing House Buildings | | Acid spills reported to have occurred. |
| 7A | West Building | Former building which contained acid raw materials and products. | |
| 7B | East Building | Former building which contained acid raw materials and products. | |
| 8 | Former Powerhouse Pit | Former pit constructed of railroad ties | |
| 9 | Open Sanitary Ditch | Disposal of sanitary sewage in open ditch | This is a one-time occurrence. |
| 10 (A–H) | Former Underground Petroleum Storage Tanks | Underground steel storage tanks containing gasoline or fuel oil | Documentation of closure was unavailable, therefore USTs remain AOCs at this time. Four USTs were filled with gravel or removed. |
| 11 | Ditch and Associated Materials | | |
| 12 | Area East of Freon Area South of ASTs | | |
| 13 | Conoco Area | | |
| 14 | Former Insecticides Warehouse | | |

[1]Designations are based on U.S. EPA's definition of SWMU and AOC from the July 15, 1985 (50 *FR* 28702), July 27, 1990 (55 *FR* 30798), and May 1, 1996 (61 *FR* 19432) *Federal Registers.*

Source: *Phase I Groundwater Assessment Report* (CH2M HILL 1990), review of aerial photographs of the East Chicago facility (1927, 1939, 1949, 1958, 1961, 1964, 1965, 1970, 1973, 1975, 1980, 1989, and 1990), and discussions with DuPont.

**Table 3**
**Descriptions of AOCs 1, 2, 3 and 10**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| AOC | Description of Activities | Approximate Size |
|---|---|---|
| AOC 1A | A paved vehicle loading/unloading area within the current manufacturing area. Has had reported spills of colloidal silica and sodium silicate. | 0.6 acre |
| AOC 1B | A paved vehicle loading/unloading area within the current manufacturing area. Has had a documented spill of sodium silicate. Other materials handled include soda ash, caustic, and sand. | 0.3 acre |
| AOC 1C | A vehicle loading/unloading area at former Contact Area No. 1 Area. Has had a documented spill of sulfuric acid. This area has not been used in 14 years. | 0.4 acre |
| AOC 1D | A vehicle loading/unloading area at the former Fluorosulfuric Acid (FSA) Reagents Area. Had documented spills of sulfur trioxide, hydrofluoric acid, sulfuric acid, nitric acid, and hydrochloric acid. Other materials handled include fluorosulfonic acid and | 0.9 acre |
| AOC 1E | A vehicle loading/unloading area at former Sulfamic Acid Area. Had documented spills of hydrochloric acid and sulfuric acid. Other materials handled include anhydrous ammonia and sulfamic acid. This area has not been used in 14 years. | 1 acre |
| AOC 1F | A vehicle loading/unloading area at the former Freon® Area that had a documented spill of hydrochloric acid. This area has not been used in 20 years. | 1.5 acre |
| AOC 1G | A vehicle loading/unloading area at the former Contact No. 3 Area that had documented spills of sulfuric acid and sulfur trioxide. Other materials handled include chlorosulfonic acid and fuel oil. This area has not been used in 14 years. | 0.5 acre |
| AOC 2A | A railroad loading/unloading area located at the former Contact No. 3 Area–North. Spills of chlorosulfonic acid and sulfuric acid were reported to have occurred. This area has not been used in 14 years. | 0.5 acre |
| AOC 2B | A railroad loading/unloading area located at the former Contact No. 3 Area–South. Spills of sulfur trioxide and sulfuric acid were reported to have occurred. Other materials handled in this area include hydrogen peroxide, zinc ores, and zinc sulfide. This | 0.7 acre |
| AOC 2C | A railroad loading/unloading area located at former Sulfamic Acid Area–North. Spills of hydrochloric acid, sulfuric acid, and ammate were reported to have occurred. Other materials handled here include anhydrous ammonia and sulfamic acid. This area has no | 1 acre |
| AOC 2D | A railroad loading/unloading area located at the former Reagents/FSA Area. Spills of fluorosulfonic acid, $SO_3$, sulfuric acid, and anhydrous hydrofluoric acid (AHF) were reported to have occurred. This area has not been used in more than 10 years. | 0.3 acre |

**Table 3**
**Descriptions of AOCs 1, 2, 3 and 10**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| | | |
|---|---|---|
| AOC 2E | A railroad loading/unloading area located at the former AgChem Area North where a spill of phenylisocyanate was reported to have occurred. Other materials handled here include hexane, toluene, hexazinone, butylisocyanate, and MEK. This area has not been u | 0.7 acre |
| AOC 2F | A railroad loading/unloading area located at the former Zinc Chloride Area. Spills of hydrochloric acid were reported to have occurred. Other materials used here include zinc, lime, ammonium chloride, zinc chloride, zinc ammonium chloride, and aluminum ch | 1.5 acre |
| AOC 2G | A railroad loading/unloading area located at the former Sulfamic Area–South. Spills of sulfamic acid were reported to have occurred. This area has not been used in 14 years. | 0.3 acre |
| AOC 3A | A former AST area within the former Freon® Area South. A spill of hydrochloric acid was reported to have occurred. This area has not been used in 20 years. | - |
| AOC 3B | A former AST area within the former Freon® Area–North. A spill of sulfuric acid was reported to have occurred. Other possible tank contents include: Freon®, propane, butane, and isopentane. This area has not been used in 20 years. | - |
| AOC 3C | A former AST area within the former Sulfamic Area. Spills of sulfuric acid and sulfamic premix were reported to have occurred. Other possible tank contents include anhydrous ammonia and hydrochloric acid. This area has not been used in 14 years. | - |
| AOC 3D | A former AST area within the former FSA/Reagents Area. Spills of hydrogen fluoride (HF) and sulfuric acid were reported to have occurred. Other possible tank contents include $SO_3$, FSA, $NH_4OH$, and $HNO_3$. This area has not been used in 9 years. | - |
| AOC 3E | A former AST area within the former Contact No. 3 Area. Spills of CSA, $SO_3$, and sulfuric acid were reported to have occurred. Other possible tank contents include alkyl acid, cinder slurry, hydrogen peroxide, and acid wastewater. This area has not been us | - |
| AOC 3F | An inactive storage tank at the former Powerhouse. A spill of molten sulfur was reported to have occurred. This tank has not been used in 12 years. | - |
| AOC 3G | A former AST area within the former AHF Area. A spill of AHF was reported to have occurred. | - |
| AOC 3H | A former AST area within the former Contact No. 1 Area. A spill of sulfuric acid was reported to have occurred. This area has not been used in 14 years. | - |
| AOC 3I | A former AST area within the former Zinc Chloride Area. Spills of aluminum chloride and hydrochloric acid were reported to have occurred. Other possible tank contents include zinc chloride, zinc ammonium chloride, and ammonium chloride. | - |

**Table 3**
**Descriptions of AOCs 1, 2, 3 and 10**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| | | |
|---|---|---|
| AOC 3J | A former AST area within the former AgChem Area. Spills of hexane and toluene were reported to have occurred. Other possible tank contents include hexazinone and ethylene glycol. This area has not been used in 14 years. | - |
| AOC 10A | An inactive 2,000-gallon steel UST at the Front Gate Area. The tank, identified as UST No. 1, was installed in 1984 or 1985 and was used for gasoline storage until the early 1990s. | - |
| AOC 10B | An abandoned UST, located in the former Contact No. 3 Area. The 4,000-gallon steel tank, identified as UST No. 2, was installed in 1954. It was used to store No. 2 fuel oil until 1984 when it was filled with gravel and closed in place. | - |
| AOC 10C | An abandoned UST at the former Central Shops Area. The 1,000-gallon steel tank, identified as UST No. 3, was installed in 1965. It was used to store gasoline until 1985 when it was filled with gravel and closed in place. | - |
| AOC 10D | An abandoned UST in the former AgChem Area. The 1,000-gallon steel tank, identified as UST No. 4, was installed in 1956. It was used to store gasoline until 1981 when it was filled with gravel and closed in place. | - |
| AOC 10E | An abandoned UST in the former Contact No. 2 Area. The 1,000-gallon tank, identified as UST No. 5, was installed in 1947. It was used to store No. 2 fuel oil until 1967 when it was filled with gravel and closed in place. | - |
| AOC 10F | An abandoned UST in the former Trail Ore Roasters Area. The 1,000-gallon tank, identified as UST No. 6, was installed in 1942. It was used to store No. 2 fuel oil until 1967. The exact tank location is unknown. | - |
| AOC 10G | An abandoned UST in the former Trail Ore Roasters Area. The date of installation of the UST, identified as UST No. 6, is unknown. The tank was used to store No. 6 fuel oil until 1968. The tank capacity and exact location also are unknown. | - |
| AOC 10H | An abandoned UST in the former Trail Ore Roasters Area. The estimated 500-gallon tank, identified as UST No. 8, was installed in 1942 and was used to store gasoline until 1967. The exact tank location is unknown. | - |

**Table 1**
**Occupational Indoor Air Screening Level Calculation**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

$C_{gw} = C_{target} \times 10^{-3} m^3/L \times 1/H \times 1/\alpha$ Appendix D, USEPA 2002

| Parameter | Definition | Value |
|---|---|---|
| H (dimensionless) | Henry's law constant (atm-$m^3$/mol) x 41 (1) | Chemical-Specific |
| $C_{target}$ ($mg/m^3$) | Target breathing zone concentration (PEL or TLV) | Chemical-Specific |
| $\alpha$ | Attenuation factor, ratio of indoor air concentration to source vapor concentration (2) | 0.001 |
| $C_{gw}$ (mg/L) | Target groundwater concentration | Calculated |

| Constituent | H | OSHA PEL | ACGIH TLV | OSHA-Based $C_{gw}$ | TLV-Based $C_{gw}$ |
|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 7.05E-01 | 1.90E+03 | 1.91E+03 | 2.70E+03 | 2.71E+03 |
| 1,1-Dichloroethane | 2.30E-01 | 4.00E+02 | 4.05E+02 | 1.74E+03 | 1.76E+03 |
| 1,2-Dichloroethane | 4.01E-02 | 2.03E+02 | 4.00E+02 | 5.06E+03 | 9.98E+03 |
| Acetone | 1.59E-03 | 2.40E+03 | 7.47E+05 | 1.51E+06 | 4.70E+08 |
| Dichlorodifluoromethane | 4.10E+00 | 4.95E+03 | 4.95E+03 | 1.21E+03 | 1.21E+03 |
| Ethyl chloride | 4.50E-01 | 2.60E+03 | 2.64E+03 | 5.78E+03 | 5.87E+03 |

Notes:

(1) From EPA's Superfund Chemical Data Matrix (SCDM) database or EPA's User Guide for Evaluating Subsurface Vapor Intrusion into Buildings (USEPA 2003)

(2) Recommended upperbound generic vapor intrusion attenuation factor Appendix F-USEPA, 2002

**References:**


USEPA, 2002. Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). Office of Solid Waste and Emergency Response. Washington, D.C. November

USEPA, 2003. User Guide for Evaluating Subsurface Vapor Intrusion into Buildings, June 2003. Prepared by: Environmental Quality Management, Inc.

**Table**
**COPCs in Groundwater, Pool A**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| Analyte[1] | Cas No. | Filtered | Units | Number of Samples | Number of Detects | Average Detection | Maximum Detection | Screening Level (SL) | Source[2] | COPC Y/N? |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-DICHLOROETHANE | 75343 | T | ug/l | 21 | 5 | 1.18E+02 | 1.50E+03 | 8.11E+01 | R9_TAP | Yes |
| ANTIMONY | 7440360 | T | ug/l | 71 | 5 | 6.46E+00 | 8.50E+01 | 6.00E+00 | FED_MCL | Yes |
| ARSENIC | 7440382 | T | ug/l | 131 | 131 | 6.04E+02 | 1.53E+04 | 1.00E+01 | FED_MCL | Yes |
| ARSENIC | 7440382 | D | ug/l | 130 | 129 | 2.96E+02 | 2.43E+03 | 5.00E+01 | FED_MCL | Yes |
| BARIUM | 7440393 | T | ug/l | 71 | 71 | 1.37E+02 | 1.83E+03 | 2.00E+03 | FED_MCL | No |
| BARIUM | 7440393 | D | ug/l | 71 | 71 | 4.49E+01 | 2.40E+02 | 2.00E+03 | FED_MCL | No |
| BORON | 7440428 | T | ug/l | 65 | 65 | 5.25E+02 | 1.58E+03 | 7.30E+02 | R9_TAP | Yes |
| BORON | 7440428 | D | ug/l | 65 | 65 | 5.15E+02 | 1.57E+03 | 7.30E+02 | R9_TAP | Yes |
| CADMIUM | 7440439 | T | ug/l | 102 | 28 | 8.26E+00 | 2.55E+02 | 5.00E+00 | FED_MCL | Yes |
| CADMIUM | 7440439 | D | ug/l | 101 | 30 | 4.87E+00 | 1.33E+02 | 5.00E+00 | FED_MCL | Yes |
| CHLORIDE | 16887006 | T | ug/l | 65 | 65 | 2.22E+05 | 1.03E+06 | 2.50E+05 | FED_SEC | Yes |
| CHROMIUM | 7440473 | T | ug/l | 71 | 36 | 6.76E+00 | 1.86E+02 | 1.00E+02 | FED_MCL | Yes |
| CHROMIUM | 7440473 | D | ug/l | 71 | 16 | 1.55E+00 | 2.38E+01 | 1.00E+02 | FED_MCL | No |
| COPPER | 7440508 | T | ug/l | 71 | 32 | 5.84E+00 | 1.16E+02 | 1.30E+03 | FED_MCL | No |
| COPPER | 7440508 | D | ug/l | 71 | 4 | 1.25E+00 | 3.60E+00 | 1.30E+03 | FED_MCL | No |
| CYANIDE | 57125 | T | ug/l | 65 | 3 | 2.31E+00 | 1.00E+01 | 2.00E+02 | FED_MCL | No |
| ETHYL CHLORIDE | 75003 | T | ug/l | 21 | 2 | 1.83E+00 | 9.00E+00 | 4.64E-01 | R9_TAP | Yes |
| FLUORIDE | 16984488 | T | ug/l | 65 | 53 | 2.51E+03 | 1.04E+04 | 4.00E+03 | FED_MCL | Yes |
| IRON | 7439896 | T | ug/l | 65 | 65 | 5.02E+04 | 1.18E+05 | 3.00E+02 | FED_SEC | Yes |
| IRON | 7439896 | D | ug/l | 65 | 65 | 4.26E+04 | 1.13E+05 | 3.00E+02 | FED_SEC | Yes |
| LEAD | 7439921 | T | ug/l | 102 | 18 | 5.96E+01 | 2.01E+03 | 1.50E+01 | FED_MCL | Yes |
| LEAD | 7439921 | D | ug/l | 101 | 2 | 6.52E+00 | 1.95E+02 | 1.50E+01 | FED_MCL | Yes |
| MANGANESE | 7439965 | T | ug/l | 65 | 65 | 1.24E+03 | 5.12E+03 | 5.00E+01 | FED_SEC | Yes |
| MANGANESE | 7439965 | D | ug/l | 65 | 65 | 1.14E+03 | 3.99E+03 | 5.00E+01 | FED_SEC | Yes |
| MERCURY | 7439976 | T | ug/l | 65 | 4 | 5.56E-02 | 2.20E-01 | 2.00E+00 | FED_MCL | No |
| NICKEL | 7440020 | T | ug/l | 71 | 50 | 2.72E+01 | 2.00E+02 | 7.30E+01 | R9_TAP | Yes |
| NICKEL | 7440020 | D | ug/l | 71 | 40 | 2.11E+01 | 1.76E+02 | 7.30E+01 | R9_TAP | Yes |
| NITRATE/NITRITE NITROGEN | C-005 | T | ug/l | 65 | 21 | 4.83E+01 | 1.90E+02 | 1.00E+04 | FED_MCL | No |
| PHOSPHORUS | 7723140 | T | ug/l | 65 | 65 | 5.26E+03 | 3.22E+04 | 5.11E+05 | DuPont[3] | No |
| SELENIUM | 7782492 | T | ug/l | 71 | 7 | 4.83E+00 | 1.81E+02 | 5.00E+01 | FED_MCL | Yes |
| SELENIUM | 7782492 | D | ug/l | 71 | 15 | 2.72E+00 | 9.20E+00 | 5.00E+01 | FED_MCL | No |
| SULFATE | 14808798 | T | ug/l | 65 | 65 | 2.01E+06 | 4.40E+06 | 2.50E+05 | FED_SEC | Yes |
| SULFIDE | 18496258 | T | ug/l | 65 | 4 | 2.75E+02 | 6.80E+02 | 1.10E+01 | R9_TAP | Yes |
| VANADIUM | 7440622 | T | ug/l | 71 | 29 | 1.11E+01 | 5.76E+02 | 2.55E+01 | R9_TAP | Yes |
| VANADIUM | 7440622 | D | ug/l | 71 | 22 | 1.74E+00 | 1.15E+01 | 2.55E+01 | R9_TAP | No |
| ZINC | 7440666 | T | ug/l | 101 | 83 | 7.79E+03 | 2.80E+05 | 5.00E+03 | FED_SEC | Yes |
| ZINC | 7440666 | D | ug/l | 101 | 77 | 4.06E+03 | 3.86E+04 | 5.00E+03 | FED_SEC | Yes |

Notes:

1- Essential nutrients (such as calcium and sodium) excluded from the evaluation.

2 - Federal Maximum Contaminant Level (FED_MCL) (equivalent to Indiana Groundwater Quality Standard), Federal Secondary Drinking Water Standards (FED_SEC), or USEPA Region IX Preliminary Remediation Goal for Tap Water (R9_TAP). PRG based on HQ=0.1

3 - DuPont site-specific screening level derived for phosphorous using a RDA of 14 mg/kg-day and default residential drinking water intake values (USEPA Region VIII, 1994).

**Table 6**
**COPCs in Riley Park Sumps**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| Analyte | Units | Average Detection | Maximum Detection | Screening Level (SL) | Source[2] | Exceeds? |
|---|---|---|---|---|---|---|
| ARSENIC | ug/L | 1.80E+01 | 3.90E+01 | 1.00E+01 | FED_MCL | **Yes** |
| CHLORIDE | ug/L | 3.00E+04 | 1.00E+05 | 2.50E+05 | FED_SEC | No |
| COPPER | ug/L | <10 | 2.00E+01 | 1.30E+03 | FED_MCL | No |
| FLUORIDE | ug/L | 2.20E+03 | 3.50E+03 | 4.00E+03 | FED_MCL | No |
| IRON | ug/L | 4.04E+03 | 1.74E+04 | 3.00E+02 | FED_SEC | **Yes** |
| SULFATE | ug/L | 4.80E+05 | 1.51E+06 | 2.50E+05 | FED_SEC | **Yes** |
| ZINC | ug/L | 4.20E+01 | 9.52E+03 | 5.00E+03 | FED_SEC | No |

Notes:
1 = Essential nutrients (such as magnesium) excluded from the evaluation.
2 - Federal Maximum Contaminant Level (FED_MCL) (consistent with Indiana Groundwater Quality Standard) or Federal Secondary Drinking Water Standards (FED_SEC)

Table
Constituents of Potential Concern in Groundwater, Pool B
DuPont East Chicago Facility
East Chicago, Indiana

| Analyte | Cas No | Filtered | Units | Number of Samples | Number of Detects | Average Detection | Maximum Detection | Screening Level (SL) | Source[2] | Indiana AWQS[1] | AWQS x Site-Specific DF | Groundwater COPC Y/N? | GW to SW COPC Y/N? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-TRICHLOROETHANE | 71556 | T | ug/l | 28 | 1 | 2.32E+00 | 5.00E+01 | 2.00E+02 | FED_MCL | 2.00E+02 | 1.00E+06 | No | No |
| 1,1-DICHLOROETHANE | 75343 | T | ug/l | 28 | 5 | 2.71E+00 | 5.00E+01 | 8.11E+01 | R9_TAP | 2.70E+04 | 1.35E+08 | No | No |
| 1,2-DICHLOROETHANE | 107062 | T | ug/l | 28 | 5 | 5.45E+00 | 5.00E+01 | 5.00E+00 | FED_MCL | 3.70E+01 | 1.85E+05 | Yes | No |
| ACETONE | 67641 | T | ug/l | 24 | 2 | 3.54E+00 | 1.30E+01 | 6.08E+01 | R9_TAP | 2.20E+05 | 1.10E+09 | No | No |
| ALUMINUM | 7429905 | T | ug/l | 79 | 63 | 9.01E+02 | 1.65E+04 | 2.00E+02 | FED_SEC | 4.50E+03 | 2.25E+07 | Yes | No |
| ALUMINUM | 7429905 | D | ug/l | 79 | 35 | 1.18E+02 | 8.30E+02 | 2.00E+02 | FED_SEC | 4.50E+03 | 2.25E+07 | Yes | No |
| ANTIMONY | 7440360 | T | ug/l | 85 | 8 | 5.88E+00 | 4.30E+01 | 6.00E+00 | FED_MCL | 2.00E+03 | 1.00E+07 | Yes | No |
| ANTIMONY | 7440360 | D | ug/l | 86 | 6 | 5.76E+00 | 3.60E+01 | 6.00E+00 | FED_MCL | 2.00E+03 | 1.00E+07 | Yes | No |
| ARSENIC | 7440382 | T | ug/l | 89 | 85 | 1.45E+03 | 1.87E+04 | 1.00E+01 | FED_MCL | 2.30E+02 | 1.15E+06 | Yes | No |
| ARSENIC | 7440382 | D | ug/l | 90 | 83 | 1.27E+03 | 1.68E+04 | 1.00E+01 | FED_MCL | 2.30E+02 | 1.15E+06 | Yes | No |
| BARIUM | 7440393 | T | ug/l | 85 | 85 | 1.68E+02 | 4.54E+03 | 2.00E+03 | FED_MCL | 1.00E+03 | 5.00E+06 | Yes | No |
| BARIUM | 7440393 | D | ug/l | 85 | 85 | 1.02E+02 | 1.32E+03 | 2.00E+03 | FED_MCL | 1.00E+03 | 5.00E+06 | No | No |
| BERYLLIUM | 7440417 | T | ug/l | 4 | 1 | 2.95E-01 | 5.80E-01 | 4.00E+00 | FED_MCL | 3.00E+02 | 1.50E+06 | No | No |
| BIS(2-ETHYLHEXYL)PHTHALATE | 117817 | T | ug/l | 20 | 1 | 1.05E+00 | 2.00E+00 | 6.00E+00 | FED_MCL | 6.00E+01 | 3.00E+05 | No | No |
| BORON | 7440428 | T | ug/l | 79 | 79 | 1.17E+03 | 8.27E+03 | 7.30E+02 | R9_TAP | 7.30E+02 | 3.65E+06 | Yes | No |
| BORON | 7440428 | D | ug/l | 79 | 79 | 1.16E+03 | 7.82E+03 | 7.30E+02 | R9_TAP | 7.30E+02 | 3.65E+06 | Yes | No |
| CADMIUM | 7440439 | T | ug/l | 89 | 37 | 9.71E+00 | 2.42E+02 | 5.00E+00 | FED_MCL | 1.40E+03 | 7.00E+06 | Yes | No |
| CADMIUM | 7440439 | D | ug/l | 90 | 35 | 6.17E+00 | 1.15E+02 | 5.00E+00 | FED_MCL | 1.40E+03 | 7.00E+06 | Yes | No |
| CHLORIDE | 16887006 | T | ug/l | 79 | 79 | 1.07E+06 | 1.67E+07 | 2.50E+05 | FED_SEC | 2.50E+05 | 1.25E+09 | Yes | No |
| CHROMIUM | 7440473 | T | ug/l | 85 | 27 | 4.74E+00 | 6.94E+01 | 1.00E+02 | FED_MCL | 4.30E+07 | 2.15E+11 | No | No |
| CHROMIUM | 7440473 | D | ug/l | 86 | 10 | 2.10E+00 | 2.02E+01 | 1.00E+02 | FED_MCL | 4.30E+07 | 2.15E+11 | No | No |
| COPPER | 7440508 | T | ug/l | 85 | 37 | 1.13E+01 | 9.01E+01 | 1.30E+03 | FED_MCL | 5.60E+04 | 2.80E+08 | No | No |
| COPPER | 7440508 | D | ug/l | 86 | 19 | 7.76E+00 | 9.08E+01 | 1.30E+03 | FED_MCL | 5.60E+04 | 2.80E+08 | No | No |
| CYANIDE | 57125 | T | ug/l | 79 | 1 | 2.34E+00 | 1.00E+01 | 2.00E+02 | FED_MCL | 4.80E+04 | 2.40E+08 | No | No |
| DICHLORODIFLUOROMETHANE | 75718 | T | ug/l | 24 | 17 | 2.11E+01 | 6.60E+01 | 3.95E+01 | R9_TAP | 3.95E+01 | 1.98E+05 | Yes | No |
| 4,4'-DDD | 72548 | T | ug/l | 19 | 1 | 6.21E-03 | 7.60E-02 | 2.80E-02 | R9_TAP | 3.10E-04 | 1.55E+00 | Yes | No |
| DIETHYL PHTHALATE | 84662 | T | ug/l | 20 | 1 | 1.35E+00 | 8.00E+00 | 2.92E+03 | R9_TAP | 1.20E+06 | 6.00E+09 | No | No |
| FLUORIDE | 16984488 | T | ug/l | 79 | 70 | 3.91E+03 | 5.80E+04 | 4.00E+03 | FED_MCL | 4.00E+03 | 2.00E+07 | Yes | No |
| IRON | 7439896 | T | ug/l | 79 | 79 | 5.72E+04 | 4.10E+05 | 3.00E+02 | FED_SEC | 3.00E+02 | 1.50E+06 | Yes | No |
| IRON | 7439896 | D | ug/l | 79 | 79 | 5.23E+04 | 4.32E+05 | 3.00E+02 | FED_SEC | 3.00E+02 | 1.50E+06 | Yes | No |
| LEAD | 7439921 | T | ug/l | 89 | 23 | 2.67E+01 | 7.45E+02 | 1.50E+01 | FED_MCL | 1.50E+01 | 7.50E+04 | Yes | No |
| LEAD | 7439921 | D | ug/l | 90 | 13 | 1.05E+01 | 9.60E+01 | 1.50E+01 | FED_MCL | 1.50E+01 | 7.50E+04 | Yes | No |
| MANGANESE | 7439965 | T | ug/l | 79 | 79 | 1.54E+03 | 6.59E+03 | 5.00E+01 | FED_SEC | 5.00E+01 | 2.50E+05 | Yes | No |
| MANGANESE | 7439965 | D | ug/l | 79 | 79 | 1.49E+03 | 6.34E+03 | 5.00E+01 | FED_SEC | 5.00E+01 | 2.50E+05 | Yes | No |
| MERCURY | 7439976 | D | ug/l | 80 | 7 | 6.73E-02 | 6.00E-01 | 2.00E+00 | FED_MCL | 1.80E-03 | 9.00E+00 | No | No |
| MERCURY | 7439976 | T | ug/l | 79 | 7 | 6.27E-02 | 6.00E-01 | 2.00E+00 | FED_MCL | 1.80E-03 | 9.00E+00 | No | No |
| NICKEL | 7440020 | T | ug/l | 85 | 67 | 1.91E+01 | 8.24E+01 | 7.30E+01 | R9_TAP | 4.20E+04 | 2.10E+08 | Yes | No |
| NICKEL | 7440020 | D | ug/l | 86 | 62 | 1.61E+01 | 9.70E+01 | 7.30E+01 | R9_TAP | 4.20E+04 | 2.10E+08 | Yes | No |
| NITRATE/NITRITE NITROGEN | C-005 | T | ug/l | 79 | 23 | 1.44E+02 | 2.85E+03 | 1.00E+04 | FED_MCL | 1.00E+04 | 5.00E+07 | No | No |
| PHENOL | 108952 | T | ug/l | 20 | 1 | 3.16E+00 | 5.40E+01 | 2.19E+03 | R9_TAP | 2.30E+03 | 1.15E+07 | No | No |
| PHOSPHORUS | 7723140 | T | ug/l | 79 | 71 | 2.93E+03 | 1.89E+04 | 5.11E+05 | DuPont[3] | 5.11E+05 | 2.56E+09 | No | No |
| SELENIUM | 7782492 | T | ug/l | 85 | 11 | 3.12E+00 | 2.40E+01 | 5.00E+01 | FED_MCL | 3.40E+03 | 1.70E+07 | No | No |
| SELENIUM | 7782492 | D | ug/l | 86 | 9 | 3.11E+00 | 2.60E+01 | 5.00E+01 | FED_MCL | 3.40E+03 | 1.70E+07 | No | No |
| SULFATE | 14808798 | T | ug/l | 79 | 79 | 1.83E+06 | 5.50E+06 | 2.50E+05 | FED_SEC | 2.50E+05 | 1.25E+09 | Yes | No |

Table 1
Constituents of Potential Concern in Groundwater, Pool B
DuPont East Chicago Facility
East Chicago, Indiana

| Analyte | Cas No | Filtered | Units | Number of Samples | Number of Detects | Average Detection | Maximum Detection | Screening Level (SL) | Source | Indiana AWQS | AWQS x Site-Specific DF | Groundwater COPC Y/N? | GW to SW COPC Y/N? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SULFIDE | 18496258 | T | ug/l | 79 | 23 | 3.79E+03 | 5.00E+04 | 1.10E+01 | R9_TAP | 1.10E+02 | 5.50E+05 | **Yes** | No |
| VANADIUM | 7440622 | T | ug/l | 85 | 34 | 1.25E+01 | 1.47E+02 | 2.55E+01 | R9_TAP | 2.30E+03 | 1.15E+07 | **Yes** | No |
| VANADIUM | 7440622 | D | ug/l | 85 | 17 | 9.75E+00 | 1.46E+02 | 2.55E+01 | R9_TAP | 2.30E+03 | 1.15E+07 | **Yes** | No |
| ZINC | 7440666 | T | ug/l | 89 | 82 | 9.16E+03 | 1.67E+05 | 5.00E+03 | FED_SEC | 2.50E+05 | 1.25E+09 | **Yes** | No |
| ZINC | 7440666 | D | ug/l | 90 | 82 | 8.13E+03 | 1.24E+05 | 5.00E+03 | FED_SEC | 2.50E+05 | 1.25E+09 | **Yes** | No |

Notes:

1- Essential nutrients (such as calcium and sodium) excluded from the evaluation.

2 - Federal Maximum Contaminant Level (FED_MCL) (equivalent to Indiana Groundwater Quality Standard), Federal Secondary Drinking Water Standards (FED_SEC), or USEPA Region IX Preliminary Remediation Goal for Tap Water (R9_TAP). PRG based on HQ=0.1

3 - DuPont site-specific screening level derived for phosphorous using a RDA of 14 mg/kg-day and default residential drinking water intake values (USEPA Region VIII, 1994).

4 - Indiana Water Quality Standards Tier I and Tier II Values for the Great Lakes Basin (IAWQS) (327 IAC 2) for protection of human health (non-drinking water)

**Table 6**
**COPCs in Groundwater, Intermittent Seeps**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| Analyte | Cas No. | Filtered | Units | Number of Samples | Number of Detects | Average Detection | Maximum Detection | Screening Level (SL) | Source | COPC Y/N? |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-DICHLOROETHANE | 75343 | T | ug/l | 10 | 5 | 2.47E+02 | 1.50E+03 | 8.11E+01 | R9_TAP | **Yes** |
| ARSENIC | 7440382 | T | ug/l | 34 | 34 | 6.14E+02 | 1.53E+04 | 1.00E+01 | FED_MCL | **Yes** |
| ARSENIC | 7440382 | D | ug/l | 34 | 34 | 6.12E+01 | 1.90E+02 | 1.00E+01 | FED_MCL | **Yes** |
| BARIUM | 7440393 | T | ug/l | 17 | 17 | 1.28E+02 | 1.68E+03 | 2.00E+03 | FED_MCL | No |
| BARIUM | 7440393 | D | ug/l | 17 | 17 | 2.66E+01 | 4.32E+01 | 2.00E+03 | FED_MCL | No |
| BORON | 7440428 | T | ug/l | 15 | 15 | 1.01E+03 | 1.58E+03 | 7.30E+02 | R9_TAP | **Yes** |
| BORON | 7440428 | D | ug/l | 15 | 15 | 9.75E+02 | 1.57E+03 | 7.30E+02 | R9_TAP | **Yes** |
| CADMIUM | 7440439 | T | ug/l | 34 | 6 | 9.18E-01 | 8.70E+00 | 5.00E+00 | FED_MCL | **Yes** |
| CADMIUM | 7440439 | D | ug/l | 34 | 11 | 8.25E-01 | 2.90E+00 | 5.00E+00 | FED_MCL | No |
| CHROMIUM | 7440473 | T | ug/l | 17 | 2 | 2.26E+00 | 2.20E+01 | 1.00E+02 | FED_MCL | No |
| CHROMIUM | 7440473 | D | ug/l | 17 | 2 | 9.88E-01 | 2.10E+00 | 1.00E+02 | FED_MCL | No |
| COPPER | 7440508 | T | ug/l | 17 | 3 | 8.05E+00 | 1.16E+02 | 1.30E+03 | FED_MCL | No |
| ETHYL CHLORIDE | 75003 | T | ug/l | 10 | 2 | 2.55E+00 | 9.00E+00 | 4.64E-01 | R9_TAP | **Yes** |
| FLUORIDE | 16984488 | T | ug/l | 15 | 15 | 7.82E+03 | 1.04E+04 | 4.00E+03 | FED_MCL | **Yes** |
| IRON | 7439896 | T | ug/l | 15 | 15 | 7.23E+04 | 1.18E+05 | 3.00E+02 | FED_SEC | **Yes** |
| IRON | 7439896 | D | ug/l | 15 | 15 | 6.18E+04 | 1.13E+05 | 3.00E+02 | FED_SEC | **Yes** |
| LEAD | 7439921 | T | ug/l | 34 | 2 | 1.40E+01 | 1.29E+02 | 1.50E+01 | FED_MCL | **Yes** |
| MANGANESE | 7439965 | T | ug/l | 15 | 15 | 2.32E+03 | 5.12E+03 | 5.00E+01 | FED_SEC | **Yes** |
| MANGANESE | 7439965 | D | ug/l | 15 | 15 | 2.15E+03 | 3.99E+03 | 5.00E+01 | FED_SEC | **Yes** |
| NICKEL | 7440020 | T | ug/l | 17 | 12 | 7.29E+01 | 1.80E+02 | 7.30E+01 | R9_TAP | **Yes** |
| NICKEL | 7440020 | D | ug/l | 17 | 12 | 6.98E+01 | 1.76E+02 | 7.30E+01 | R9_TAP | **Yes** |
| SELENIUM | 7782492 | T | ug/l | 17 | 3 | 1.27E+01 | 1.81E+02 | 5.00E+01 | FED_MCL | **Yes** |
| SELENIUM | 7782492 | D | ug/l | 17 | 4 | 2.71E+00 | 5.50E+00 | 5.00E+01 | FED_MCL | No |
| VANADIUM | 7440622 | T | ug/l | 17 | 5 | 3.55E+01 | 5.76E+02 | 2.55E+01 | R9_TAP | **Yes** |
| VANADIUM | 7440622 | D | ug/l | 17 | 5 | 1.85E+00 | 6.80E+00 | 2.55E+01 | R9_TAP | No |
| ZINC | 7440666 | T | ug/l | 33 | 28 | 1.78E+04 | 2.80E+05 | 5.00E+03 | FED_SEC | **Yes** |
| ZINC | 7440666 | D | ug/l | 34 | 25 | 7.10E+03 | 3.86E+04 | 5.00E+03 | FED_SEC | **Yes** |

Notes:

1- Monitoring well data set includes wells located near localized on-site mounding (MW-8, MW-9, and MW-18). Essential nutrients (such as calcium and sodium) excluded from the evaluation.

2 - Federal Maximum Contaminant Level (FED_MCL) (equivalent to Indiana Groundwater Quality Standard), Federal Secondary Drinking Water Standards (FED_SEC), or USEPA Region IX Preliminary Remediation Goal for Tap Water (R9_TAP). PRG based on HQ=0.1

# Table 9
## SWMU and AOC COPCs in Soil
## DuPont East Chicago Facility
## East Chicago, Indiana

| Unit | Name | COPCs Surface Soil | COPCs Subsurface Soil |
|---|---|---|---|
| SWMU 1 | Northern On-site Waste Management Area | | |
| SWMU 1A | Ash Landfill/Stoker Grate Area | As, Cd, Cr, Pb, Zn | As, Cd, Pb, Zn |
| SWMU 1B | Calcium Sulfate and TSP Area | As, Pb | As |
| SWMU 1C | Rubble Fill Area | PCB 1254, PCB 1260, As, Cr, Pb | As, Pb |
| SWMU 1I | Miscellaneous Pits and Piles—North | As, Ba, Cd, Cr, Pb, Zn | As |
| SWMU 1J | Miscellaneous Pits and Piles—South | As, Cd, Fe, Pb, Sb, Zn | As, Cd, Cr, Fe, Pb, Mn, Sb, Zn |
| SWMU 1K | Spill Areas—South of Ash Landfill/Stoker Grate Area | | As |
| SWMU 2 | Coal and Fly Ash Piles | | |
| SWMU 2C | East Pile | As, Cr, Pb | As |
| SWMU 2D | Far East Pile | | As |
| SWMU 3 | Disposal Area Near Former Chrome Outfall | As, Cd, Cr, Fe, Pb, Mn, Zn | As, Cd, Cr, Fe, Pb, Zn and Sulfide |
| SWMU 4 | Insecticide Disposal Area | DDT, As, Ba, Fe, Pb, Sb, Zn | As, Cd, Cr, Cu, Fe, Sb, Pb |
| SWMU 5 | PCB Electrical Storage Yard | | |
| SWMU 6 | Hazardous Waste Storage Areas | | |
| SWMU 6A | Waste Solvent Tank | | |
| SWMU 6E | Flue Dust Storage near North Warehouse | | |
| SWMU 7 | Abandoned Chemical Storage Building-"The Morgue" | As, Ba, Cd, Cu, Fe, Pb, Mn, Sb, Zn | As, Cd, Cr, Fe, Pb, Mn, Sb, Zn |
| SWMU 8 | Zinc Roaster Sinter Area | As, Cd, Cr, Pb, Zn | As |
| SWMU 10 | HCl Neutralization Pit | | |
| SWMU 10A | North Pit | As, Cr, Pb, Sb | As, Sb |
| SWMU 10B | West Pit | | As |
| SWMU 10C | South Pit | As | |
| SWMUC 10D | Far North Pit | 1,1,2,2-TCA, As, Cd, Cu, Pb, PCE, Sb, TCE, Zn | As |
| SWMU 11 | Sulfamic Acid Pits (2) | | As |
| SWMU 12 | Antimony Pentachloride Settling Basin | | |
| SWMU 12A | North Basin | As, Cr | As, Sb |
| SWMU 12B | South Basin | As, Cr | As |
| SWMU 14 | Chrome Outfall and Impoundment | | As, Cr, Zn |
| SWMU 15 | Former Wastewater Treatment System (Outfall 002) | | As |
| SWMU 20 | I-90 Fill Area | As | As |
| SWMU 21 | Lead Arsenate Sludge Disposal Area | As, Fe, Pb, Sb | As, Cd, Cr, Fe, Pb, Sb, Zn |
| AOC 1C | Vehicle Loading/ Unloading Areas | | |
| AOC 1D | | | |
| AOC 1E | | | |
| AOC 1F | | | |
| AOC 1G | | | |
| AOC 2A | Railroad Loading and Unloading Areas | | |

# Table 9
## SWMU and AOC COPCs in Soil
## DuPont East Chicago Facility
## East Chicago, Indiana

| Unit | Name | COPCs Surface Soil | COPCs Subsurface Soil |
|---|---|---|---|
| AOC 2B | | As, Cd, Pb, Zn | |
| AOC 2C | | | |
| AOC 2D | | | |
| AOC 2E | | DDT, As, Cr, Fe, Pb, Mn | As, Cr, Fe, Pb |
| AOC 2F | | | |
| AOC 3A | Aboveground Storage Tanks | | |
| AOC 3B | | | TCE |
| AOC 3C | | | |
| AOC 3D | | | |
| AOC 3E | | | |
| AOC 3H | | | |
| AOC 3I | | | |
| AOC 3J | | | |
| AOC 5 | Beneath Former Contact No.1 | | |
| AOC 6 | Zinc Crude Milling Area | | |
| AOC 8 | Former Powerhouse Pit | | As |
| AOC 11 | Ditch and Associated Materials | As | As |
| AOC 12 | Area East of Freon Area South of ASTs | | |
| AOC 13 | Conoco Area | As, Cd, Cr, Cu, Fe, Pb, Mn, Sb, Zn | As, Cd, Fe, Pb, Mn, Sb, Zn |
| AOC 14 | Former Insecticides Warehouse | | As |

Notes:

Inorganics - As (Arsenic), Ba (Barium), Cd (Cadmium), Cr (Chromium), Cu (Copper), Fe (Iron), Pb (Lead), Mn (Manganese), Sb (Antimony), Zn (Zinc)

Organics - 1,1,2,2- TCA (1,1,2,2-Tetrachloroethane), TCE (Trichloroethene), PCE (Tetrachloroethene)

No COPCs identified

Table 1b
November 2004 Riley Park Surface Soil Data
DuPont East Chicago Facility
East Chicago, Indiana

**ARSENIC CONCENTRATIONS (mg/kg) - Preliminary**

| Riley Park | November 2004 | | EPA Region IX PRG | |
|---|---|---|---|---|
| Soil Sample Location | DuPont | EPA | Resident | Industrial |
| 4928 Ivy | 69.500 | 77.800 | 0.390 | 1.600 |
| 4928 Ivy (Dup) | 61.400 | NA | 0.390 | 1.600 |
| 4928 Ivy (Bckgnd) | 9.500 | NA | 0.390 | 1.600 |
| 4942 Ivy | 9.290 | 9.610 | 0.390 | 1.600 |
| 4942 Ivy (Bckgnd) | 11.800 | NA | 0.390 | 1.600 |
| 4903 Euclid | 48.200 | 52.100 | 0.390 | 1.600 |
| 4903 Euclid (Bckgnd) | 75.000 | 84.900 | 0.390 | 1.600 |
| 4907 Euclid | 54.800 | 64.300 | 0.390 | 1.600 |
| 4907 Euclid (Bckgnd) | 30.000 | NA | 0.390 | 1.600 |
| | | | | |

Table

**Summary of Perimeter Monitoring Well Groundwater Statistics**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| Analyte | Cas No | Units | Filtered | Number of Samples | Number of Detects | Average Detection | Maximum Detection | Screening Level (SL) | Source[2] | Exceeds SL Y/N? |
|---|---|---|---|---|---|---|---|---|---|---|
| ALUMINUM | 7429905 | ug/l | T | 40 | 33 | 1.03E+03 | 5.77E+03 | 2.00E+02 | FED_SEC | **Yes** |
| ALUMINUM | 7429905 | ug/l | D | 40 | 6 | 3.28E+01 | 3.76E+02 | 2.00E+02 | FED_SEC | **Yes** |
| ANTIMONY | 7440360 | ug/l | T | 42 | 4 | 5.73E+00 | 2.40E+01 | 6.00E+00 | FED_MCL | **Yes** |
| ARSENIC | 7440382 | ug/l | T | 77 | 77 | 7.31E+02 | 1.16E+04 | 1.00E+01 | FED_MCL | **Yes** |
| ARSENIC | 7440382 | ug/l | D | 77 | 77 | 4.51E+02 | 2.43E+03 | 1.00E+01 | FED_MCL | **Yes** |
| BARIUM | 7440393 | ug/l | D | 42 | 42 | 5.11E+01 | 2.40E+02 | 2.00E+03 | FED_MCL | No |
| BARIUM | 7440393 | ug/l | T | 42 | 42 | 1.65E+02 | 1.83E+03 | 2.00E+03 | FED_MCL | No |
| BORON | 7440428 | ug/l | T | 40 | 40 | 4.00E+02 | 6.94E+02 | 7.30E+02 | R9_TAP | No |
| BORON | 7440428 | ug/l | D | 40 | 40 | 3.92E+02 | 8.39E+02 | 7.30E+02 | R9_TAP | **Yes** |
| CADMIUM | 7440439 | ug/l | T | 48 | 18 | 1.66E+01 | 2.55E+02 | 5.00E+00 | FED_MCL | **Yes** |
| CADMIUM | 7440439 | ug/l | D | 48 | 15 | 9.41E+00 | 1.33E+02 | 5.00E+00 | FED_MCL | **Yes** |
| CHLORIDE | 16887006 | ug/l | T | 40 | 40 | 1.95E+05 | 5.65E+05 | 2.50E+05 | FED_SEC | **Yes** |
| CHROMIUM | 7440473 | ug/l | T | 42 | 30 | 9.57E+00 | 1.86E+02 | 1.00E+02 | FED_MCL | **Yes** |
| CHROMIUM | 7440473 | ug/l | D | 42 | 10 | 1.83E+00 | 2.38E+01 | 1.00E+02 | FED_MCL | No |
| COPPER | 7440508 | ug/l | D | 42 | 3 | 1.29E+00 | 3.60E+00 | 1.30E+03 | FED_MCL | No |
| COPPER | 7440508 | ug/l | T | 42 | 26 | 6.09E+00 | 4.29E+01 | 1.30E+03 | FED_MCL | No |
| CYANIDE | 57125 | ug/l | T | 40 | 3 | 2.50E+00 | 1.00E+01 | 2.00E+02 | FED_MCL | No |
| FLUORIDE | 16984488 | ug/l | T | 40 | 30 | 9.38E+02 | 4.00E+03 | 4.00E+03 | FED_MCL | No |
| IRON | 7439896 | ug/l | D | 40 | 40 | 3.60E+04 | 1.09E+05 | 3.00E+02 | FED_SEC | **Yes** |
| IRON | 7439896 | ug/l | T | 40 | 40 | 4.34E+04 | 1.08E+05 | 3.00E+02 | FED_SEC | **Yes** |
| LEAD | 7439921 | ug/l | T | 48 | 16 | 1.15E+02 | 2.01E+03 | 1.50E+01 | FED_MCL | **Yes** |
| LEAD | 7439921 | ug/l | D | 48 | 2 | 8.72E+00 | 1.95E+02 | 1.50E+01 | FED_MCL | **Yes** |
| MANGANESE | 7439965 | ug/l | D | 40 | 40 | 8.95E+02 | 2.77E+03 | 5.00E+01 | FED_SEC | **Yes** |
| MANGANESE | 7439965 | ug/l | T | 40 | 40 | 9.85E+02 | 2.61E+03 | 5.00E+01 | FED_SEC | **Yes** |
| MERCURY | 7439976 | ug/l | T | 40 | 4 | 5.99E-02 | 2.20E-01 | 2.00E+00 | FED_MCL | No |
| NICKEL | 7440020 | ug/l | T | 42 | 35 | 1.56E+01 | 2.00E+02 | 7.30E+01 | R9_TAP | **Yes** |
| NICKEL | 7440020 | ug/l | D | 42 | 28 | 7.14E+00 | 3.52E+01 | 7.30E+01 | R9_TAP | No |
| NITRATE/NITRITE NITROGEN | C-005 | ug/l | T | 40 | 15 | 5.59E+01 | 1.90E+02 | 1.00E+04 | FED_MCL | No |
| PHOSPHORUS | 7723140 | ug/l | T | 40 | 40 | 6.50E+03 | 3.22E+04 | 5.11E+05 | DuPont | No |
| SELENIUM | 7782492 | ug/l | T | 42 | 4 | 2.43E+00 | 9.50E+00 | 5.00E+01 | FED_MCL | No |
| SELENIUM | 7782492 | ug/l | D | 42 | 8 | 2.77E+00 | 9.20E+00 | 5.00E+01 | FED_MCL | No |
| SULFATE | 14808798 | ug/l | T | 40 | 40 | 2.13E+06 | 4.40E+06 | 2.50E+05 | FED_SEC | **Yes** |
| SULFIDE | 18496258 | ug/l | T | 40 | 4 | 2.89E+02 | 6.80E+02 | - | - | **Yes** |
| VANADIUM | 7440622 | ug/l | D | 42 | 15 | 1.79E+00 | 1.15E+01 | 2.55E+01 | R9_TAP | No |
| VANADIUM | 7440622 | ug/l | T | 42 | 20 | 3.89E+00 | 2.49E+01 | 2.55E+01 | R9_TAP | No |
| ZINC | 7440666 | ug/l | D | 48 | 43 | 3.52E+03 | 2.08E+04 | 5.00E+03 | FED_SEC | **Yes** |
| ZINC | 7440666 | ug/l | T | 48 | 42 | 4.13E+03 | 2.28E+04 | 5.00E+03 | FED_SEC | **Yes** |

Notes:

1- Monitoring well data set includes the following perimeter monitoring wells: MW-1, 10, 11, 21 - 25.
Essential nutrients (such as calcium and sodium) excluded from the evaluation.

2 - Federal Maximum Contaminant Level (FED_MCL) (equivalent to Indiana Groundwater Quality Standard), Federal Secondary Drinking Water Standards (FED_SEC), or USEPA Region IX Preliminary Remediation Goal for Tap Water (R9_TAP). PRG based on HQ=0.1

3 - DuPont site-specific screening level derived for phosphorous using a RDA of 14 mg/kg-day and default residential drinking water intake values (USEPA Region VIII, 1994).

Table 12
**Summary of Health Risks Intermittent Exposure to Basement Water**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

**Perimeter Well Water Data (MW-1, MW-10, MW-11, MW-21 through MW-25)**

| Receptor/Pathway | HI | CR |
|---|---|---|
| Child Resident | | |
| Perimeter Well Water Ingestion | 3.4E-01 | 1.1E-05 |
| Perimeter Well Water Dermal Contact | 7.2E-02 | 1.6E-06 |
| **Total** | 4.1E-01 | 1.3E-05 |
| Adult Resident | | |
| Perimeter Well Water Ingestion | 7.2E-02 | 1.2E-05 |
| Perimeter Well Water Dermal Contact | 8.8E-03 | 9.7E-07 |
| **Total** | 7.2E-02 | 1.2E-05 |

HI = Hazard Index
CR = Cancer Risk

Table 3
**Summary of Exposure Point Concentrations**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| Analyte | SWMU 1A | | SWMU 1B | | SWMU 1C | | SWMU 1I | | SWMU 1J | | SWMU 2C | | SWMU 3 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type |
| 1,1,2,2-Tetrachloroethane | | | | | | | | | | | | | | |
| 4,4'-DDT | | | | | | | | | | | | | | |
| Antimony | | | | | | | | | 4.25E+01 | UCL | | | | |
| Aroclor 1254 | | | | | 9.50E-02 | MAX | | | | | | | | |
| Aroclor 1260 | | | | | 1.65E-01 | MAX | | | | | | | | |
| Arsenic | 2.57E+03 | UCL | 1.50E+01 | UCL | 2.68E+02 | MAX | 9.61E+02 | MAX | 1.51E+04 | UCL | 2.58E+01 | MAX | 9.04E+01 | UCL |
| Barium | | | | | | | 7.72E+03 | MAX | | | | | | |
| Cadmium | 7.60E+01 | UCL | | | | | 1.02E+03 | MAX | 1.10E+02 | UCL | | | 7.74E+01 | UCL |
| Chromium | 5.20E+01 | UCL | | | 8.30E+01 | MAX | 2.34E+02 | MAX | | | 5.66E+01 | MAX | 6.76E+01 | UCL |
| Copper | | | | | | | | | | | | | | |
| Iron | | | | | | | | | 5.31E+04 | MAX | | | 1.14E+05 | MAX |
| Lead | 1.50E+04 | UCL | 3.13E+02 | UCL | 3.39E+03 | MAX | 3.62E+04 | MAX | 2.35E+04 | UCL | 1.31E+03 | MAX | 5.53E+03 | UCL |
| Manganese | | | | | | | | | | | | | 1.92E+03 | MAX |
| Tetrachloroethene | | | | | | | | | | | | | | |
| Thallium | | | | | | | | | | | | | | |
| Trichloroethene | | | | | | | | | | | | | | |
| Zinc | 4.61E+04 | UCL | | | | | 3.31E+04 | MAX | 7.17E+04 | UCL | | | 9.48E+03 | UCL |

Notes:
UCL - 95% Upper Confidence Limit on the mean calculated in Appendix D of BLRA.
MAX - Maximum detected concentration, sample size less than 5 or MAX less than UCL.
Mean - Mean detected concentration, recommended for lead evaluations.

Table [illegible]
**Summary of Exposure Point Concentrations**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| Analyte | SWMU 4 | | SWMU 7 | | SWMU 8 | | SWMU 10A | | SWMU 10C | | SWMU 10D | | SWMU 12A | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type |
| 1,1,2,2-Tetrachloroethane | | | | | | | | | | | 1.00E-01 | MAX | | |
| 4,4'-DDT | 8.50E-01 | MAX | | | | | | | | | | | | |
| Antimony | 2.97E+02 | MAX | 1.01E+03 | MAX | | | 4.70E+02 | MAX | | | 2.71E+03 | UCL | | |
| Aroclor 1254 | | | | | | | | | | | | | | |
| Aroclor 1260 | | | | | | | | | | | | | | |
| Arsenic | 1.43E+04 | UCL | 1.19E+03 | UCL | 4.60E+01 | MAX | 9.33E+02 | MAX | 1.73E+01 | MAX | 1.48E+02 | UCL | 1.87E+03 | MAX |
| Barium | 5.58E+03 | UCL | 5.22E+03 | UCL | | | | | | | | | | |
| Cadmium | | | 5.18E+02 | MAX | 9.76E+01 | MAX | | | | | 5.93E+03 | MAX | | |
| Chromium | | | - | - | 4.54E+01 | MAX | 8.95E+02 | MAX | | | | | 2.06E+03 | MAX |
| Copper | | | 2.76E+03 | UCL | | | | | | | 5.10E+03 | MAX | | |
| Iron | 1.27E+05 | MAX | 1.51E+05 | MAX | | | | | | | | | | |
| Lead | 5.96E+04 | UCL | 7.64E+04 | UCL | 1.29E+03 | MAX | 2.16E+03 | MAX | | | 1.44E+05 | MAX | | |
| Manganese | | | 2.42E+03 | MAX | | | | | | | | | | |
| Tetrachloroethene | | | | | | | | | | | 1.80E+00 | MAX | | |
| Thallium | | | | | | | | | | | | | | |
| Trichloroethene | | | | | | | | | | | 2.10E-02 | MAX | | |
| Zinc | 3.78E+04 | UCL | 9.01E+04 | UCL | 2.49E+04 | MAX | | | | | 1.20E+05 | MAX | | |

**Table 13**
**Summary of Exposure Point Concentrations**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| Analyte | SWMU 12B | | SWMU 20 | | SWMU 21 | | AOC 2B | | AOC 2E | | AOC 11 | | AOC 13 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type | Surface Soil (mg/kg) | Type |
| 1,1,2,2-Tetrachloroethane | | | | | | | | | | | | | | |
| 4,4'-DDT | | | | | | | | | 2.43E+00 | MAX | | | | |
| Antimony | | | | | 9.22E+01 | MAX | | | | | | | 2.48E+02 | UCL |
| Aroclor 1254 | | | | | | | | | | | | | | |
| Aroclor 1260 | | | | | | | | | | | | | | |
| Arsenic | 3.39E+01 | MAX | 3.66E+00 | UCL | 1.54E+02 | UCL | 5.15E+01 | MAX | 3.18E+03 | UCL | 5.20E+00 | MAX | 7.57E+02 | UCL |
| Barium | | | | | | | | | | | | | | |
| Cadmium | | | | | | | 1.13E+02 | MAX | | | | | 3.73E+02 | UCL |
| Chromium | 1.74E+02 | MAX | | | | | | | 4.84E+02 | MAX | | | 4.86E+01 | UCL |
| Copper | | | | | | | | | | | | | 2.47E+03 | UCL |
| Iron | | | | | 2.11E+05 | MAX | | | 5.11E+04 | MAX | | | 1.98E+05 | MAX |
| Lead | | | | | 2.28E+03 | UCL | 1.41E+03 | MAX | 6.82E+03 | UCL | | | 4.64E+04 | UCL |
| Manganese | | | | | | | | | 1.48E+04 | MAX | | | 5.10E+03 | MAX |
| Tetrachloroethene | | | | | | | | | | | | | | |
| Thallium | | | | | | | | | | | | | | |
| Trichloroethene | | | | | | | | | | | | | | |
| Zinc | | | | | | | 4.66E+04 | MAX | | | | | 5.85E+04 | UCL |

**Table 14**
**Intake Assumptions**
**Exposure to Soil**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

**Soil Intake Factors (kg soil/kg-day)**

Ingestion = (IRS x EF x ED x CFs x FC)/ (AT x BW)

Dermal Absorption = (AB x SA x AF x EF x ED x CFs x FC)/(AT x BW)

**Air Intake Factor ($m^3$-air/kg-day)**

Inhalation = (IN x ET x EF x ED x FC) / (AT x BW x (PEF or VF))

| | Intake Parameter | Current/Future On-Site Trespasser |
|---|---|---|
| IRS | Ingestion Rate, soil (mg/day) (1) | 100 |
| IN | Inhalation Rate, air ($m^3$/hour) (2) | 1.9 |
| FC | Fraction contacted (3) | 0.25 to 1 |
| AF | Dermal Adherence Factor, soil (mg/$cm^2$) (4) | 0.2 |
| AB | Dermal Absorption Fraction (unitless) (5) | Chemical-specific |
| PEF | Particulate Emission Factor ($m^3$/kg) (6) | 1.32E+09 |
| VF | Soil to Air Volatilization Factor, $m^3$/kg (6) | Chemical-specific |
| SA | Skin Surface Area, ($cm^2$) (7) | 2800 |
| ET: | Exposure Time (hours/day) (8) | 2 |
| EF: | Exposure Frequency (days/year) (8) | 5 |
| ED: | Exposure Duration (years) (8) | 10 |
| CFs: | Conversion Factor, soil (kg/mg) | 1E-06 |
| BW: | Body Weight (kg) (9) | 45 |
| AT: | Averaging Time (days) (10) | |
| | Noncarcinogenic, ED x 365 d/yr | 3650 |
| | Carcinogenic,70 yr x 365d/yr | 25,550 |

**Notes:**

(1) Soil ingestion rate: USEPA recommended value for youth age 7-16 years (USEPA, 1997).

(2) Inhalation Rate: USEPA recommended values for children heavy activity (1.9 m3/hr) (USEPA, 1997).

(3) Fraction contacted: Value is based on an equal distribution of time spent across each unit within an exposure area (such as waste management areas).

(4) Adherence Factor: USEPA recommended value as cited in USEPA Region IX, 2002.

(5) Chemical-specific dermal absorption fraction obtained from Exhibit C-6 in USEPA 2002.

(6) Particulate Emission Factor or Volatilization Factor: USEPA default value PEF used for non-volatile compounds (USEPA, 1996) or chemical-specific VF used for volatile compounds (USEPA Region IX, 2002).

(7) Skin Surface Area: USEPA default value for residential dermal contact (face, forearms, and hands) (Exhibit 5-2, USEPA 2002).

(8) Exposure Time: Estimated value for daily visit by a trespasser.
Exposure Frequency: value based on a conservative site-specific estimate of exposure during warm weather months.
Exposure Duration: USEPA Region IV default value (USEPA Region IV, 2000).

(9) Averaging time: Noncarcinogens = ED expressed in days. Carcinogens = 70-year lifetime expressed in days.

**References:**


USEPA, 1996. Soil Screening Guidance: User's Guide. Office of Solid Waste and Emergency Response. Washington, D.C. EPA/540/R-96/018. July.

USEPA, 1997. Expsoure Factors Handbook. Office of Research and Development. Washington, D.C. EPA/600/P-95/002Fa. August.

USEPA, 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Office of Emergency and Remedial Response. OSWER 9355.4-24. December.

USEPA Region IV, 2000. Supplemental Guidance to RAGs: Region IV Bulletins. Office of Technical Services. October 1995 (revised May 2000).

USEPA Region IX, 2002. Preliminary Remediation Goal Table. November.

**Table 15**
**Summary of Risk Characterization Results in Soil**
**DuPont East Chicago Facility**
**East Chicago, Indiana**

| | | On-Site Trespasser | | |
|---|---|---|---|---|
| | SWMUs/AOCs | Total HI (a) | Max HI by Target Organ (b) | CR |
| SWMU 1A | Ash Landfill/Stoker Grate Area | 0.08 | - | 5.E-06 |
| SWMU 1B | Calcium Sulfate and TSP Area | 0.0004 | - | 3.E-08 |
| SWMU 1C | Rubble Fill Area | 0.08 | - | 5.E-07 |
| SWMU 1I | Miscellaneous Pits and Piles—North | 0.05 | - | 2.E-06 |
| SWMU 1J | Miscellaneous Pits and Piles—South | 0.5 | - | 3.E-05 |
| SWMU 1K | Spill Areas—South of Ash Landfill/Stoker Grate Area | | | |
| SWMU 2C | East Pile | 0.0008 | - | 5.E-08 |
| SWMU 2D | Far East Pile | | | |
| SWMU 3 | Disposal Area Near Former Chrome Outfall | 0.08 | - | 2.E-07 |
| SWMU 4 | Insecticide Disposal Area | 0.4 | - | 3.E-05 |
| SWMU 7 | Abandoned Chemical Storage Building-"The Morgue" | 0.07 | - | 2.E-06 |
| SWMU 8 | Zinc Roaster Sinter Area | 0.004 | - | 9.E-08 |
| SWMU 10A | HCl Neutralization Pit North Pit | 0.04 | - | 2.E-06 |
| SWMU 10B | HCl Neutralization Pit West Pit | | | |
| SWMU 10C | HCl Neutralization Pit South Pit | 0.005 | - | 3.E-08 |
| SWMU 10D | HCl Neutralization Pit Far North Pit | 0.2 | - | 3.E-07 |
| SWMU 11 | Sulfamic Acid Pits (2) | | | |
| SWMU 12A | Antimony Pentachloride Settling Basin, North Basin | 0.06 | - | 4.E-06 |
| SWMU 12B | Antimony Pentachloride Settling Basin, South Basin | 0.001 | - | 6.E-08 |
| SWMU 14 | Chrome Outfall and Impoundment | | | |
| SWMU 15 | Former Wastewater Treatment System (Outfall 002) | | | |
| SWMU 20 | I-90 Fill Area | 0.0002 | - | 1.E-08 |
| SWMU 21 | Lead Arsenate Sludge Disposal Area | 0.01 | - | 3.E-07 |
| AOC 2B | Railroad Loading/Unloading Area | 0.005 | - | 1.E-07 |
| AOC 2E | Railroad Loading/Unloading Area | 0.1 | - | 6.E-06 |
| AOC 3B | Aboveground Storage Tank Area | | | |
| AOC 8 | Former Powerhouse Pit | | | |
| AOC 11 | Ditch and Associated Materials | 0.0003 | - | 2.E-08 |
| AOC 13 | Conoco Area | 0.04 | - | 1.E-06 |
| AOC 14 | Former Insecticides Warehouse | | | |

Incomplete Pathway under current land use conditions
Incomplete Pathway under current and future land use conditions

**Notes:**

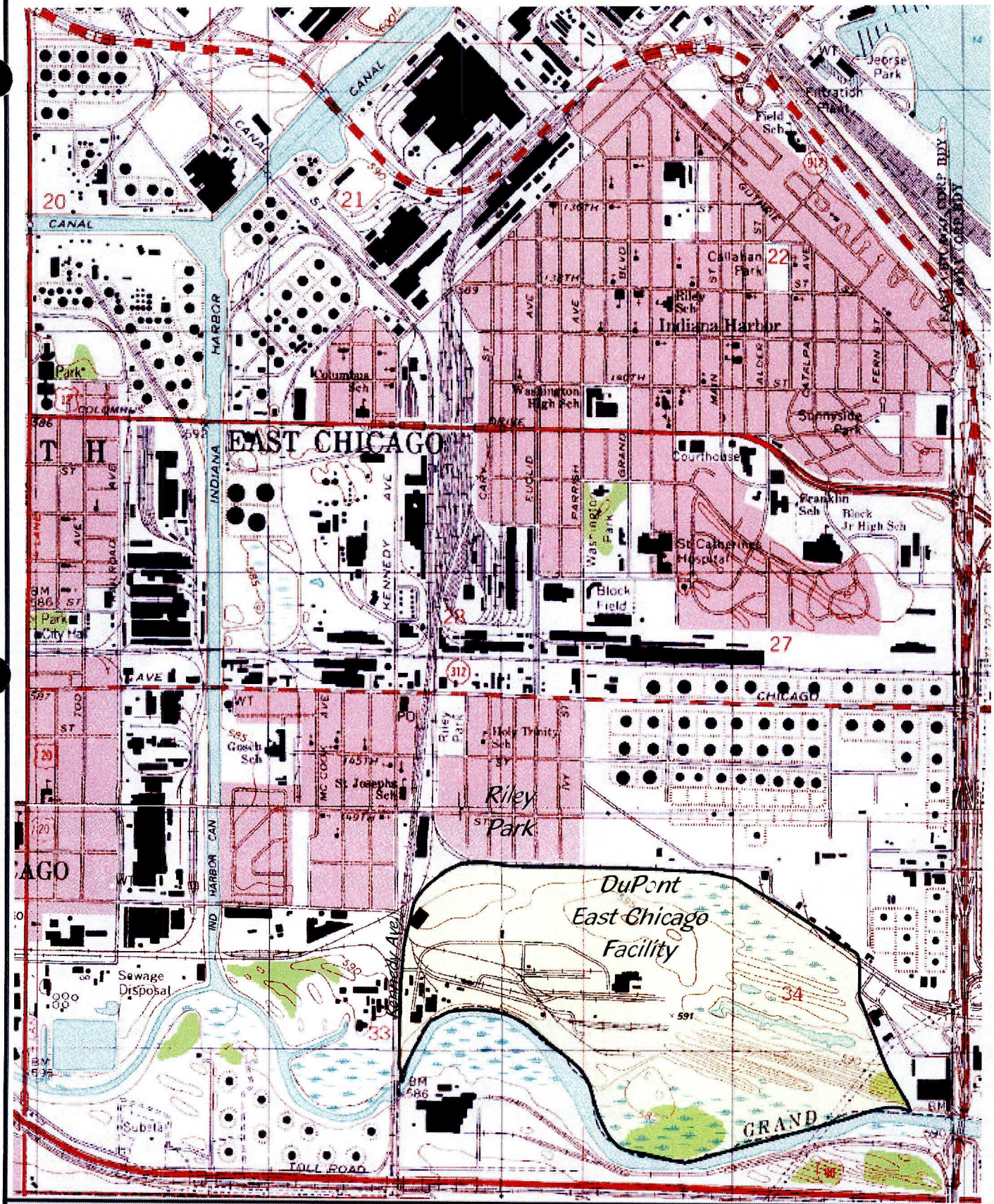
HI - Hazard index for noncancer effects.

CR = Cancer risk. Cancer risk levels between 1E-06 and 1E-04 (1 in 1 milltion to 1 in 10,000) are considered to be generally acceptable (IDEM, 2001).

(a) "Total HI" is shown for total HIs less than or equal to 1, regardless of whether constituent effects are additive or not (based on target organ affected).

(b) If the total HI was greater than 1, the maximum HI for constituents that affect the same target organ is also shown (see Appendix D in BLRA).

# FIGURES




| | | | |
|---|---|---|---|
| CLIENT: | DuPont East Chicago, East Chicago, Indiana | TITLE: | Site Location Map |
| PROJECT: | EI CA 725 | | |
| REVISION NO.: 0 | DESIGNED BY: DBM | DUPONT / CORPORATE REMEDIATION GROUP<br>An Alliance between DuPont and URS Diamond | PROJ NO.: 18983871 |
| SCALE: NTS | DRAWN BY: DBM | | TASK: |
| FILE: Figure1.cdr | CHECKED BY: APE | | FIGURE: 1 |

**LEGEND**

- Approximate Location of Groundwater Divide Based on June, August, and November 1990 Potentiometric Surfaces
- Inferred Groundwater Divide
- Probable Direction of Groundwater Flow
- Surface Water Runoff
- Property Line.
- Onsite Area Boundaries
- Peat
- Fill (bricks, sand, and gravel)
- Grey Brown Fine-Grained Loose Sand (SP)
- Grey Clay (CL)
- Marsh Topography
- Dune & Swale Topography
- Standing Water
- Approximate Monitoring Well Locations
- Approximate location of Groundwater divide as shown in Phase I RFI Report

**Solid Waste Management Units**

1 Northern Onsite Waste Management Area
- 1A Ash Landfill/Stoker Grate Area
- 1B Calcium Sulfate and TSP Area
- 1C Rubble Fill Area
- 1D Silica/Calcium Sulfate Area
- 1E Calcium Fluoride Area
- 1F Zinc Mud Area
- 1G General Rufuse Areas
- 1H PCB Storage Area in Rubble Fill Area
- 1I Miscellaneous Pits and Piles-North
- 1J Miscellaneous Pits and Piles-South
- 1K Spill Areas South of Ash Landfill/ Stoker Grate Area
- 1L New Landfill

2 Coal and Fly Ash Piles
- 2A Far West Pile
- 2B West Pile
- 2C East Pile
- 2D Far East Pile

3 Disposal Area Near Former Chrome Outfall
4 Insecticide Disposal Area
5 PCB Electrical Storage Yard
6 Hazardous Waste Storage Area
- 6A Waste Solvent Tank
- 6B AgChem Drum Storage
- 6C Reagent Drum Storage
- 6D Flue Dust Storage in Adhesives Building
- 6E Flue Dust Storage Near North Warehouse

7 Abandoned Chemical Storage Building- "The Morgue"
8 Zinc Roaster Sinter Area
9 Incinerators
- 9A Northwest Incinerator
- 9B Incinerator West of Freon Warehouse

10 HCl Neutralization Pits
- 10A North Pit
- 10B West Pit
- 10C South Pit
- 10D Far North Pit

11 Sulfamic Acid Pits (2)
12 Antimony Pentachloride Settling Basins
- 12A North Basin
- 12B South Basin

13 Colloidal Silica Settling Pits (2)
14 Former Chrome Outfall and Impoundment
15 Former Wastewater Treatment System (Outfall 002)
16 Environmental Control System and Outfall 003 (Current Wastewater Treatment System)
20 I-90 Fill Area
21 Lead Arsenate Sludge Disposal Area
22 Former River Intake Canal

**Notes:**
Map Source: Figure 2-10b of Current Conditions Report
SWMUs 17 (process sewers) and 18 (sanitary sewers) are not shown on this figure (see Figure 2-6b of the CCR)
SWMU 19 (building maintenance areas) is not shown on this figure (see Figure 2-6a)
AOCs are not shown on this figure

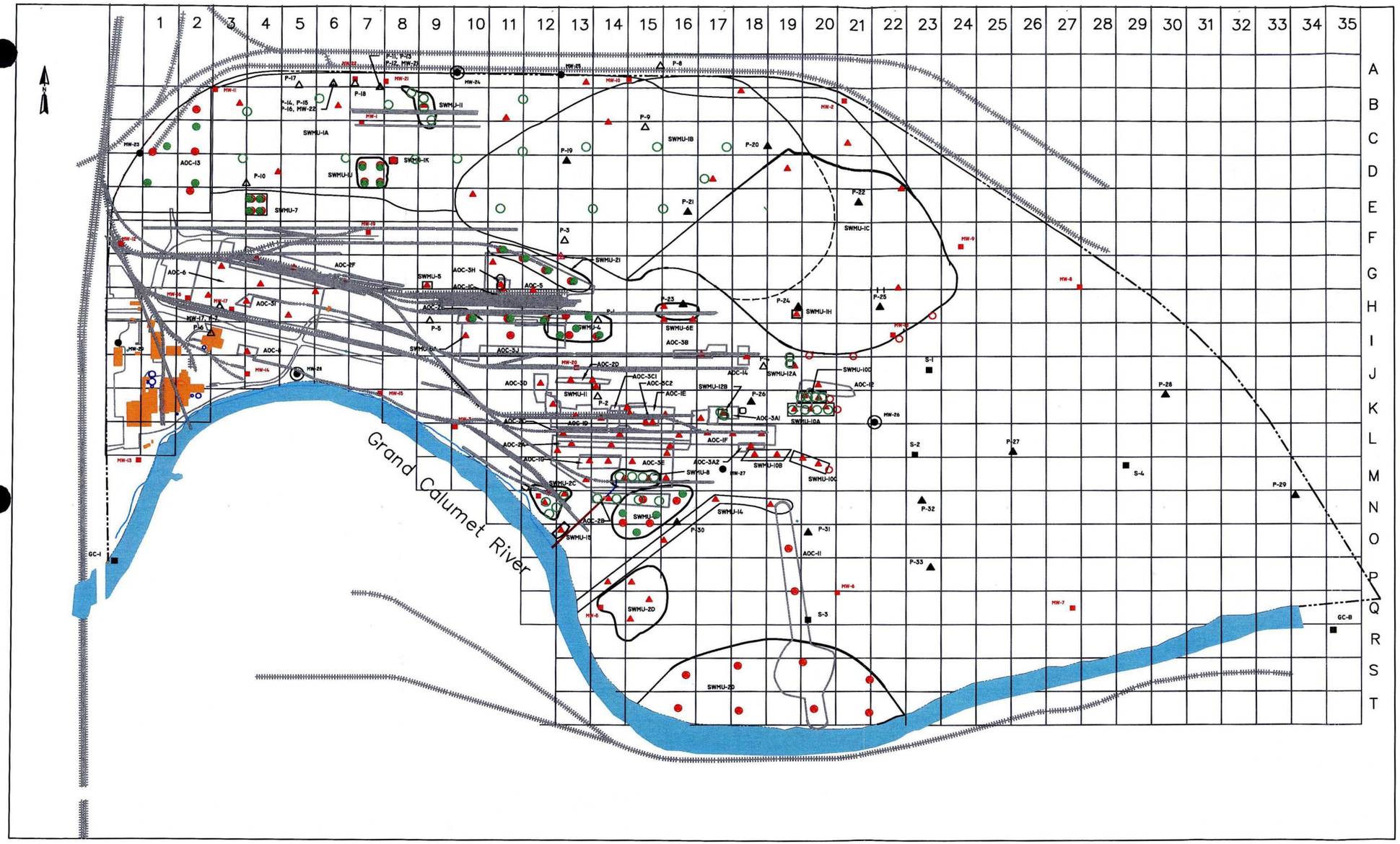
DUPONT
CORPORATE REMEDIATION GROUP

EI CA725
DuPont East Chicago Facility
East Chicago, Indiana

DBM
03/16/04

Figure 2
Preliminary Conceptual Site Model

Figure2.cdr
18983871




Notes:
Symbols centered over sample location.

Sources:
DuPont and CH2M HILL

Legend

- DuPont Property Line
- Areas of Concern
- Solid Waste Management Units
- Example of Overlapping Areas of Concern
- Monitoring Well Location
- 1999 Subsurface Sampling Location
- 1999 Surface Sampling Location
- 1999 Both = (Surface/Subsurface Sampling Location)
- P-25 1999 Piezometer
- MW-18 Existing Monitoring Well
- S-4 1999 Staff Gauge
- P-9 Existing Piezometer
- MW-25 1999 Monitoring Well
- P-12, MW-21 Existing Monitoring Well/Piezometer
- MW-25 Shelby Tube Sample
- 2003 Surface Sampling Location
- 2003 Both = (Surface/Subsurface Sampling Location)

1999 = Phase I
2003 = Phase II

0 150 300
FEET

| NO. | REVISIONS | BY | DATE |
|---|---|---|---|
| 1 | Corrected SWMU'S and boring locations labels. Piezometer locations are approximate. | L.R. | 05/24/99 |

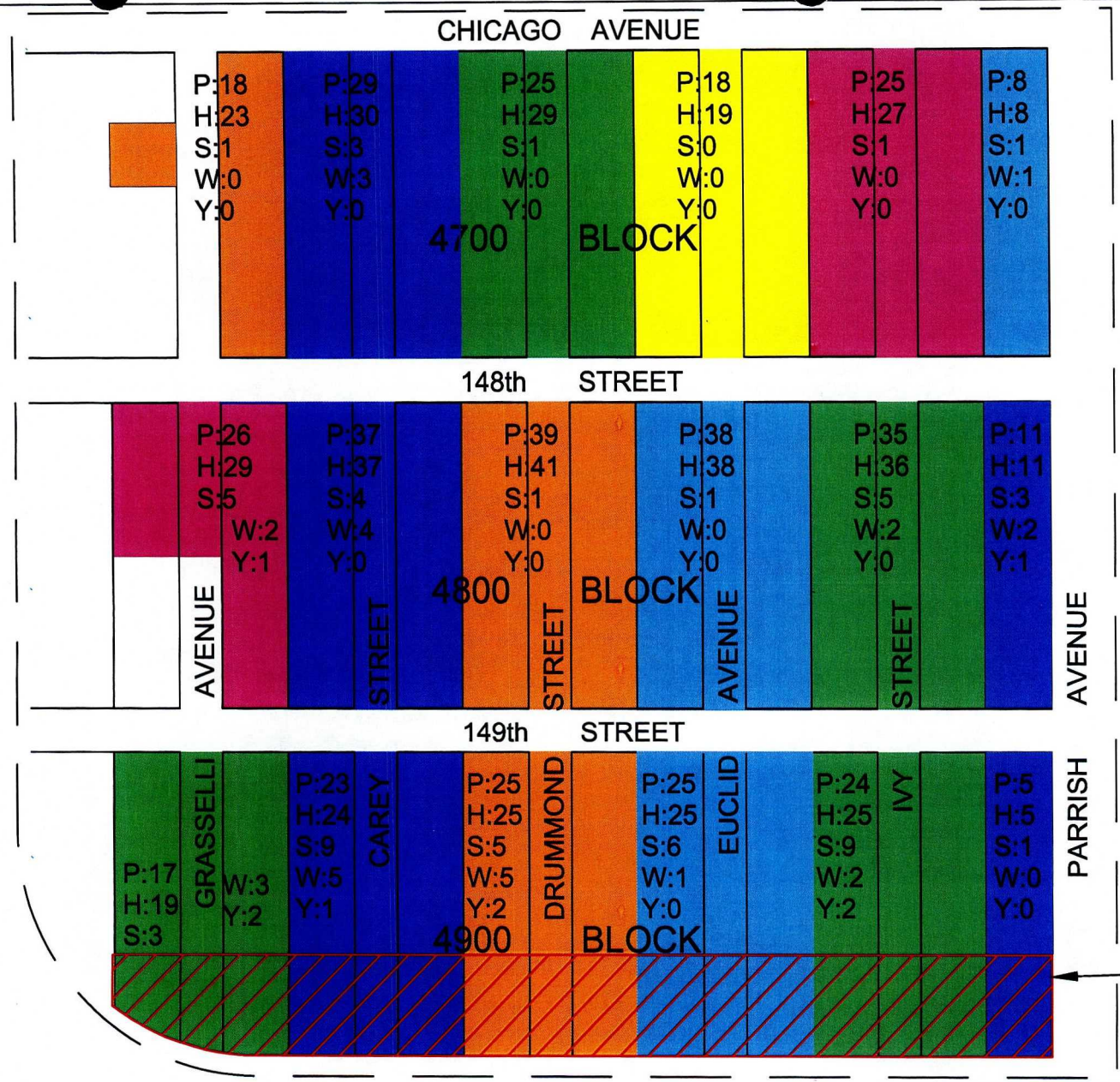
| | | INITIALS |
|---|---|---|
| DESIGNED | | |
| DRAWN | D.H. ENGLISH | |
| CHECKED | P.J. CHEN | |
| APPROVED(DESIGN) | A.P. EGLER | |
| APPROVED(CONSTRUCTION) | | |

Corporate Remediation Group
An Alliance between DuPont and The W-C Diamond Group
Barley Mill Plaza, Building 27
Wilmington, Delaware 19880-0027

# PHASE I AND PHASE II RFI SAMPLE LOCATIONS

DuPont East Chicago Facility and Northwest Indiana Region
East Chicago, Illinois

| SCALE | DATE | DRAWING NO. | FIGURE |
|---|---|---|---|
| 1" = 300' | 4/29/04 | 3761D012 | 3 |




APPROXIMATE NORTH

N

LEGEND:

P – ESTIMATED NUMBER OF HOUSES IN PHOTOGRAPH

H – NUMBER OF HOUSES SURVEYED

S – NUMBER OF HOUSES WITH SUMPS

W – ESTIMATED NUMBER OF HOUSES WITH SUMPS THAT PUMP BECAUSE OF A HIGH WATER TABLE

Y – ESTIMATED NUMBER OF HOUSES WITH A HIGH WATER TABLE THAT PUMP TO THE GROUND.

SOUTHERN HALF 4900 BLOCK RILEY PARK. SUMPS SAMPLED IN EARLY 1990 BY $CH_2$ M HILL

$CH_2$ M HILL SUMP SAMPLING
ARSENIC AVG. = <0.006 mg/l
ARSENIC MAX. = 0.028 mg/l


DUPONT

**Corporate Remediation Group**

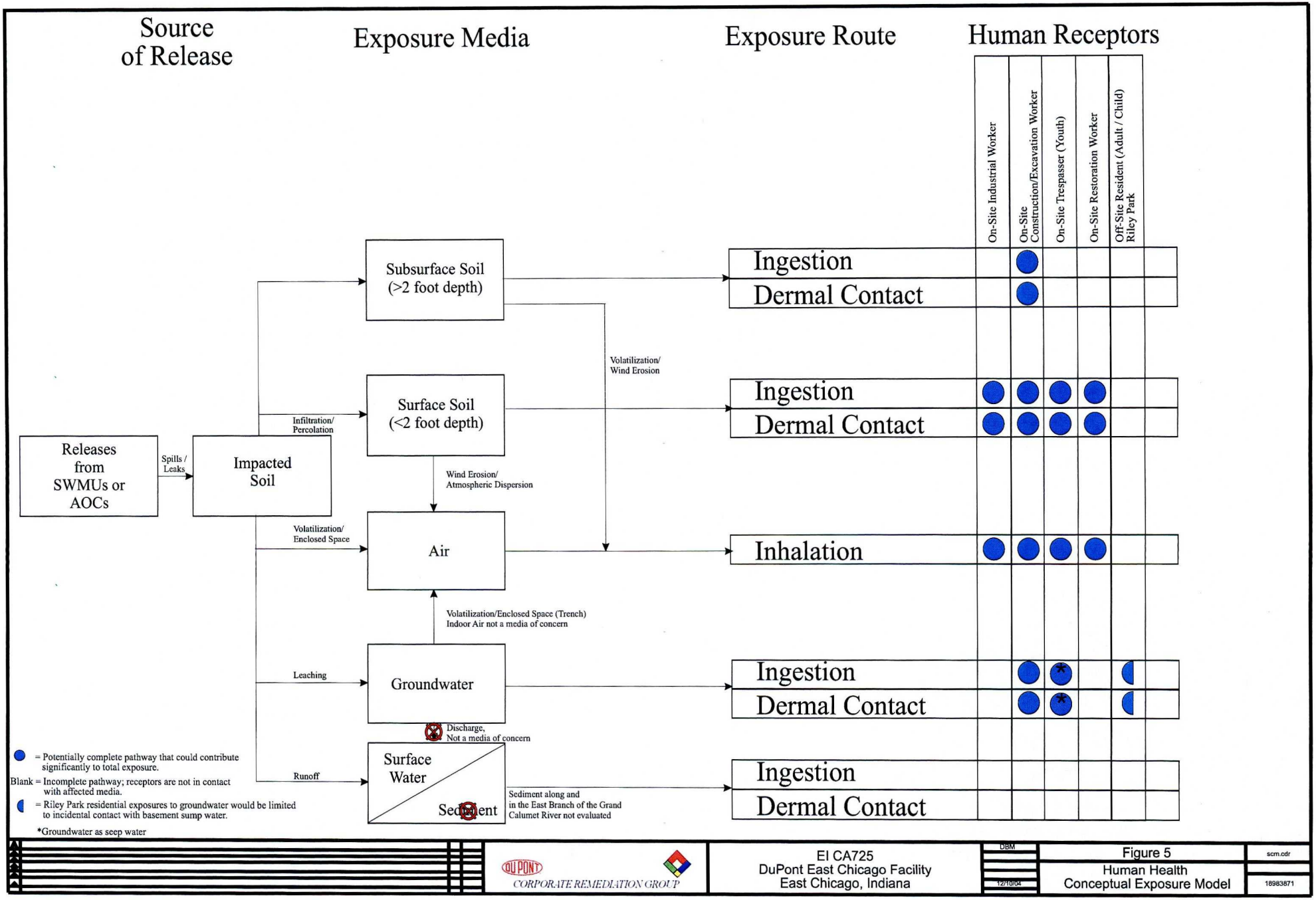
*An Alliance between DuPont and URS Diamond*

Barley Mill Plaza, Building 27
Wilmington, Delaware 19805


# RILEY PARK BASEMENT SUMP SUMMARY INFORMATION

East Chicago Facility
East Chicago, Wisconsin

| SCALE | DESIGNED | DRAWN | CAD FILE NO. |
|---|---|---|---|
| Not to Scale | | DEL | 3456A001 |
| DATE | CHECKED | APPROVED | FIGURE |
| 10/21/04 | P. Chen | | 4 |


Source of Release
Exposure Media
Exposure Route
Human Receptors
On-Site Industrial Worker
On-Site Construction/Excavation Worker
On-Site Trespasser (Youth)
On-Site Restoration Worker
Off-Site Resident (Adult / Child) Riley Park
Releases from SWMUs or AOCs
Spills / Leaks
Impacted Soil
Subsurface Soil (>2 foot depth)
Surface Soil (<2 foot depth)
Air
Groundwater
Surface Water
Sediment
Infiltration/ Percolation
Volatilization/ Wind Erosion
Wind Erosion/ Atmospheric Dispersion
Volatilization/ Enclosed Space
Volatilization/Enclosed Space (Trench) Indoor Air not a media of concern
Leaching
Discharge, Not a media of concern
Runoff
Sediment along and in the East Branch of the Grand Calumet River not evaluated
Ingestion
Dermal Contact
Inhalation
= Potentially complete pathway that could contribute significantly to total exposure.
Blank = Incomplete pathway; receptors are not in contact with affected media.
= Riley Park residential exposures to groundwater would be limited to incidental contact with basement sump water.
*Groundwater as seep water
DUPONT
CORPORATE REMEDIATION GROUP
EI CA725
DuPont East Chicago Facility
East Chicago, Indiana
DBM
12/10/04
Figure 5
Human Health
Conceptual Exposure Model
scm.cdr
18983871

# APPENDICES

# APPENDIX A

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-03 | MW-04 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 11:20 | 11/9/1999 11:10 | 11/11/1999 15:10 | 11/11/1999 14:10 | 11/11/1999 11:25 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | <1. | <1. | <1. | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | <2. | <2. | <2. | <2. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | <2. | <2. | <2. | <2. |
| 1,1-DICHLOROETHANE | ug/l | T | | | <2. | <2. | <2. | <2. |
| 1,1-DICHLOROETHENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | | <2. | <2. | <2. | 17 |
| 1,2-DICHLOROPROPANE | ug/l | T | | | <1. | <1. | <1. | <1. |
| 2-HEXANONE | ug/l | T | | | <7. | <7. | <7. | <7. |
| ACETONE | ug/l | T | | | <6. | <6. | <6. | <6. |
| BENZENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | | <1. | <1. | <1. | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | | <1. | <1. | <1. | <1. |
| BROMOFORM | ug/l | T | | | <1. | <1. | <1. | <1. |
| CARBON DISULFIDE | ug/l | T | | | <3. | <3. | <3. | <3. |
| CARBON TETRACHLORIDE | ug/l | T | | | <1. | <1. | <1. | <1. |
| CHLOROBENZENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | | <2. | <2. | <2. | <2. |
| CHLOROFORM | ug/l | T | | | <1. | <1. | <1. | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | <2. | <2. | <2. | <2. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | <2. UJ | 42. J | 30. J | 10. J |
| ETHYL CHLORIDE | ug/l | T | | | <3. | <3. | <3. | <3. |
| ETHYLBENZENE | ug/l | T | | | <2. | <2. | <2. | <2. |
| METHYL BROMIDE | ug/l | T | | | <3. | <3. UJ | <3. UJ | <3. UJ |
| METHYL CHLORIDE | ug/l | T | | | <3. | <3. | <3. | <3. |
| METHYL ETHYL KETONE | ug/l | T | | | <3. | <3. | <3. | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | | <5. | <5. | <5. | <5. |
| METHYLENE CHLORIDE | ug/l | T | | | <2. | <2. | <2. | <2. |
| STYRENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| TOLUENE | ug/l | T | | | <2. | <2. | <2. | <2. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | <2. | <2. | <2. | <2. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| TRICHLOROETHENE | ug/l | T | | | <1. | <1. | <1. | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | <2. | <2. | <2. | <2. |
| VINYL CHLORIDE | ug/l | T | | | <2. | <2. | <2. | <2. |
| XYLENES | ug/l | T | | | <1. | <1. | <1. | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | <1. | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | <1. | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | <1. | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | <1. | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | <1. | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-03 | MW-04 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 11:20 | 11/9/1999 11:10 | 11/11/1999 15:10 | 11/11/1999 14:10 | 11/11/1999 11:25 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,6-DINITROTOLUENE | ug/l | T | | | | <2. | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | <1. | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | <1. | | |
| 2-NITROANILINE | ug/l | T | | | | <2. | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | <2. UJ | | |
| 3-NITROANILINE | ug/l | T | | | | <2. UJ | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | <2. | | |
| 4-CHLOROANILINE | ug/l | T | | | | <1. UJ | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | <1. | | |
| 4-NITROANILINE | ug/l | T | | | | <2. | | |
| ACENAPHTHENE | ug/l | T | | | | <1. | | |
| ACENAPHTHYLENE | ug/l | T | | | | <1. | | |
| ANTHRACENE | ug/l | T | | | | <1. | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | <1. | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | <1. | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | <1. | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | <1. | | |
| BENZO[A]PYRENE | ug/l | T | | | | <1. | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | <1. | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | <1. | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | <1. | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | <2. | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | <2. | | |
| CARBAZOLE | ug/l | T | | | | <3. | | |
| CHRYSENE | ug/l | T | | | | <1. | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | <1. | | |
| DIBENZOFURAN | ug/l | T | | | | <1. | | |
| DIETHYL PHTHALATE | ug/l | T | | | | <2. | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | <2. | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | <2. | | |
| FLUORANTHENE | ug/l | T | | | | <1. | | |
| FLUORENE | ug/l | T | | | | <1. | | |
| HEXACHLOROBENZENE | ug/l | T | | | | <2. | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | <2. | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | <5. | | |
| HEXACHLOROETHANE | ug/l | T | | | | <1. | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | <1. | | |
| ISOPHORONE | ug/l | T | | | | <1. | | |
| NAPHTHALENE | ug/l | T | | | | <1. | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | <2. | | |
| NITROBENZENE | ug/l | T | | | | <1. | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | <1. | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-03 | MW-04 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 11:20 | 11/9/1999 11:10 | 11/11/1999 15:10 | 11/11/1999 14:10 | 11/11/1999 11:25 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | <1. | | |
| PHENANTHRENE | ug/l | T | | | | <1. | | |
| PHENOL | ug/l | T | | | | <1. UJ | | |
| PYRENE | ug/l | T | | | | <1. | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | <0.096 | <0.096 | |
| AROCLOR 1016 | ug/l | T | | | | <0.095 | <0.095 | |
| AROCLOR 1221 | ug/l | T | | | | <0.095 | <0.095 | |
| AROCLOR 1232 | ug/l | T | | | | <0.095 | <0.095 | |
| AROCLOR 1242 | ug/l | T | | | | <0.095 | <0.095 | |
| AROCLOR 1248 | ug/l | T | | | | <0.095 | <0.095 | |
| AROCLOR 1254 | ug/l | T | | | | <0.095 | <0.095 | |
| AROCLOR 1260 | ug/l | T | | | | <0.095 | <0.095 | |
| DDT | ug/l | T | | | | <0.0038 UJ | <0.0038 UJ | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | <0.0038 | <0.0038 | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | <0.0038 | <0.0038 | |
| METHOXYCHLOR | ug/l | T | | | | <0.019 UJ | <0.019 UJ | |
| ALUMINUM | ug/l | D | | <77 | <77 | <77 | <77 | <77 |
| ALUMINUM | ug/l | T | | 420 | <77 | <77 | 187 J | 270 |
| ANTIMONY | ug/l | D | | <8.4 | <8.4 | <8.4 | <8.4 | <8.4 |
| ANTIMONY | ug/l | T | | <8.4 | 12 U | <8.4 R | <8.4 | <8.4 |
| ARSENIC | ug/l | D | | 918 | 113 | 16600 | 37 | 106 |
| ARSENIC | ug/l | T | | 1040 | 118 | 17700 | 36 | 120 |
| BARIUM | ug/l | D | | 32.6 J | 32.0 J | 67.4 | 15.4 | 19.9 |
| BARIUM | ug/l | T | | 61.4 | 30.7 | 70.1 | 17 | 21.3 |
| CADMIUM | ug/l | D | | 1.8 | 1.36 J | <.81 | <.81 | <.81 |
| CADMIUM | ug/l | T | | 9.5 | <.81 | <.81 | 7.9 J | <.81 |
| CALCIUM | ug/l | D | | 607000 | 508000 | 553000 | 544000 | 547000 |
| CALCIUM | ug/l | T | | 649000 | 494000 | 562000 | 547000 | 530000 |
| CHROMIUM | ug/l | D | | 3.2 U | 2.2 U | <1.7 | <1.7 | <1.7 |
| CHROMIUM | ug/l | T | | 4.2 U | <1.7 | 4.5 U | <1.7 UJ | <1.7 UJ |
| COPPER | ug/l | D | | <2.9 | <2.9 | <2.9 | <2.9 | <2.9 |
| COPPER | ug/l | T | | <2.9 UJ | <2.9 UJ | <2.9 | <2.9 | <2.9 |
| IRON | ug/l | D | | 19800 | 62900 | 46600 | 41200 | 56000 |
| IRON | ug/l | T | | 22400 | 61700 | 46300 | 44300 | 56700 |
| LEAD | ug/l | D | | <7.9 | <7.9 | <7.9 | <7.9 | <7.9 |
| LEAD | ug/l | T | | 59 | <7.9 | <7.9 | <7.9 | <7.9 |
| MAGNESIUM | ug/l | D | | 22200 | 87000 | 90100 J | 54900 | 829000 |
| MAGNESIUM | ug/l | T | | 29400 | 88500 | 81200 J | 56100 | 803000 |
| MANGANESE | ug/l | D | | 513 | 358 | 2060 | 680 | 1470 |
| MANGANESE | ug/l | T | | 563 | 366 | 2230 | 705 | 1500 |
| MERCURY | ug/l | D | | <.10 UJ | <.10 UJ | <.10 | <.10 | <.10 |
| MERCURY | ug/l | T | | <.10 UJ | <.10 UJ | <.10 | <.10 | <.10 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-03 | MW-04 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 11:20 | 11/9/1999 11:10 | 11/11/1999 15:10 | 11/11/1999 14:10 | 11/11/1999 11:25 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| NICKEL | ug/l | D | | 3.0 U | <1.6 | <1.6 | 11.9 J | 26 |
| NICKEL | ug/l | T | | 3.8 U | <1.6 | 1.7 J | 14.3 J | 27.4 |
| SELENIUM | ug/l | D | | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 |
| SELENIUM | ug/l | T | | <4.4 UJ | <4.4 UJ | 5.3 J | <4.4 | <4.4 |
| SODIUM | ug/l | D | | 26000 | 124000 | 105000 | 130000 | 119000 |
| SODIUM | ug/l | T | | 27200 | 121000 | 96000 | 136000 | 123000 |
| VANADIUM | ug/l | D | | <1.9 | <1.9 | <1.9 UJ | <1.9 UJ | <1.9 UJ |
| VANADIUM | ug/l | T | | <1.9 UJ | <1.9 UJ | 5.5 U | 6.6 J | 8.0 J |
| ZINC | ug/l | D | | 4030 | 5.1 U | <3.0 | 942 | 7090 |
| ZINC | ug/l | T | | 4350 | 6.4 U | 4.8 J | 1630 | 7300 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 163000 | 203000 | 298000 | 241000 | 507000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 1400 | 3800 | 8000 | 52100 | 78300 |
| BICARBONATE | MG/L AS CA | T | | 163 | 203 | 298 | 241 | 507 |
| BORON | ug/l | D | | 276 | 205 | 501 | 457 | 970 |
| BORON | ug/l | T | | 302 | 215 | 486 | 468 | 981 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 31500 | 24500 | 31000 | 46000 | 101000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 1770 | <8000 | 930 | 980 | 2520 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 44 J | <30 | <30 | <30 | <30 |
| PHOSPHORUS | ug/l | T | | 1190 | 1380 | 9500 J | 280 J | 1040 J |
| SULFATE | ug/l | T | | 1360000 | 1560000 | 1750000 | 1820000 | 4770000 |
| SULFIDE | ug/l | T | | <410 | <410 | 5100 | <410 | <410 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 2000 U | 5100 J | 9300 J | 51000 J | 83000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | CLEAR | CLEAR | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 1420 | 840 | 490 | 430 | 730 |
| ODOR (FIELD) | NONE | N | | NONE | NONE | NONE | NONE | NONE |
| PH (FIELD) | STD UNITS | N | | 6.72 | 6.95 | 6.94 | 7.18 | 6.95 |
| REDOX (FIELD) | MV | N | | -82.9 | -106.1 | -64.4 | -86.5 | -47.5 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2370 | 2440 | 2110 | 3100 | 2220 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 11.9 | 4.79 | 0.81 | 34.3 | 36.5 |
| DEPTH TO WATER FROM TOC | Feet | N | | 10.04 | 6.14 | 13.2 | 8.9 | 9.66 |
| HEXANE | ug/l | T | | | <2. | <2. | <2. | <2. |
| OVABZONE | NONE | N | | nir | NIR | NIR | NIR | NIR |
| OVACASING | NONE | N | | nir | NIR | NIR | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.6 | 11.8 | 13.7 | 15.1 | 11.3 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-07 | MW-08 | MW-09 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/1999 10:15 | 11/11/1999 9:25 | 11/9/1999 14:55 | 11/9/1999 13:15 | 11/9/1999 13:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | | | <1. | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <2. | | | <2. | <2. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <2. | | | <2. | <2. |
| 1,1-DICHLOROETHANE | ug/l | T | | <2. | | | 200 | 200 |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | | | <1. | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | <2. | | | <2. | <2. |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | | | <1. | <1. |
| 2-HEXANONE | ug/l | T | | <7. | | | <7. | <7. |
| ACETONE | ug/l | T | | 13. J | | | <6. | <6. |
| BENZENE | ug/l | T | | <1. | | | <1. | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | | | <1. | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | | | <1. | <1. |
| BROMOFORM | ug/l | T | | <1. | | | <1. | <1. |
| CARBON DISULFIDE | ug/l | T | | <3. | | | <3. | <3. |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | | | <1. | <1. |
| CHLOROBENZENE | ug/l | T | | <1. | | | <1. | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | <2. | | | <2. | <2. |
| CHLOROFORM | ug/l | T | | <1. | | | <1. | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <2. | | | <2. | <2. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | <1. | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. UJ | | | <2. UJ | <2. UJ |
| ETHYL CHLORIDE | ug/l | T | | <3. | | | <3. UJ | <3. UJ |
| ETHYLBENZENE | ug/l | T | | <2. | | | <2. | <2. |
| METHYL BROMIDE | ug/l | T | | <3. UJ | | | <3. UJ | <3. UJ |
| METHYL CHLORIDE | ug/l | T | | <3. | | | <3. UJ | <3. UJ |
| METHYL ETHYL KETONE | ug/l | T | | <3. | | | <3. | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | <5. | | | <5. | <5. |
| METHYLENE CHLORIDE | ug/l | T | | <2. | | | <2. | <2. |
| STYRENE | ug/l | T | | <1. | | | <1. | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | | | <1. | <1. |
| TOLUENE | ug/l | T | | <2. | | | <2. | <2. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <2. | | | <2. | <2. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | <1. | <1. |
| TRICHLOROETHENE | ug/l | T | | <1. | | | <1. | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | | | <2. UJ | <2. UJ |
| VINYL CHLORIDE | ug/l | T | | <2. | | | <2. UJ | <2. UJ |
| XYLENES | ug/l | T | | <1. | | | <1. | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-07 | MW-08 | MW-09 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/1999 10:15 | 11/11/1999 9:25 | 11/9/1999 14:55 | 11/9/1999 13:15 | 11/9/1999 13:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 2 |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-07 | MW-08 | MW-09 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/1999 10:15 | 11/11/1999 9:25 | 11/9/1999 14:55 | 11/9/1999 13:15 | 11/9/1999 13:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 2 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <77 | <77 | <77 | <77 | |
| ALUMINUM | ug/l | T | | <77 | 158 U | <77 | 130 J | |
| ANTIMONY | ug/l | D | | <8.4 | <8.4 | <8.4 | <8.4 | |
| ANTIMONY | ug/l | T | | 15 | <8.4 | <8.4 | <8.4 | |
| ARSENIC | ug/l | D | | 92 | 6.2 J | 15 | 97 | |
| ARSENIC | ug/l | T | | 97 | <5.0 UJ | 15 | 105 | |
| BARIUM | ug/l | D | | 1060 | 57.8 | 34.4 J | 33.5 J | |
| BARIUM | ug/l | T | | 1140 | 64.8 | 36.8 | 33.6 | |
| CADMIUM | ug/l | D | | 9.1 J | <.81 | <.81 | 2.6 J | |
| CADMIUM | ug/l | T | | 26 | <.81 | <.81 | .99 J | |
| CALCIUM | ug/l | D | | 8430000 | 171000 | 421000 | 684000 | |
| CALCIUM | ug/l | T | | 8250000 | 181000 | 462000 | 731000 | |
| CHROMIUM | ug/l | D | | <1.7 | <1.7 | <1.7 UJ | 2.1 U | |
| CHROMIUM | ug/l | T | | <1.7 R | <1.7 | <1.7 | <1.7 | |
| COPPER | ug/l | D | | 6.0 J | <2.9 | <2.9 | <2.9 | |
| COPPER | ug/l | T | | 3.1 J | <2.9 | <2.9 UJ | <2.9 UJ | |
| IRON | ug/l | D | | 432000 | 14300 | 47800 | 113000 | |
| IRON | ug/l | T | | 410000 | 16700 | 53000 | 115000 | |
| LEAD | ug/l | D | | <7.9 | <7.9 | <7.9 | <7.9 | |
| LEAD | ug/l | T | | <7.9 | <7.9 | <7.9 | <7.9 | |
| MAGNESIUM | ug/l | D | | 331000 | 24200 | 45500 | 216000 | |
| MAGNESIUM | ug/l | T | | 308000 | 26900 | 50000 | 220000 | |
| MANGANESE | ug/l | D | | 6340 | 533 | 1370 | 3980 | |
| MANGANESE | ug/l | T | | 6590 | 562 | 1530 | 4100 | |
| MERCURY | ug/l | D | | .30 J | <.10 | <.10 UJ | <.10 UJ | |
| MERCURY | ug/l | T | | <.10 | <.10 | <.10 UJ | <.10 UJ | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-07 | MW-08 | MW-09 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/1999 10:15 | 11/11/1999 9:25 | 11/9/1999 14:55 | 11/9/1999 13:15 | 11/9/1999 13:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 2 |
| NICKEL | ug/l | D | | 2.0 J | <1.6 | 1.8 U | 78.8 | |
| NICKEL | ug/l | T | | <1.6 | <1.6 | <1.6 | 79.7 | |
| SELENIUM | ug/l | D | | <4.4 UJ | <4.4 | <4.4 | <4.4 | |
| SELENIUM | ug/l | T | | <4.4 UJ | <4.4 | <4.4 UJ | <4.4 UJ | |
| SODIUM | ug/l | D | | 931000 | 50000 | 147000 | 668000 | |
| SODIUM | ug/l | T | | 947000 | 58400 | 159000 | 727000 | |
| VANADIUM | ug/l | D | | <1.9 R | <1.9 | <1.9 | <1.9 UJ | |
| VANADIUM | ug/l | T | | 28.3 J | 3.9 U | <1.9 UJ | <1.9 UJ | |
| ZINC | ug/l | D | | 11900 | 3.2 U | <3.0 | 27400 | |
| ZINC | ug/l | T | | 10.0 J | 10.1 J | 10.3 U | 29700 | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 542000 | 227000 | 219000 | 294000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | |
| AMMONIA | ug/l | T | | 6600 | 1800 | 1200 | 52500 | |
| BICARBONATE | MG/L AS CA | T | | 542 | 227 | 219 | 294 | |
| BORON | ug/l | D | | 7820 | 252 | 469 | 1430 | |
| BORON | ug/l | T | | 8270 | 273 | 541 | 1580 | |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | |
| CHLORIDE | ug/l | T | | 16700000 | 115000 | 195000 | 1030000 | |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | |
| FLUORIDE | ug/l | T | | 58000 | 1650 | 4410 | 8000 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 210 | <30 | <30 | <30 | |
| PHOSPHORUS | ug/l | T | | 1290 J | 140 J | 8600 | 1910 | |
| SULFATE | ug/l | T | | 1630000 | 281000 | 990000 | 2670000 | |
| SULFIDE | ug/l | T | | 1680 J | <410 | <410 | <410 | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 7600 J | 2300 J | 1900 U | 53000 J | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | CLEAR | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 10040 | 170 | 460 | 460 | |
| ODOR (FIELD) | NONE | N | | NONE | NONE | NONE | NONE | |
| PH (FIELD) | STD UNITS | N | | 6.3 | 7.54 | 7.12 | 6.84 | |
| REDOX (FIELD) | MV | N | | -29.9 | -106.1 | -150 | -87.9 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2360 | 1618 | 2490 | 6750 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 9.9 | 31.2 | 12.6 | 13.8 | |
| DEPTH TO WATER FROM TOC | Feet | N | | 4.94 | 5 | 8.89 | 5.8 | |
| HEXANE | ug/l | T | | <2. | | | <2. | <2. |
| OVABZONE | NONE | N | | NIR | NIR | NIR | NIR | |
| OVACASING | NONE | N | | NIR | NIR | NIR | NIR | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 10.5 | 11.2 | 13 | 11.9 | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 7:50 | 11/8/1999 13:10 | 11/10/1999 8:30 | 11/10/1999 10:05 | 11/10/1999 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <2. | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <2. | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | <2. | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | <2. | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | | | | |
| 2-HEXANONE | ug/l | T | | <7. | | | | |
| ACETONE | ug/l | T | | <6. | | | | |
| BENZENE | ug/l | T | | <1. | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | | | | |
| BROMOFORM | ug/l | T | | <1. | | | | |
| CARBON DISULFIDE | ug/l | T | | <3. | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | | | | |
| CHLOROBENZENE | ug/l | T | | <1. | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | <2. | | | | |
| CHLOROFORM | ug/l | T | | <1. | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <2. | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. | | | | |
| ETHYL CHLORIDE | ug/l | T | | <3. | | | | |
| ETHYLBENZENE | ug/l | T | | <2. | | | | |
| METHYL BROMIDE | ug/l | T | | <3. | | | | |
| METHYL CHLORIDE | ug/l | T | | <3. | | | | |
| METHYL ETHYL KETONE | ug/l | T | | <3. | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | <5. | | | | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | | | | |
| STYRENE | ug/l | T | | <1. | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. UJ | | | | |
| TOLUENE | ug/l | T | | <2. | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <2. | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | | |
| TRICHLOROETHENE | ug/l | T | | <1. | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | | | | |
| VINYL CHLORIDE | ug/l | T | | <2. | | | | |
| XYLENES | ug/l | T | | <1. | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 7:50 | 11/8/1999 13:10 | 11/10/1999 8:30 | 11/10/1999 10:05 | 11/10/1999 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 7:50 | 11/8/1999 13:10 | 11/10/1999 8:30 | 11/10/1999 10:05 | 11/10/1999 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <77 | <77 | <77 | 580 J | <77 |
| ALUMINUM | ug/l | T | | <77 | 102 J | <77 | 500 J | <77 |
| ANTIMONY | ug/l | D | | <8.4 | <8.4 | <8.4 | 22 | <8.4 |
| ANTIMONY | ug/l | T | | <8.4 | 9.6 U | <8.4 | 43 | <8.4 |
| ARSENIC | ug/l | D | | 348 | 23 | 79 | 196 | 23 |
| ARSENIC | ug/l | T | | 392 | 23 | 83 | 203 | 26 J |
| BARIUM | ug/l | D | | 78.8 J | 27.5 J | 74.6 | 113 | 12.8 |
| BARIUM | ug/l | T | | 79.3 | 25.8 | 74.1 J | 116 J | 12.7 J |
| CADMIUM | ug/l | D | | 1.30 J | <.81 | 1.31 J | 1.14 J | 1.42 J |
| CADMIUM | ug/l | T | | <.81 | <.81 | <.81 | <.81 | <.81 |
| CALCIUM | ug/l | D | | 590000 | 631000 | 284000 | 8100 R | 792000 |
| CALCIUM | ug/l | T | | 624000 | 627000 | 270000 | 3160 R | 754000 |
| CHROMIUM | ug/l | D | | 3.2 U | 3.8 U | <1.7 UJ | 11.7 | <1.7 UJ |
| CHROMIUM | ug/l | T | | <1.7 | <1.7 UJ | <1.7 | 17.4 | <1.7 |
| COPPER | ug/l | D | | <2.9 | <2.9 | <2.9 | 66 | <2.9 |
| COPPER | ug/l | T | | <2.9 UJ | <2.9 UJ | <2.9 | 82.1 | <2.9 |
| IRON | ug/l | D | | 57000 | 14600 | 14200 | 1660 | 11900 |
| IRON | ug/l | T | | 60200 | 15400 | 14900 | 1950 | 13700 |
| LEAD | ug/l | D | | <7.9 | <7.9 | <7.9 | 33 J | <7.9 |
| LEAD | ug/l | T | | <7.9 | <7.9 | <7.9 | 45 | <7.9 |
| MAGNESIUM | ug/l | D | | 33300 | 19800 | 19700 | 110 | 62100 |
| MAGNESIUM | ug/l | T | | 35900 | 20700 | 20400 | 120 U | 61400 |
| MANGANESE | ug/l | D | | 695 | 545 | 713 | 16 | 582 |
| MANGANESE | ug/l | T | | 756 | 552 | 759 | 20 | 578 |
| MERCURY | ug/l | D | | <.10 UJ | <.10 UJ | <.10 | <.10 | <.10 |
| MERCURY | ug/l | T | | <.10 UJ | <.10 UJ | <.10 | <.10 | <.10 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 7:50 | 11/8/1999 13:10 | 11/10/1999 8:30 | 11/10/1999 10:05 | 11/10/1999 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| NICKEL | ug/l | D | | 2.7 U | 6.9 U | <1.6 | 62.4 | 17.4 |
| NICKEL | ug/l | T | | <1.6 | 6.0 U | 2.3 J | 71.4 | 19.4 J |
| SELENIUM | ug/l | D | | <4.4 | <4.4 | <4.4 UJ | 26 | <4.4 UJ |
| SELENIUM | ug/l | T | | <4.4 UJ | <4.4 UJ | <4.4 | 24 | <4.4 |
| SODIUM | ug/l | D | | 354000 | 40000 | 33100 J | 2320000 | 63000 |
| SODIUM | ug/l | T | | 372000 | 39900 | 28700 J | 2730000 | 63400 |
| VANADIUM | ug/l | D | | <1.9 | <1.9 | <1.9 UJ | 114 | <1.9 UJ |
| VANADIUM | ug/l | T | | <1.9 UJ | <1.9 UJ | <1.9 UJ | 132 | <1.9 UJ |
| ZINC | ug/l | D | | 6.6 U | 7720 | <3.0 | 53 R | 1860 |
| ZINC | ug/l | T | | <3.0 | 7860 | <3.0 | 39 U | 1770 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 155000 | 108000 | 248000 | 5270000 | 182000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | 3380000 | <370 |
| AMMONIA | ug/l | T | | 31100 | 1400 | 5000 | 19100 | 12400 |
| BICARBONATE | MG/L AS CA | T | | 155 | 108 | 248 | <1.0 | 182 |
| BORON | ug/l | D | | 287 | 480 | 411 | 765 | 235 |
| BORON | ug/l | T | | 318 | 487 | 421 | 817 | 227 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | 3790 | <1.0 |
| CHLORIDE | ug/l | T | | 351000 | 58600 | 137000 | 225000 | 481000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 1120 | <400 | 540 J | <8000 | <400 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | 55 J | 470 J | <30 UJ |
| PHOSPHORUS | ug/l | T | | 9610 | 330 U | 410 | 10300 | <130 |
| SULFATE | ug/l | T | | 1980000 | 1430000 | 318000 | 152000 | 1460000 |
| SULFIDE | ug/l | T | | 480 J | <410 | <410 | 50000 | <410 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 33000 J | 1600 U | 7100 | 30000 | 14300 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | CLEAR | BROWN | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 80 | 280 | 240 | 40 | 360 |
| ODOR (FIELD) | NONE | N | | NONE | NONE | NONE | YES | NONE |
| PH (FIELD) | STD UNITS | N | | 7.28 | 6.81 | 6.9 | 11.38 | 6.5 |
| REDOX (FIELD) | MV | N | | -149.8 | -87.4 | -74.9 | -321 | -9.3 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 4170 | 2420 | 1347 | 8620 | 2190 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 12.04 | 23 | 0.97 | 2.5 | 21.8 |
| DEPTH TO WATER FROM TOC | Feet | N | | 7.38 | 8.1 | 6.92 | 8.24 | 8.9 |
| HEXANE | ug/l | T | | <2. | | | | |
| OVABZONE | NONE | N | | nir | NIR | NIR | NIR | NIR |
| OVACASING | NONE | N | | nir | NIR | NIR | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 12.6 | 13.2 | 14.3 | 15 | 16.1 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-16 | MW-17 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/1999 13:25 | 11/10/1999 13:25 | 11/10/1999 14:55 | 11/10/1999 14:25 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | |
| 2-HEXANONE | ug/l | T | | | | | |
| ACETONE | ug/l | T | | | | | |
| BENZENE | ug/l | T | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | |
| BROMOFORM | ug/l | T | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | |
| CHLOROFORM | ug/l | T | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | |
| STYRENE | ug/l | T | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | |
| TOLUENE | ug/l | T | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | |
| XYLENES | ug/l | T | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-16 | MW-17 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/1999 13:25 | 11/10/1999 13:25 | 11/10/1999 14:55 | 11/10/1999 14:25 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | |
| ANTHRACENE | ug/l | T | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | |
| CARBAZOLE | ug/l | T | | | | | |
| CHRYSENE | ug/l | T | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | |
| FLUORANTHENE | ug/l | T | | | | | |
| FLUORENE | ug/l | T | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | |
| ISOPHORONE | ug/l | T | | | | | |
| NAPHTHALENE | ug/l | T | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | |
| NITROBENZENE | ug/l | T | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-16 | MW-17 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/1999 13:25 | 11/10/1999 13:25 | 11/10/1999 14:55 | 11/10/1999 14:25 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | |
| PHENANTHRENE | ug/l | T | | | | | |
| PHENOL | ug/l | T | | | | | |
| PYRENE | ug/l | T | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | <0.097 | <0.097 | | |
| AROCLOR 1016 | ug/l | T | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | |
| DDT | ug/l | T | | <0.0038 UJ | <0.0038 UJ | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | <0.0038 UJ | <0.0038 UJ | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | <0.0038 | <0.0038 | | |
| METHOXYCHLOR | ug/l | T | | <0.019 UJ | <0.019 UJ | | |
| ALUMINUM | ug/l | D | | 104 U | 94 U | <77 | <77 |
| ALUMINUM | ug/l | T | | <77 | <77 | <77 | 96 U |
| ANTIMONY | ug/l | D | | <8.4 | <8.4 | <8.4 | <8.4 |
| ANTIMONY | ug/l | T | | <8.4 | <8.4 | <8.4 | <8.4 |
| ARSENIC | ug/l | D | | 561 J | 491 | 9.1 J | 7.4 J |
| ARSENIC | ug/l | T | | 474 J | 488 | 11 U | 8.5 U |
| BARIUM | ug/l | D | | 34.7 | 34.3 | 91.9 | 1030 J |
| BARIUM | ug/l | T | | 33.3 J | 32.7 J | 87.3 J | 800 J |
| CADMIUM | ug/l | D | | 8.2 J | 9.0 J | 6.4 J | 115 J |
| CADMIUM | ug/l | T | | 8.9 J | 8.7 J | 6.2 J | 119 |
| CALCIUM | ug/l | D | | 518000 | 509000 | 372000 | 414000 |
| CALCIUM | ug/l | T | | 492000 | 488000 | 347000 | 385000 |
| CHROMIUM | ug/l | D | | <1.7 UJ | <1.7 UJ | <1.7 UJ | <1.7 UJ |
| CHROMIUM | ug/l | T | | <1.7 | <1.7 | <1.7 | <1.7 |
| COPPER | ug/l | D | | <2.9 | <2.9 | <2.9 | <2.9 |
| COPPER | ug/l | T | | 8.8 | 8.8 | <2.9 | <2.9 |
| IRON | ug/l | D | | 15700 | 14200 | 4080 | 133000 |
| IRON | ug/l | T | | 14700 | 14900 | 4250 | 141000 |
| LEAD | ug/l | D | | <7.9 | <7.9 | <7.9 | 96 J |
| LEAD | ug/l | T | | <7.9 | <7.9 | <7.9 | 108 |
| MAGNESIUM | ug/l | D | | 101000 J | 86500 | 153000 | 151000 |
| MAGNESIUM | ug/l | T | | 86600 J | 90000 | 148000 | 153000 |
| MANGANESE | ug/l | D | | 714 | 752 | 1070 | 1360 |
| MANGANESE | ug/l | T | | 778 | 758 | 1080 | 1410 |
| MERCURY | ug/l | D | | <.10 | <.10 | <.10 | <.10 |
| MERCURY | ug/l | T | | <.10 | <.10 | <.10 | <.10 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-16 | MW-17 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/1999 13:25 | 11/10/1999 13:25 | 11/10/1999 14:55 | 11/10/1999 14:25 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 |
| NICKEL | ug/l | D | | 4.0 J | 3.3 J | 27.5 | 64.3 |
| NICKEL | ug/l | T | | 6.3 J | 5.0 J | 29.7 J | 71.6 |
| SELENIUM | ug/l | D | | <4.4 UJ | <4.4 UJ | <4.4 UJ | <4.4 UJ |
| SELENIUM | ug/l | T | | <4.4 | <4.4 | <4.4 | <4.4 |
| SODIUM | ug/l | D | | 46300 J | 45400 | 30500 J | 30800 |
| SODIUM | ug/l | T | | 41200 J | 42900 | 26900 J | 29600 |
| VANADIUM | ug/l | D | | <1.9 UJ | <1.9 UJ | <1.9 UJ | <1.9 UJ |
| VANADIUM | ug/l | T | | <1.9 UJ | <1.9 UJ | <1.9 UJ | <1.9 UJ |
| ZINC | ug/l | D | | 2170 | 2410 | 9680 | 112000 |
| ZINC | ug/l | T | | 2470 | 2380 | 9190 | 119000 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 265000 | 269000 | 227000 | 120000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 2400 | 2300 | 52100 | 23400 |
| BICARBONATE | MG/L AS CA | T | | 265 | 269 | 227 | 120 |
| BORON | ug/l | D | | 539 | 510 | 546 | 406 |
| BORON | ug/l | T | | 504 | 510 | 525 | 412 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 12700 | 12300 | 999000 | 1250000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 7560 J | 7700 J | 1110 J | <800 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 UJ | <30 UJ | <30 UJ | <30 UJ |
| PHOSPHORUS | ug/l | T | | 7280 | 7600 | <130 | <130 |
| SULFATE | ug/l | T | | 1310000 | 1310000 | 186000 | 182000 |
| SULFIDE | ug/l | T | | <410 | <410 | <410 | <410 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 3300 | 3000 | 52000 | 25000 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | | CLEAR | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 1830 | | 340 | 920 |
| ODOR (FIELD) | NONE | N | | NONE | | NONE | NONE |
| PH (FIELD) | STD UNITS | N | | 6.63 | | 7.13 | 5.8 |
| REDOX (FIELD) | MV | N | | -64.3 | | -82.1 | 45.1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2220 | | 2290 | 3630 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 3.01 | | 5.17 | 23.1 |
| DEPTH TO WATER FROM TOC | Feet | N | | 11.19 | | 7.5 | 7.73 |
| HEXANE | ug/l | T | | | | | |
| OVABZONE | NONE | N | | NIR | | NIR | NIR |
| OVACASING | NONE | N | | NIR | | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 16.2 | | 14.7 | 15.5 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 14:55 | 11/8/1999 10:10 | 11/8/1999 10:15 | 11/11/1999 8:15 | 11/11/1999 8:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | | | 2. J | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <2. | | | <2. | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <2. | | | <2. | |
| 1,1-DICHLOROETHANE | ug/l | T | | <2. | | | <2. | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | | | <1. | |
| 1,2-DICHLOROETHANE | ug/l | T | | <2. | | | <2. | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | | | <1. | |
| 2-HEXANONE | ug/l | T | | <7. | | | <7. | |
| ACETONE | ug/l | T | | <6. | | | <6. | |
| BENZENE | ug/l | T | | <1. | | | <1. | |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | | | <1. | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | | | <1. | |
| BROMOFORM | ug/l | T | | <1. | | | <1. | |
| CARBON DISULFIDE | ug/l | T | | <3. | | | <3. | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | | | <1. | |
| CHLOROBENZENE | ug/l | T | | <1. | | | <1. | |
| CHLORODIBROMOMETHANE | ug/l | T | | <2. | | | <2. | |
| CHLOROFORM | ug/l | T | | <1. | | | <1. | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <2. | | | <2. | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | <1. | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. UJ | | | <2. UJ | |
| ETHYL CHLORIDE | ug/l | T | | <3. | | | <3. | |
| ETHYLBENZENE | ug/l | T | | <2. | | | <2. | |
| METHYL BROMIDE | ug/l | T | | <3. | | | <3. UJ | |
| METHYL CHLORIDE | ug/l | T | | <3. | | | <3. | |
| METHYL ETHYL KETONE | ug/l | T | | <3. | | | <3. | |
| METHYL ISOBUTYL KETONE | ug/l | T | | <5. | | | <5. | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | | | <2. | |
| STYRENE | ug/l | T | | <1. | | | <1. | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | | | <1. | |
| TOLUENE | ug/l | T | | <2. | | | <2. | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <2. | | | <2. | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | <1. | |
| TRICHLOROETHENE | ug/l | T | | <1. | | | <1. | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | | | <2. | |
| VINYL CHLORIDE | ug/l | T | | <2. | | | <2. | |
| XYLENES | ug/l | T | | <1. | | | <1. | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 2,4-DINITROTOLUENE | ug/l | T | | | <0.9 | <0.9 | <1. | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 14:55 | 11/8/1999 10:10 | 11/8/1999 10:15 | 11/11/1999 8:15 | 11/11/1999 8:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 2 |
| 2,6-DINITROTOLUENE | ug/l | T | | | <2. | <2. | <2. | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 2-NITROANILINE | ug/l | T | | | <2. | <2. | <2. | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | <2. UJ | <2. | <2. UJ | |
| 3-NITROANILINE | ug/l | T | | | <2. UJ | <2. | <2. | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | <2. | <2. | <2. | |
| 4-CHLOROANILINE | ug/l | T | | | <0.9 UJ | <0.9 | <1. | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 4-NITROANILINE | ug/l | T | | | <2. | <2. | <2. | |
| ACENAPHTHENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| ACENAPHTHYLENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| ANTHRACENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BENZO(A)ANTHRACENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BENZO[A]PYRENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | <0.9 | <0.9 | <1. | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | <2. UJ | <2. | <2. | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| CARBAZOLE | ug/l | T | | | <3. | <3. | <3. | |
| CHRYSENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| DIBENZOFURAN | ug/l | T | | | <0.9 | <0.9 | <1. | |
| DIETHYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| DIMETHYL PHTHALATE | ug/l | T | | | <2. | <2. UJ | <2. | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| FLUORANTHENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| FLUORENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| HEXACHLOROBENZENE | ug/l | T | | | <2. | <2. | <2. | |
| HEXACHLOROBUTADIENE | ug/l | T | | | <2. | <2. | <2. | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | <5. | <5. | <5. | |
| HEXACHLOROETHANE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| ISOPHORONE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| NAPHTHALENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| NITROBENZENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | <0.9 | <0.9 | <1. | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 14:55 | 11/8/1999 10:10 | 11/8/1999 10:15 | 11/11/1999 8:15 | 11/11/1999 8:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 2 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| PHENANTHRENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| PHENOL | ug/l | T | | | <0.9 UJ | <0.9 UJ | <1. UJ | |
| PYRENE | ug/l | T | | | <0.9 | <0.9 | <1. | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | <0.096 | <0.095 |
| AROCLOR 1221 | ug/l | T | | | | | <0.26 | <0.26 |
| AROCLOR 1232 | ug/l | T | | | | | <0.096 | <0.095 |
| AROCLOR 1242 | ug/l | T | | | | | <0.096 | <0.095 |
| AROCLOR 1248 | ug/l | T | | | | | <0.096 | <0.095 |
| AROCLOR 1254 | ug/l | T | | | | | <0.096 | <0.095 |
| AROCLOR 1260 | ug/l | T | | | | | <0.096 | <0.095 |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <77 | <77 | <77 | <77 | |
| ALUMINUM | ug/l | T | | <77 | 111 J | 128 J | <77 | |
| ANTIMONY | ug/l | D | | <8.4 | <8.4 | <8.4 | <8.4 | |
| ANTIMONY | ug/l | T | | <8.4 | 9.2 U | <8.4 | <8.4 | |
| ARSENIC | ug/l | D | | 74 | 28 | 24 | 1440 | |
| ARSENIC | ug/l | T | | 85 | 27 | 28 | 1800 | |
| BARIUM | ug/l | D | | 15.7 J | 32.0 J | 32.5 J | 17.3 | |
| BARIUM | ug/l | T | | 16 | 31.5 | 32.6 | 17.6 | |
| CADMIUM | ug/l | D | | .89 J | <.81 | <.81 | <.81 | |
| CADMIUM | ug/l | T | | <.81 | <.81 | <.81 | <.81 | |
| CALCIUM | ug/l | D | | 544000 | 639000 | 610000 | 362000 | |
| CALCIUM | ug/l | T | | 558000 | 632000 | 647000 | 366000 | |
| CHROMIUM | ug/l | D | | 1.9 U | <1.7 | <1.7 | <1.7 | |
| CHROMIUM | ug/l | T | | <1.7 | <1.7 UJ | <1.7 UJ | <1.7 UJ | |
| COPPER | ug/l | D | | <2.9 UJ | <2.9 | <2.9 | <2.9 | |
| COPPER | ug/l | T | | <2.9 UJ | <2.9 UJ | <2.9 UJ | <2.9 | |
| IRON | ug/l | D | | 47900 | 40700 | 44300 | 9720 | |
| IRON | ug/l | T | | 49800 | 41700 | 42600 | 10100 | |
| LEAD | ug/l | D | | <7.9 | <7.9 | <7.9 | <7.9 | |
| LEAD | ug/l | T | | <7.9 | <7.9 | <7.9 | <7.9 | |
| MAGNESIUM | ug/l | D | | 61200 | 345000 J | 533000 R | 60600 | |
| MAGNESIUM | ug/l | T | | 64900 | 333000 | 333000 R | 60300 | |
| MANGANESE | ug/l | D | | 1650 | 406 | 353 | 1030 | |
| MANGANESE | ug/l | T | | 1810 | 413 | 414 | 1070 | |
| MERCURY | ug/l | D | | <.10 UJ | <.10 UJ | <.10 UJ | <.10 | |
| MERCURY | ug/l | T | | <.10 UJ | <.10 UJ | <.10 UJ | <.10 | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 14:55 | 11/8/1999 10:10 | 11/8/1999 10:15 | 11/11/1999 8:15 | 11/11/1999 8:15 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 2 |
| NICKEL | ug/l | D | | 148 | <1.6 | <1.6 | <1.6 | |
| NICKEL | ug/l | T | | 154 | <1.6 | <1.6 | 1.9 J | |
| SELENIUM | ug/l | D | | <4.4 | <4.4 | <4.4 | <4.4 | |
| SELENIUM | ug/l | T | | <4.4 UJ | <4.4 UJ | <4.4 UJ | <4.4 | |
| SODIUM | ug/l | D | | 825000 | 696000 J | 933000 J | 491000 | |
| SODIUM | ug/l | T | | 873000 | 677000 | 689000 J | 481000 | |
| VANADIUM | ug/l | D | | <1.9 | <1.9 | 2.5 U | <1.9 UJ | |
| VANADIUM | ug/l | T | | <1.9 UJ | <1.9 UJ | <1.9 UJ | <1.9 | |
| ZINC | ug/l | D | | 5360 | 418 J | 318 J | 115 J | |
| ZINC | ug/l | T | | 5690 | 420 | 442 | 181 | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 324000 | 531000 | 529000 | 258000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | |
| AMMONIA | ug/l | T | | 8200 | 7700 | 7900 | 8200 | |
| BICARBONATE | MG/L AS CA | T | | 324 | 531 | 529 | 258 | |
| BORON | ug/l | D | | 831 | 840 | 984 J | 815 | |
| BORON | ug/l | T | | 958 | 880 | 890 J | 821 | |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | |
| CHLORIDE | ug/l | T | | 130000 | 232000 | 227000 | 124000 | |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | |
| FLUORIDE | ug/l | T | | 8700 | <400 | <400 | 1050 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | <30 | <30 | |
| PHOSPHORUS | ug/l | T | | 790 | 1090 | 970 | 1190 J | |
| SULFATE | ug/l | T | | 2880000 | 3100000 | 3090000 | 1830000 | |
| SULFIDE | ug/l | T | | <410 | <410 | <410 | 2300 | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 9400 J | 7800 J | 6700 J | 9500 J | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 470 | 4330 | | 140 | |
| ODOR (FIELD) | NONE | N | | NONE | NONE | | NONE | |
| PH (FIELD) | STD UNITS | N | | 6.92 | 6.6 | | 7.53 | |
| REDOX (FIELD) | MV | N | | -66.3 | -70.4 | | -189.3 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 5150 | 6050 | | 3650 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 10.9 | 26.4 | | 3.01 | |
| DEPTH TO WATER FROM TOC | Feet | N | | 9.58 | 7.92 | | 9.33 | |
| HEXANE | ug/l | T | | <2. | | | <2. | |
| OVABZONE | NONE | N | | NIR | nir | | NIR | |
| OVACASING | NONE | N | | NIR | nir | | NIR | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 12.7 | 14.2 | | 14.2 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-22 | MW-23 | MW-24 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 14:50 | 11/8/1999 14:15 | 11/8/1999 16:20 | 11/8/1999 15:35 | 11/9/1999 8:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-22 | MW-23 | MW-24 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 14:50 | 11/8/1999 14:15 | 11/8/1999 16:20 | 11/8/1999 15:35 | 11/9/1999 8:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-22 | MW-23 | MW-24 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 14:50 | 11/8/1999 14:15 | 11/8/1999 16:20 | 11/8/1999 15:35 | 11/9/1999 8:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <77 | <77 | <77 | <77 | <77 |
| ALUMINUM | ug/l | T | | 137 J | 320 | <77 | 119 J | 670 |
| ANTIMONY | ug/l | D | | <8.4 | <8.4 | <8.4 | <8.4 | <8.4 |
| ANTIMONY | ug/l | T | | <8.4 | <8.4 | <8.4 | <8.4 | <8.4 |
| ARSENIC | ug/l | D | | 1500 | 900 | 48 | 264 | 196 |
| ARSENIC | ug/l | T | | 1580 | 1370 | 52 | 290 | 230 |
| BARIUM | ug/l | D | | 33.8 J | 27.0 J | 29.6 J | 67.1 J | 97.4 J |
| BARIUM | ug/l | T | | 35 | 31.7 | 32 | 69.1 | 98.6 |
| CADMIUM | ug/l | D | | 15.3 | <.81 | <.81 | <.81 | 1.40 J |
| CADMIUM | ug/l | T | | 16.7 | 2.3 | <.81 | <.81 | <.81 |
| CALCIUM | ug/l | D | | 593000 | 580000 | 680000 | 763000 | 609000 |
| CALCIUM | ug/l | T | | 615000 | 578000 | 720000 | 814000 | 626000 |
| CHROMIUM | ug/l | D | | 3.3 U | 3.0 U | <1.7 | 3.9 U | 2.3 U |
| CHROMIUM | ug/l | T | | <1.7 UJ | 3.2 U | <1.7 UJ | 3.0 U | 4.7 U |
| COPPER | ug/l | D | | <2.9 | <2.9 | <2.9 | <2.9 | <2.9 |
| COPPER | ug/l | T | | <2.9 UJ | <2.9 UJ | <2.9 UJ | <2.9 UJ | <2.9 UJ |
| IRON | ug/l | D | | 19600 | 27500 | 23500 | 37200 | 85000 |
| IRON | ug/l | T | | 20000 | 35300 | 24300 | 39200 | 91900 |
| LEAD | ug/l | D | | <7.9 | <7.9 | <7.9 | <7.9 | <7.9 |
| LEAD | ug/l | T | | <7.9 | 11 | <7.9 | <7.9 | <7.9 |
| MAGNESIUM | ug/l | D | | 84100 | 35300 | 42300 | 67100 | 60700 |
| MAGNESIUM | ug/l | T | | 89600 | 39300 | 45800 | 72400 | 63700 |
| MANGANESE | ug/l | D | | 718 | 1350 | 647 | 732 | 2240 |
| MANGANESE | ug/l | T | | 728 | 1450 | 694 | 794 | 2440 |
| MERCURY | ug/l | D | | <.10 UJ | <.10 UJ | <.10 UJ | <.10 UJ | <.10 UJ |
| MERCURY | ug/l | T | | <.10 UJ | <.10 UJ | <.10 UJ | <.10 UJ | <.10 UJ |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-22 | MW-23 | MW-24 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/8/1999 14:50 | 11/8/1999 14:15 | 11/8/1999 16:20 | 11/8/1999 15:35 | 11/9/1999 8:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| NICKEL | ug/l | D | | 24.8 | 2.9 U | 2.3 U | 5.0 U | <1.6 |
| NICKEL | ug/l | T | | 23.8 | 2.6 U | 3.5 U | 4.3 U | 4.0 U |
| SELENIUM | ug/l | D | | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 |
| SELENIUM | ug/l | T | | <4.4 UJ | <4.4 UJ | <4.4 UJ | <4.4 UJ | <4.4 UJ |
| SODIUM | ug/l | D | | 73700 | 26600 | 33000 | 374000 | 1280000 |
| SODIUM | ug/l | T | | 75600 | 27700 | 34800 | 370000 | 1320000 |
| VANADIUM | ug/l | D | | <1.9 | <1.9 | <1.9 | 1.9 U | 3.2 U |
| VANADIUM | ug/l | T | | <1.9 UJ | 2.0 U | <1.9 UJ | <1.9 UJ | 6.3 J |
| ZINC | ug/l | D | | 13300 | 1790 | 1160 | 2890 | 128 |
| ZINC | ug/l | T | | 15000 | 2720 | 1190 | 2840 | 135 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 151000 | 115000 | 191000 | 155000 | 432000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 3600 | 2400 | 4400 | 6300 | 209000 |
| BICARBONATE | MG/L AS CA | T | | 151 | 115 | 191 | 155 | 432 |
| BORON | ug/l | D | | 396 | 307 | 443 | 234 | 498 |
| BORON | ug/l | T | | 422 | 335 | 487 | 262 | 574 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 49400 | 41900 | 138000 | 299000 | 428000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | <400 | <400 | <400 | <400 | <8000 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | <30 | <30 | <30 |
| PHOSPHORUS | ug/l | T | | 1470 | 2190 | 2920 | 430 U | 24500 |
| SULFATE | ug/l | T | | 1690000 | 1440000 | 2680000 | 1430000 | 4300000 |
| SULFIDE | ug/l | T | | <410 | <410 | <410 | <410 | 680 J |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 3300 | 2600 J | 4500 J | 7000 | 202000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | CLEAR | CLEAR | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 340 | 210 | 290 | 330 | 470 |
| ODOR (FIELD) | NONE | N | | NONE | NONE | NONE | NONE | NONE |
| PH (FIELD) | STD UNITS | N | | 6.66 | 6.83 | 6.72 | 6.77 | 7.29 |
| REDOX (FIELD) | MV | N | | -77.6 | -108.2 | -97.8 | -118.8 | -154.5 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2790 | 2330 | 3040 | 4300 | 8540 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 18.4 | 113 | 4.02 | 15.3 | 65.4 |
| DEPTH TO WATER FROM TOC | Feet | N | | 8.04 | 7.97 | 7.94 | 9.16 | 8.25 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | NIR | NIR | nir | NIR | NIR |
| OVACASING | NONE | N | | NIR | NIR | nir | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 12.9 | 12.6 | 12.9 | 12.8 | 12.9 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-27 | MW-28 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 8:40 | 11/9/1999 10:10 | 11/11/1999 13:35 | 11/10/1999 11:00 | 11/10/1999 9:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-27 | MW-28 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 8:40 | 11/9/1999 10:10 | 11/11/1999 13:35 | 11/10/1999 11:00 | 11/10/1999 9:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-27 | MW-28 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 8:40 | 11/9/1999 10:10 | 11/11/1999 13:35 | 11/10/1999 11:00 | 11/10/1999 9:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <77 | 124 J | 720 | <77 | |
| ALUMINUM | ug/l | T | | 800 | 460 | 1250 | <77 | |
| ANTIMONY | ug/l | D | | <8.4 | <8.4 | <8.4 | <8.4 | |
| ANTIMONY | ug/l | T | | <8.4 | <8.4 | <8.4 | <8.4 | |
| ARSENIC | ug/l | D | | 213 | 189 | 40 | 37 | |
| ARSENIC | ug/l | T | | 225 | 212 | 41 | 37 | |
| BARIUM | ug/l | D | | 93.5 J | 45.0 J | 28.5 | 52.2 | |
| BARIUM | ug/l | T | | 102 | 44.3 | 29.1 | 49.6 J | |
| CADMIUM | ug/l | D | | 1.22 J | <.81 | 3.8 J | 8.5 J | |
| CADMIUM | ug/l | T | | <.81 | <.81 | 8.3 J | 7.5 J | |
| CALCIUM | ug/l | D | | 627000 | 700000 | 850000 | 906000 | |
| CALCIUM | ug/l | T | | 615000 | 689000 | 858000 | 851000 | |
| CHROMIUM | ug/l | D | | 2.3 U | <1.7 UJ | <1.7 | <1.7 UJ | |
| CHROMIUM | ug/l | T | | 6.3 U | 6.4 U | <1.7 UJ | <1.7 | |
| COPPER | ug/l | D | | <2.9 | <2.9 | <2.9 | <2.9 | |
| COPPER | ug/l | T | | <2.9 UJ | <2.9 UJ | 4.1 J | <2.9 | |
| IRON | ug/l | D | | 92500 | 50100 | 368000 J | 17000 | |
| IRON | ug/l | T | | 91400 | 52900 | 312000 J | 17600 | |
| LEAD | ug/l | D | | <7.9 | <7.9 | <7.9 | 14 J | |
| LEAD | ug/l | T | | <7.9 | <7.9 | 13 J | 21 | |
| MAGNESIUM | ug/l | D | | 67200 | 92200 | 1270000 J | 123000 | |
| MAGNESIUM | ug/l | T | | 63000 | 92700 | 976000 J | 125000 | |
| MANGANESE | ug/l | D | | 2460 | 3200 | 5980 J | 2510 | |
| MANGANESE | ug/l | T | | 2400 | 3330 | 5230 J | 2570 | |
| MERCURY | ug/l | D | | <.10 UJ | <.10 UJ | <.10 | <.10 | |
| MERCURY | ug/l | T | | <.10 UJ | .10 U | <.10 | <.10 | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-27 | MW-28 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/9/1999 8:40 | 11/9/1999 10:10 | 11/11/1999 13:35 | 11/10/1999 11:00 | 11/10/1999 9:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| NICKEL | ug/l | D | | 2.9 U | 10.2 | 29.3 | 16.5 | |
| NICKEL | ug/l | T | | 49.7 J | 14.4 | 27.2 | 19.2 J | |
| SELENIUM | ug/l | D | | <4.4 | <4.4 | <4.4 | <4.4 UJ | |
| SELENIUM | ug/l | T | | <4.4 UJ | <4.4 UJ | 8.3 J | <4.4 | |
| SODIUM | ug/l | D | | 1260000 | 2180000 | 850000 | 56500 | |
| SODIUM | ug/l | T | | 1260000 | 2080000 | 813000 | 55700 | |
| VANADIUM | ug/l | D | | 2.7 U | <1.9 | <1.9 UJ | <1.9 UJ | |
| VANADIUM | ug/l | T | | 6.5 J | <1.9 UJ | 39.5 | <1.9 UJ | |
| ZINC | ug/l | D | | 106 | 4110 | 2540 | 6120 J | |
| ZINC | ug/l | T | | 158 | 4250 | 2790 | 5500 J | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 445000 | 452000 | 407000 | 200000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | |
| AMMONIA | ug/l | T | | 206000 | 89500 | 17700 | 398000 | |
| BICARBONATE | MG/L AS CA | T | | 445 | 452 | 407 | 200 | |
| BORON | ug/l | D | | 547 | 1920 | 4180 | 668 | |
| BORON | ug/l | T | | 571 | 2140 | 3900 | 646 | |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | |
| CHLORIDE | ug/l | T | | 407000 | 1580000 | 3600000 | 2330000 | |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | |
| FLUORIDE | ug/l | T | | <8000 | <40000 | <8000 | 1420 J | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | 190 | <30 UJ | |
| PHOSPHORUS | ug/l | T | | 23700 | 710 | 410 J | 350 | |
| SULFATE | ug/l | T | | 4070000 | 3840000 | 3700000 | 1740000 | |
| SULFIDE | ug/l | T | | <410 | <410 | <410 | <410 | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 191000 J | 76000 | 20000 J | 440000 | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | CLEAR | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 3560 | 230 | 170 | |
| ODOR (FIELD) | NONE | N | | | NONE | NONE | NONE | |
| PH (FIELD) | STD UNITS | N | | | 7.16 | 6.04 | 6.81 | |
| REDOX (FIELD) | MV | N | | | -72.4 | 34.6 | -57.4 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 1095 | 7760 | 8220 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 14.1 | 22 | 9.36 | |
| DEPTH TO WATER FROM TOC | Feet | N | | | 8.09 | 11.41 | 9.22 | 11.07 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | nir | NIR | NIR | NIR |
| OVACASING | NONE | N | | | nir | NIR | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 12.3 | 13.8 | 14.7 | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-01 | MW-01 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 17:40 | 7/20/2000 14:30 | 11/2/2000 14:30 | 3/22/2000 10:05 | 7/21/2000 10:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | <1. | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | <2. | <1. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | <2. | <1. |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | <2. | <1. |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | <1. | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | <2. | <1. |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | <1. | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | <7. | <3. |
| ACETONE | ug/l | T | | | | | <6. | <6. |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | <1. | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | | | | <1. | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | | | | <1. | <1. |
| BROMOFORM | ug/l | T | | | | | <1. | <1. |
| CARBON DISULFIDE | ug/l | T | | | | | <3. | <1. |
| CARBON TETRACHLORIDE | ug/l | T | | | | | <1. | <1. |
| CHLOROBENZENE | ug/l | T | | | | | <1. | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | <2. | <1. |
| CHLOROFORM | ug/l | T | | | | | <1. | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | <2. | <1. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | <2. | <2. |
| ETHYL CHLORIDE | ug/l | T | | | | | <3. | <2. |
| ETHYLBENZENE | ug/l | T | | | | | <2. | <1. |
| METHYL BROMIDE | ug/l | T | | | | | <3. UJ | <2. |
| METHYL CHLORIDE | ug/l | T | | | | | <3. UJ | <2. |
| METHYL ETHYL KETONE | ug/l | T | | | | | <3. | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | <5. | <3. |
| METHYLENE CHLORIDE | ug/l | T | | | | | <2. | <2. |
| STYRENE | ug/l | T | | | | | <1. | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | | | | <1. | <1. |
| TOLUENE | ug/l | T | | | | | <2. | <1. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | <2. | <1. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | <1. |
| TRICHLOROETHENE | ug/l | T | | | | | <1. | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | <2. | <2. |
| VINYL CHLORIDE | ug/l | T | | | | | <2. | <1. |
| XYLENES | ug/l | T | | | | | <1. | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-01 | MW-01 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 17:40 | 7/20/2000 14:30 | 11/2/2000 14:30 | 3/22/2000 10:05 | 7/21/2000 10:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-01 | MW-01 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 17:40 | 7/20/2000 14:30 | 11/2/2000 14:30 | 3/22/2000 10:05 | 7/21/2000 10:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-01 | MW-01 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 17:40 | 7/20/2000 14:30 | 11/2/2000 14:30 | 3/22/2000 10:05 | 7/21/2000 10:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <77 | <19.0 | <19.0 | <77 | <19.0 |
| ALUMINUM | ug/l | T | | 2450 | 3250 | 5190 | 179 J | 137 J |
| ANTIMONY | ug/l | D | | <8.4 | <9.4 | <9.4 | <8.4 | <9.4 |
| ANTIMONY | ug/l | T | | <8.4 | 14.6 J | 24 | <8.4 | <9.4 |
| ARSENIC | ug/l | D | | 688 | 498 | 956 | 113 | 112 |
| ARSENIC | ug/l | T | | 895 | 935 | 1460 | 130 | 115 |
| BARIUM | ug/l | D | | 28.1 J | 24.1 J | 27.8 | 33.4 | 29.4 J |
| BARIUM | ug/l | T | | 245 J | 920 | 1830 | 36 | 32 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | 84.9 | 133 | 68.2 | <.81 | <.90 |
| CADMIUM | ug/l | T | | 89.1 | 196 | 140 | <.81 | <.90 |
| CALCIUM | ug/l | D | | 544000 | 596000 | 590000 | 476000 | 515000 |
| CALCIUM | ug/l | T | | 619000 | 619000 | 652000 | 499000 | 499000 |
| CHROMIUM | ug/l | D | | <1.7 | <1.6 | <1.6 | <1.7 | 1.9 J |
| CHROMIUM | ug/l | T | | 9.2 U | 49.8 | 22.4 | <1.7 | 1.9 J |
| COPPER | ug/l | D | | <2.9 | <1.9 | <1.9 | <2.9 | <1.9 |
| COPPER | ug/l | T | | 11.8 U | 23.4 | 42.9 | <2.9 | 2.0 U |
| IRON | ug/l | D | | 13900 | 6530 | 17900 | 55600 | 61500 |
| IRON | ug/l | T | | 22700 | 17000 | 35600 | 65600 | 61900 |
| LEAD | ug/l | D | | <7.9 | <9.8 | 16.0 J | <7.9 | <9.8 |
| LEAD | ug/l | T | | 377 | 918 | 1700 | <7.9 | <9.8 |
| MAGNESIUM | ug/l | D | | 21100 | 19800 | 26100 | 80100 | 85400 |
| MAGNESIUM | ug/l | T | | 42400 | 43000 | 59900 | 84200 | 83100 |
| MANGANESE | ug/l | D | | 388 | 254 | 447 | 334 | 371 |
| MANGANESE | ug/l | T | | 625 | 474 | 786 | 374 | 393 |
| MERCURY | ug/l | D | | <.10 | <.048 | <.12 | <.10 | <.048 |
| MERCURY | ug/l | T | | <.10 | .17 J | .17 J | <.10 | <.048 |
| NICKEL | ug/l | D | | 13.6 | 28 | 9.9 | <1.6 | <1.9 |
| NICKEL | ug/l | T | | 25 | 66 | 36.9 | <1.6 | <1.9 |
| SELENIUM | ug/l | D | | <4.4 | 9.2 J | <3.5 | <4.4 | 5.0 J |
| SELENIUM | ug/l | T | | <4.4 | 9.5 J | <3.5 | <4.4 | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-01 | MW-01 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 17:40 | 7/20/2000 14:30 | 11/2/2000 14:30 | 3/22/2000 10:05 | 7/21/2000 10:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 22800 | 21300 | 23900 | 132000 | 124000 |
| SODIUM | ug/l | T | | 23500 | 20800 | 24500 | 121000 | 126000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.9 | <1.5 | <1.5 | <1.9 | 5.9 |
| VANADIUM | ug/l | T | | 7.6 | 8.3 | 12 | <1.9 | 5 |
| ZINC | ug/l | D | | 6430 | 10700 J | 7020 J | <3.0 | 7.9 U |
| ZINC | ug/l | T | | 8130 | 13100 J | 11000 J | <3.0 | 13.5 U |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 108000 | 130000 | 140000 | 150000 | 199000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 690 J | 200 J | 1300 U | 4200 | 4000 |
| BICARBONATE | MG/L AS CA | T | | 108 | 130 | 140 | 150 | 199 |
| BORON | ug/l | D | | 249 | 243 | 312 | 193 | 199 |
| BORON | ug/l | T | | 274 | 246 | 314 | 206 | 198 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 26600 | 24900 | 31000 | 22000 | 20800 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 UJ |
| FLUORIDE | ug/l | T | | 2000 | 2500 | 2300 | <400 | 430 U |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 48 J | 52 J | 71 J | <30 | <30 |
| PHOSPHORUS | ug/l | T | | 660 | 2790 | 1580 | 1340 | 1460 |
| SULFATE | ug/l | T | | 1400000 | 1430000 | 1400000 | 1640000 | 1700000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 1420 J | <3200 | <3200 UJ | 4900 | 3800 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | | CLEAR | LT BROWN | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 1300 | 1500 | |
| ODOR (FIELD) | NONE | N | | NONE | | | NONE | |
| PH (FIELD) | STD UNITS | N | | 7 | | 7.15 | 6.75 | |
| REDOX (FIELD) | MV | N | | 6.1 | | -75 | 48.35 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2080 | | 2480 | 2230 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | 255 | | |
| DEPTH TO WATER FROM TOC | Feet | N | | 8.42 | | | 4.97 | |
| HEXANE | ug/l | T | | | | | <2. | <2. |
| OVABZONE | NONE | N | | | | 0 | | |
| OVACASING | NONE | N | | | | 0 | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 12 | | 14.33 | 12.1 | |
| TOTAL WELL DEPTH | Feet | N | | 21.6 | | | 31.07 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-02 | MW-03 | MW-03 | MW-03 | MW-04 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/3/2000 9:30 | 3/23/2000 7:52 | 7/25/2000 10:30 | 11/7/2000 8:00 | 3/23/2000 9:06 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| 1,1-DICHLOROETHANE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | <3. | <7. | <3. | <3. | <7. |
| ACETONE | ug/l | T | | <6. | <6. | <6. | <6. | <6. |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMOFORM | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CARBON DISULFIDE | ug/l | T | | <1. | <3. | <1. | <1. | <3. |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CHLOROBENZENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| CHLOROFORM | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. UJ | 66. J | 55 | 52. J | 42. J |
| ETHYL CHLORIDE | ug/l | T | | <2. | <3. | <2. | <2. UJ | <3. |
| ETHYLBENZENE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| METHYL BROMIDE | ug/l | T | | <2. | <3. | <2. | <2. UJ | <3. |
| METHYL CHLORIDE | ug/l | T | | <2. UJ | <3. | <2. | <2. UJ | <3. |
| METHYL ETHYL KETONE | ug/l | T | | <3. | <3. | <3. | <3. | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | <5. | <3. | <3. | <5. |
| METHYLENE CHLORIDE | ug/l | T | | <2. | <2. | <2. | <2. | <2. |
| STYRENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TOLUENE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TRICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | <2. UJ | <2. | <2. | <2. UJ |
| VINYL CHLORIDE | ug/l | T | | <1. | <2. | <1. | <1. | <2. |
| XYLENES | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | <1. | <1. | <1. | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | <1. | <1. | <1. | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-02 | MW-03 | MW-03 | MW-03 | MW-04 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/3/2000 9:30 | 3/23/2000 7:52 | 7/25/2000 10:30 | 11/7/2000 8:00 | 3/23/2000 9:06 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | <1. | <1. | <1. | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | <1. | <1. | <1. | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | <2. | <2. | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | <2. | <2. | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | <1. | <1. | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | <1. | <1. | |
| 2,4-DINITROPHENOL | ug/l | T | | | | <20. R | <20. | |
| 2,4-DINITROTOLUENE | ug/l | T | | | <1. | <1. | <1. | |
| 2,6-DINITROTOLUENE | ug/l | T | | | <2. | <2. | <2. | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | <1. | <1. | <1. | |
| 2-CHLOROPHENOL | ug/l | T | | | | <1. | <1. | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | <1. | <1. | <1. | |
| 2-NITROANILINE | ug/l | T | | | <2. | <2. | <2. | |
| 2-NITROPHENOL | ug/l | T | | | | <1. | <1. | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | <2. | <2. | <2. | |
| 3-NITROANILINE | ug/l | T | | | <2. | <2. | <2. | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | <5. UJ | <5. UJ | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | <2. | <2. | <2. | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | <1. | <1. | |
| 4-CHLOROANILINE | ug/l | T | | | <1. | <1. | <1. | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | <1. | <1. | <1. | |
| 4-METHYLPHENOL | ug/l | T | | | | <3. | <3. | |
| 4-NITROANILINE | ug/l | T | | | <2. | <2. | <2. | |
| 4-NITROPHENOL | ug/l | T | | | | <10. UJ | <10. UJ | |
| ACENAPHTHENE | ug/l | T | | | <1. | <1. | <1. | |
| ACENAPHTHYLENE | ug/l | T | | | <1. | <1. | <1. | |
| ANTHRACENE | ug/l | T | | | <1. | <1. | <1. | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | <1. | <1. | <1. | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | <1. | <1. | <1. | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | <1. | <1. | <1. | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | <1. | <1. | <1. | |
| BENZO[A]PYRENE | ug/l | T | | | <1. | <1. | <1. | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | <1. | <1. | <1. | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | <1. | <1. | <1. | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | <1. | <1. | <1. | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| CARBAZOLE | ug/l | T | | | <3. | <3. | <3. | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | <1. | <1. | <1. | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-02 | MW-03 | MW-03 | MW-03 | MW-04 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/3/2000 9:30 | 3/23/2000 7:52 | 7/25/2000 10:30 | 11/7/2000 8:00 | 3/23/2000 9:06 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | <1. | <1. | <1. | |
| DIBENZOFURAN | ug/l | T | | | <1. | <1. | <1. | |
| DIETHYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| DIMETHYL PHTHALATE | ug/l | T | | | <2. UJ | <2. | <2. UJ | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| FLUORANTHENE | ug/l | T | | | <1. | <1. | <1. | |
| FLUORENE | ug/l | T | | | <1. | <1. | <1. | |
| HEXACHLOROBENZENE | ug/l | T | | | <2. | <2. | <2. | |
| HEXACHLOROBUTADIENE | ug/l | T | | | <2. UJ | <2. | <2. UJ | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | <5. UJ | <5. | <5. UJ | |
| HEXACHLOROETHANE | ug/l | T | | | <1. UJ | <1. | <1. UJ | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | <1. | <1. | <1. | |
| ISOPHORONE | ug/l | T | | | <1. | <1. | <1. | |
| NAPHTHALENE | ug/l | T | | | <1. | <1. | <1. | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | <2. | <2. | <2. | |
| NITROBENZENE | ug/l | T | | | <1. | <1. | <1. | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | <1. | <1. | <1. | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | <1. | <1. | <1. | |
| O-CRESOL | ug/l | T | | | | <1. | <1. | |
| PENTACHLOROPHENOL | ug/l | T | | | | <3. | <3. | |
| PHENANTHRENE | ug/l | T | | | <1. | <1. | <1. | |
| PHENOL | ug/l | T | | | <1. | <1. UJ | <1. UJ | |
| PYRENE | ug/l | T | | | <1. | <1. | <1. | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | <0.095 | <0.095 | <0.095 | <0.094 |
| AROCLOR 1016 | ug/l | T | | | <0.095 | <0.095 | <0.096 | <0.095 |
| AROCLOR 1221 | ug/l | T | | | <0.095 | <0.095 | <0.096 | <0.095 |
| AROCLOR 1232 | ug/l | T | | | <0.095 | <0.095 | <0.096 | <0.095 |
| AROCLOR 1242 | ug/l | T | | | <0.095 | <0.095 | <0.096 | <0.095 |
| AROCLOR 1248 | ug/l | T | | | <0.095 | <0.095 | <0.096 | <0.095 |
| AROCLOR 1254 | ug/l | T | | | <0.095 | <0.095 | <0.096 | <0.095 |
| AROCLOR 1260 | ug/l | T | | | <0.095 | <0.095 | <0.096 | <0.095 |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | <0.0038 | <0.0038 | <0.0038 | <0.0038 |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | <0.0038 | <0.0038 | <0.0038 | <0.0038 |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | <0.0038 | <0.0038 | <0.0038 | <0.0038 |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-02 | MW-03 | MW-03 | MW-03 | MW-04 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/3/2000 9:30 | 3/23/2000 7:52 | 7/25/2000 10:30 | 11/7/2000 8:00 | 3/23/2000 9:06 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | <0.019 | <0.019 | <0.019 | <0.019 |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <77 | <19.0 | 69.6 J | <77 |
| ALUMINUM | ug/l | T | | 1360 | <77 | 59.5 U | 89.0 J | <77 |
| ANTIMONY | ug/l | D | | <9.4 | <8.4 | <9.4 | <9.4 | <8.4 |
| ANTIMONY | ug/l | T | | <9.4 | <8.4 | <9.4 | <9.4 | <8.4 |
| ARSENIC | ug/l | D | | 114 | 15100 | 15100 | 16600 | 17 |
| ARSENIC | ug/l | T | | 130 | 16500 | 15000 | 17300 | 22 |
| BARIUM | ug/l | D | | 28.5 | 63.6 | 71.3 | 76.9 | 13.2 |
| BARIUM | ug/l | T | | 42.8 | 60.7 | 70.2 | 77 | 13.2 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | 1.6 | <.81 | <.90 | <.90 | <.81 |
| CADMIUM | ug/l | T | | 1.2 J | <.81 | <.90 | <.90 | <.81 |
| CALCIUM | ug/l | D | | 514000 | 557000 | 591000 | 583000 | 513000 |
| CALCIUM | ug/l | T | | 631000 | 585000 | 554000 | 567000 | 572000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.7 | <1.6 | <1.6 | <1.7 |
| CHROMIUM | ug/l | T | | 6 | <1.7 | 1.9 J | <1.6 | <1.7 |
| COPPER | ug/l | D | | <1.9 | <2.9 | <1.9 | <1.9 | <2.9 |
| COPPER | ug/l | T | | 5.1 | <2.9 | <1.9 | 2.0 J | <2.9 |
| IRON | ug/l | D | | 63400 | 41000 | 46100 | 43100 | 24400 |
| IRON | ug/l | T | | 75800 | 40100 | 44400 | 44100 | 31800 |
| LEAD | ug/l | D | | <9.8 | <7.9 | <9.8 | <9.8 | <7.9 |
| LEAD | ug/l | T | | <9.8 | <7.9 | <9.8 | <9.8 | <7.9 |
| MAGNESIUM | ug/l | D | | 86300 | 57200 | 80400 | 74900 | 46700 |
| MAGNESIUM | ug/l | T | | 136000 | 54000 | 78500 | 67800 | 51300 |
| MANGANESE | ug/l | D | | 372 | 1980 | 2300 | 2160 | 450 |
| MANGANESE | ug/l | T | | 864 | 2170 | 2250 | 2210 | 479 |
| MERCURY | ug/l | D | | <.12 | <.10 | <.048 | <.12 | <.10 |
| MERCURY | ug/l | T | | <.12 | <.10 | <.048 | <.12 | <.10 |
| NICKEL | ug/l | D | | <1.9 | <1.6 | <1.9 | <1.9 | 12.5 |
| NICKEL | ug/l | T | | 7.9 | <1.6 | <1.9 | <1.9 | 14.3 |
| SELENIUM | ug/l | D | | <3.5 | <4.4 | <3.5 | <3.5 | <4.4 |
| SELENIUM | ug/l | T | | <3.5 | <4.4 | 3.6 J | <3.5 | <4.4 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-02 | MW-03 | MW-03 | MW-03 | MW-04 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/3/2000 9:30 | 3/23/2000 7:52 | 7/25/2000 10:30 | 11/7/2000 8:00 | 3/23/2000 9:06 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 125000 | 64300 J | 65900 | 58300 J | 113000 |
| SODIUM | ug/l | T | | 133000 | 50000 J | 64200 | 49900 J | 106000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | 2.6 J | <1.9 | <1.5 | <1.5 | <1.9 |
| VANADIUM | ug/l | T | | 3.9 J | <1.9 | <1.5 | <1.5 | <1.9 |
| ZINC | ug/l | D | | 5.2 U | <3.0 | <3.1 | <3.1 | 492 |
| ZINC | ug/l | T | | 24.7 U | <3.0 | 11.6 U | <3.1 | 487 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 182000 | 236000 | 284000 | 264000 | 207000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 4200 | 8400 | 7800 | 8000 | 54300 |
| BICARBONATE | MG/L AS CA | T | | 182 | 236 | 284 | 264 | 207 |
| BORON | ug/l | D | | 206 | 424 | 437 | 427 | 482 |
| BORON | ug/l | T | | 211 | 425 | 444 | 398 | 537 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 19100 | 26100 | 29600 | 26000 | 36100 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | 4.6 J |
| FLUORIDE | ug/l | T | | 410 J | 1620 | 1490 | 1450 | 1540 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 UJ | <30 | <30 | <30 | <30 UJ |
| PHOSPHORUS | ug/l | T | | 2120 | 13400 | 13400 J | 15800 | 140 J |
| SULFATE | ug/l | T | | 1800000 | 1510000 | 1820000 | 1660000 | 1840000 |
| SULFIDE | ug/l | T | | <530 | 3100 | 3200 | 3000 | 32600 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 4600 J | 5900 J | 9600 J | 7900 J | 52000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | | LT ORANGE | LT BROWN |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 1490 | 1900 | | 510 | 1800 |
| ODOR (FIELD) | NONE | N | | | NONE | | | NONE |
| PH (FIELD) | STD UNITS | N | | 6.92 | 6.62 | | 6.94 | 6.76 |
| REDOX (FIELD) | MV | N | | -85 | 498.6 | | -92 | 233.4 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2940 | 2140 | | 2290 | 2810 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 83.4 | | | 66.9 | |
| DEPTH TO WATER FROM TOC | Feet | N | | | 13 | | | 8.56 |
| HEXANE | ug/l | T | | <2. | <2. | <2. | <2. | <2. |
| OVABZONE | NONE | N | | 0 | | | 0 | |
| OVACASING | NONE | N | | 0 | | | 0 | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 11.72 | 14.9 | | 14.97 | 15.7 |
| TOTAL WELL DEPTH | Feet | N | | | 31.57 | | | 30 |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-04 | MW-04 | MW-05 | MW-05 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 11:30 | 11/7/2000 10:00 | 3/23/2000 10:01 | 7/25/2000 14:30 | 11/7/2000 11:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| 1,1-DICHLOROETHANE | ug/l | T | | 2. J | 2. J | 3. J | <1. | <1. |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | <1. | 34 | 1. J | 8 |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | <3. | <3. | <7. | <3. | <3. |
| ACETONE | ug/l | T | | <6. | <6. | <6. | <6. | <6. |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMOFORM | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CARBON DISULFIDE | ug/l | T | | <1. | <1. | <3. | <1. | <1. |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CHLOROBENZENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| CHLOROFORM | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | 35 | 48 | 26. J | <2. | 3. J |
| ETHYL CHLORIDE | ug/l | T | | <2. | <2. UJ | <3. | <2. | <2. UJ |
| ETHYLBENZENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| METHYL BROMIDE | ug/l | T | | <2. | <2. UJ | <3. | <2. | <2. UJ |
| METHYL CHLORIDE | ug/l | T | | <2. | <2. UJ | <3. | <2. | <2. UJ |
| METHYL ETHYL KETONE | ug/l | T | | <3. | <3. | <3. | <3. | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | <3. | <5. | <3. | <3. |
| METHYLENE CHLORIDE | ug/l | T | | <2. | <2. | <2. | <2. | <2. |
| STYRENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TOLUENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TRICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | <2. | <2. UJ | <2. | <2. |
| VINYL CHLORIDE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| XYLENES | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-04 | MW-04 | MW-05 | MW-05 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 11:30 | 11/7/2000 10:00 | 3/23/2000 10:01 | 7/25/2000 14:30 | 11/7/2000 11:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-04 | MW-04 | MW-05 | MW-05 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 11:30 | 11/7/2000 10:00 | 3/23/2000 10:01 | 7/25/2000 14:30 | 11/7/2000 11:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1016 | ug/l | T | | <0.095 | <0.096 | | | |
| AROCLOR 1221 | ug/l | T | | <0.095 | <0.096 | | | |
| AROCLOR 1232 | ug/l | T | | <0.095 | <0.096 | | | |
| AROCLOR 1242 | ug/l | T | | <0.095 | <0.096 | | | |
| AROCLOR 1248 | ug/l | T | | <0.095 | <0.096 | | | |
| AROCLOR 1254 | ug/l | T | | <0.095 | <0.096 | | | |
| AROCLOR 1260 | ug/l | T | | <0.095 | <0.096 | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | <0.0019 | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | <0.0038 | <0.0038 | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | <0.0038 | <0.0038 | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | <0.0038 | <0.0038 | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-04 | MW-04 | MW-05 | MW-05 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 11:30 | 11/7/2000 10:00 | 3/23/2000 10:01 | 7/25/2000 14:30 | 11/7/2000 11:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| *Analyte* | *units* | *Diss. (D)* | *Duplicate #* | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | <0.019 | <0.019 | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <19.0 | <77 | 26.2 U | 29.2 J |
| ALUMINUM | ug/l | T | | 156 J | 187 J | <77 | 309 | 654 |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ARSENIC | ug/l | D | | 30.3 | 34.3 | 107 | 100 | 104 |
| ARSENIC | ug/l | T | | 91.1 | 68.5 | 125 | 513 | 203 |
| BARIUM | ug/l | D | | 11.5 | 12.5 | 22.1 | 25.6 | 21.7 |
| BARIUM | ug/l | T | | 11.5 | 14.5 | 21.3 | 32.2 | 25 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.90 | <.90 | <.81 | <.90 | <.90 |
| CADMIUM | ug/l | T | | 3.2 | 4.8 | <.81 | <.90 | <.90 |
| CALCIUM | ug/l | D | | 564000 | 616000 | 582000 | 582000 | 580000 |
| CALCIUM | ug/l | T | | 547000 | 627000 | 560000 | 550000 | 541000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.7 | <1.6 | <1.6 |
| CHROMIUM | ug/l | T | | <1.6 | <1.6 | <1.7 | 1.6 J | <1.6 |
| COPPER | ug/l | D | | <1.9 | <1.9 | <2.9 | <1.9 | <1.9 |
| COPPER | ug/l | T | | <1.9 | 2.2 J | <2.9 | <1.9 | 2.8 J |
| IRON | ug/l | D | | 35000 | 34600 | 73900 | 52400 | 52500 |
| IRON | ug/l | T | | 46300 | 43800 | 78600 | 78300 | 59800 |
| LEAD | ug/l | D | | <9.8 | <9.8 | <7.9 | <9.8 | <9.8 |
| LEAD | ug/l | T | | <9.8 | <9.8 | <7.9 | <9.8 | <9.8 |
| MAGNESIUM | ug/l | D | | 54000 | 63100 | 887000 | 816000 | 656000 |
| MAGNESIUM | ug/l | T | | 53400 | 63200 | 822000 | 840000 | 662000 |
| MANGANESE | ug/l | D | | 503 | 509 | 2030 | 1420 J | 1610 |
| MANGANESE | ug/l | T | | 496 | 512 | 2200 | 1240 J | 1460 |
| MERCURY | ug/l | D | | <.048 | <.12 | <.10 | <.048 | <.12 |
| MERCURY | ug/l | T | | <.048 | <.12 | <.10 | <.048 | <.12 |
| NICKEL | ug/l | D | | 16.9 | 16.9 | 13.9 | 19.8 | 20.5 |
| NICKEL | ug/l | T | | 17.7 | 18.9 | 20.1 | 20.8 | 21 |
| SELENIUM | ug/l | D | | <3.5 | <3.5 | <4.4 | <3.5 | <3.5 |
| SELENIUM | ug/l | T | | 3.6 J | <3.5 | <4.4 | <3.5 | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-04 | MW-04 | MW-05 | MW-05 | MW-05 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 11:30 | 11/7/2000 10:00 | 3/23/2000 10:01 | 7/25/2000 14:30 | 11/7/2000 11:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 80800 | 58700 | 125000 | 122000 | 98800 |
| SODIUM | ug/l | T | | 80500 | 62200 | 117000 | 126000 | 100000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.5 | <1.5 | <1.9 | <1.5 | 1.9 J |
| VANADIUM | ug/l | T | | 2.3 J | <1.5 | <1.9 | 3.2 J | <1.5 |
| ZINC | ug/l | D | | 310 | 615 | 14200 | 3550 R | 7780 J |
| ZINC | ug/l | T | | 650 | 1090 | 13900 | 2240 R | 7030 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 216000 | 283000 | 462000 | 677000 | 509000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 41100 | 39000 | 59600 | 121000 | 136000 |
| BICARBONATE | MG/L AS CA | T | | 216 | 283 | 462 | 677 | 509 |
| BORON | ug/l | D | | 519 | 588 | 1140 | 775 | 996 |
| BORON | ug/l | T | | 543 | 592 | 1140 | 758 | 925 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 37600 | 33000 | 89000 | 154000 | 92000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 1790 | 1850 | 5330 | 2690 | 2930 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | 96 J | <30 | <30 |
| PHOSPHORUS | ug/l | T | | 530 J | 550 | 790 | 3760 J | 1950 |
| SULFATE | ug/l | T | | 1710000 | 1780000 | 4800000 | 5500000 | 4190000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 39000 J | 41000 J | 59000 J | 113000 J | 125000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | CLEAR | | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 1690 | 1200 | | 1370 |
| ODOR (FIELD) | NONE | N | | | | NONE | | |
| PH (FIELD) | STD UNITS | N | | | 7.06 | 6.53 | | 6.88 |
| REDOX (FIELD) | MV | N | | | -82 | 106.7 | | -53 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 3140 | 5500 | | 14000 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 31.9 | | | 79.8 |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 8.64 | | |
| HEXANE | ug/l | T | | <2. | <2. | <2. | <2. | <2. |
| OVABZONE | NONE | N | | | 0 | | | 0 |
| OVACASING | NONE | N | | | 0 | | | 0 |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 14.62 | 11.7 | | 11.51 |
| TOTAL WELL DEPTH | Feet | N | | | | 32.11 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-06 | MW-07 | MW07 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 16:00 | 11/7/2000 14:00 | 3/23/2000 13:58 | 7/26/2000 10:00 | 7/26/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | <1. | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | <3. | <3. | | | |
| ACETONE | ug/l | T | | 6. U | <6. | | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | <1. | <1. | | | |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | <1. | | | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | <1. | | | |
| BROMOFORM | ug/l | T | | <1. | <1. | | | |
| CARBON DISULFIDE | ug/l | T | | <1. | <1. | | | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | <1. | | | |
| CHLOROBENZENE | ug/l | T | | <1. | <1. | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | <1. | | | |
| CHLOROFORM | ug/l | T | | <1. | <1. | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | 5 | 2. J | | | |
| ETHYL CHLORIDE | ug/l | T | | <2. | <2. UJ | | | |
| ETHYLBENZENE | ug/l | T | | <1. | <1. | | | |
| METHYL BROMIDE | ug/l | T | | <2. | <2. UJ | | | |
| METHYL CHLORIDE | ug/l | T | | <2. | <2. UJ | | | |
| METHYL ETHYL KETONE | ug/l | T | | <3. | <3. | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | <3. | | | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | <2. | | | |
| STYRENE | ug/l | T | | <1. | <1. | | | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | <1. | | | |
| TOLUENE | ug/l | T | | <1. | <1. | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | | | |
| TRICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | <2. | | | |
| VINYL CHLORIDE | ug/l | T | | <1. | <1. | | | |
| XYLENES | ug/l | T | | <1. | <1. | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-06 | MW-07 | MW07 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 16:00 | 11/7/2000 14:00 | 3/23/2000 13:58 | 7/26/2000 10:00 | 7/26/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-06 | MW-07 | MW07 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 16:00 | 11/7/2000 14:00 | 3/23/2000 13:58 | 7/26/2000 10:00 | 7/26/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-06 | MW-07 | MW07 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 16:00 | 11/7/2000 14:00 | 3/23/2000 13:58 | 7/26/2000 10:00 | 7/26/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | 42.8 U | <19.0 | <77 | <19.0 | |
| ALUMINUM | ug/l | T | | 74.9 U | 107 J | <77 | | 216 |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <8.4 | <9.4 | |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <8.4 | | <9.4 |
| ARSENIC | ug/l | D | | 36.5 | 20.3 | <5.0 | 8.6 J | |
| ARSENIC | ug/l | T | | 15.5 | 15.4 | <5.0 | | 9.8 J |
| BARIUM | ug/l | D | | 111 | 78.6 | 78.3 | 167 | |
| BARIUM | ug/l | T | | 61.4 | 71.9 | 77 | | 183 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | 1.3 J | <.90 | <.81 | <.90 | |
| CADMIUM | ug/l | T | | <.90 | <.90 | <.81 | | <.90 |
| CALCIUM | ug/l | D | | 1690000 | 1630000 | 193000 | 294000 | |
| CALCIUM | ug/l | T | | 1790000 | 1780000 | 206000 | | 304000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.7 | <1.6 | |
| CHROMIUM | ug/l | T | | <1.6 | <1.6 | <1.7 | | <1.6 |
| COPPER | ug/l | D | | 2.1 J | <1.9 | <2.9 | <1.9 | |
| COPPER | ug/l | T | | <1.9 | <1.9 | <2.9 | | <1.9 |
| IRON | ug/l | D | | 23700 R | 6850 | 14700 | 26400 | |
| IRON | ug/l | T | | 10100 R | 8330 | 16400 | | 36700 |
| LEAD | ug/l | D | | <9.8 | <9.8 | <7.9 | <9.8 | |
| LEAD | ug/l | T | | <9.8 | <9.8 | <7.9 | | <9.8 |
| MAGNESIUM | ug/l | D | | 114000 | 114000 | 25800 | 37900 | |
| MAGNESIUM | ug/l | T | | 115000 | 117000 | 29900 | | 38000 |
| MANGANESE | ug/l | D | | 2920 | 3390 | 543 | 1010 | |
| MANGANESE | ug/l | T | | 3290 | 3370 | 606 | | 1100 |
| MERCURY | ug/l | D | | <.048 | <.12 | <.10 | <.048 | |
| MERCURY | ug/l | T | | <.048 | <.12 | <.10 | | <.048 |
| NICKEL | ug/l | D | | 3.3 J | 2.4 J | <1.6 | <1.9 | |
| NICKEL | ug/l | T | | 2.7 J | 3.7 J | <1.6 | | <1.9 |
| SELENIUM | ug/l | D | | <3.5 | <3.5 | <4.4 | <3.5 | |
| SELENIUM | ug/l | T | | <3.5 | <3.5 | <4.4 | | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-06 | MW-06 | MW-07 | MW07 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 16:00 | 11/7/2000 14:00 | 3/23/2000 13:58 | 7/26/2000 10:00 | 7/26/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 701000 | 742000 | 65300 | 91700 | |
| SODIUM | ug/l | T | | 740000 | 795000 | 66300 | | 105000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.5 | <1.5 | <1.9 | <1.5 | |
| VANADIUM | ug/l | T | | <1.5 | <1.5 | <1.9 | | 2.2 J |
| ZINC | ug/l | D | | <15.5 | <15.5 | <3.0 | 3.8 U | |
| ZINC | ug/l | T | | 10.0 U | <15.5 | <3.0 | | 12.0 U |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 106000 | 113000 | 216000 | | 227000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | | <370 |
| AMMONIA | ug/l | T | | 610 J | 360 J | 2300 | | 6300 |
| BICARBONATE | MG/L AS CA | T | | 106 | 113 | 216 | | 227 |
| BORON | ug/l | D | | 3000 | 3280 | 320 | 340 | |
| BORON | ug/l | T | | 3260 | 3360 | 295 | | 397 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | | <1.0 |
| CHLORIDE | ug/l | T | | 3750000 | 3830000 | 127000 | | 319000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | | <4.0 |
| FLUORIDE | ug/l | T | | 5270 | 5450 | 1620 | | 2750 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 2180 | 2850 | 170 J | | <30 |
| PHOSPHORUS | ug/l | T | | 240 | 430 | 150 J | | 710 |
| SULFATE | ug/l | T | | 1290000 | 1330000 | 360000 | | 850000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 3300 J | <630 R | 2400 J | | 6300 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | CLEAR | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 1700 | | |
| ODOR (FIELD) | NONE | N | | | | NONE | | |
| PH (FIELD) | STD UNITS | N | | | | 7.03 | | |
| REDOX (FIELD) | MV | N | | | | 527.5 | | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | | 1200 | | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 3.78 | | |
| HEXANE | ug/l | T | | <2. | <2. | | | |
| OVABZONE | NONE | N | | | 0 | | | |
| OVACASING | NONE | N | | | 0 | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | | 10.7 | | |
| TOTAL WELL DEPTH | Feet | N | | | | 3.78 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-07 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/7/2000 13:00 | 3/22/2000 14:19 | 7/21/2000 12:30 | 11/3/2000 11:30 | 3/22/2000 13:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | <2. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | <2. |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | 1500 |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | <2. |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | <7. |
| ACETONE | ug/l | T | | | | | | <6. |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMOFORM | ug/l | T | | | | | | <1. |
| CARBON DISULFIDE | ug/l | T | | | | | | <3. |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | <1. |
| CHLOROBENZENE | ug/l | T | | | | | | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | <2. |
| CHLOROFORM | ug/l | T | | | | | | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | <2. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | <2. |
| ETHYL CHLORIDE | ug/l | T | | | | | | 9 |
| ETHYLBENZENE | ug/l | T | | | | | | <2. |
| METHYL BROMIDE | ug/l | T | | | | | | <3. UJ |
| METHYL CHLORIDE | ug/l | T | | | | | | <3. UJ |
| METHYL ETHYL KETONE | ug/l | T | | | | | | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | <5. |
| METHYLENE CHLORIDE | ug/l | T | | | | | | <2. |
| STYRENE | ug/l | T | | | | | | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | <1. |
| TOLUENE | ug/l | T | | | | | | <2. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | <2. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| TRICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | <2. |
| VINYL CHLORIDE | ug/l | T | | | | | | <2. |
| XYLENES | ug/l | T | | | | | | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-07 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/7/2000 13:00 | 3/22/2000 14:19 | 7/21/2000 12:30 | 11/3/2000 11:30 | 3/22/2000 13:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-07 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/7/2000 13:00 | 3/22/2000 14:19 | 7/21/2000 12:30 | 11/3/2000 11:30 | 3/22/2000 13:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-07 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/7/2000 13:00 | 3/22/2000 14:19 | 7/21/2000 12:30 | 11/3/2000 11:30 | 3/22/2000 13:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <77 | <19.0 | <19.0 | <77 |
| ALUMINUM | ug/l | T | | 82.4 J | <77 | 67.8 U | 69.4 U | <77 |
| ANTIMONY | ug/l | D | | <9.4 | <8.4 | <9.4 | <9.4 | <8.4 |
| ANTIMONY | ug/l | T | | <9.4 | <8.4 | <9.4 | <9.4 | <8.4 |
| ARSENIC | ug/l | D | | <5.0 | 17 | 18.5 | 18.8 | 74 R |
| ARSENIC | ug/l | T | | 8.5 J | 18 | 23.6 | 21.7 | 39 R |
| BARIUM | ug/l | D | | 111 | 41.8 | 39.3 J | 35.7 | 29.3 |
| BARIUM | ug/l | T | | 115 | 49.5 | 51.2 | 50.2 | 30 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.90 | <.81 | <.90 | 1.4 J | <.81 |
| CADMIUM | ug/l | T | | <.90 | <.81 | <.90 | <.90 | <.81 |
| CALCIUM | ug/l | D | | 224000 | 533000 | 560000 | 508000 | 563000 |
| CALCIUM | ug/l | T | | 236000 | 574000 | 571000 | 567000 | 614000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.7 | <1.6 | <1.6 | <1.7 |
| CHROMIUM | ug/l | T | | <1.6 | <1.7 | <1.6 | <1.6 | <1.7 |
| COPPER | ug/l | D | | <1.9 | <2.9 | <1.9 | <1.9 | <2.9 |
| COPPER | ug/l | T | | <1.9 | <2.9 | 2.0 U | <1.9 | <2.9 |
| IRON | ug/l | D | | 18300 | 54100 | 62700 | 59100 | 80800 |
| IRON | ug/l | T | | 20400 | 64100 | 69500 | 67000 | 110000 |
| LEAD | ug/l | D | | <9.8 | <7.9 | <9.8 | <9.8 | <7.9 |
| LEAD | ug/l | T | | <9.8 | <7.9 | <9.8 | <9.8 | <7.9 |
| MAGNESIUM | ug/l | D | | 30000 | 57700 | 57200 | 60000 | 154000 |
| MAGNESIUM | ug/l | T | | 31100 | 65300 | 58200 | 65600 | 165000 |
| MANGANESE | ug/l | D | | 783 | 1590 | 1520 | 1550 | 3990 |
| MANGANESE | ug/l | T | | 796 | 1810 | 1590 | 1680 | 5120 |
| MERCURY | ug/l | D | | <.12 | <.10 | <.048 | <.12 | <.10 |
| MERCURY | ug/l | T | | <.12 | <.10 | <.048 | <.12 | <.10 |
| NICKEL | ug/l | D | | <1.9 | <1.6 | <1.9 | <1.9 | 81.7 R |
| NICKEL | ug/l | T | | <1.9 | <1.6 | <1.9 | <1.9 | 36.5 R |
| SELENIUM | ug/l | D | | <3.5 | <4.4 | 4.1 J | <3.5 | <4.4 |
| SELENIUM | ug/l | T | | <3.5 | <4.4 | 3.9 J | <3.5 | <4.4 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-07 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/7/2000 13:00 | 3/22/2000 14:19 | 7/21/2000 12:30 | 11/3/2000 11:30 | 3/22/2000 13:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 75100 | 201000 | 185000 | 193000 | 298000 R |
| SODIUM | ug/l | T | | 79300 | 198000 | 184000 | 210000 | 192000 R |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.5 | <1.9 | 5.5 | 2.3 J | <1.9 |
| VANADIUM | ug/l | T | | <1.5 | <1.9 | 5.4 | <1.5 | <1.9 |
| ZINC | ug/l | D | | 7.4 U | <3.0 | 7.0 U | 13.5 U | 28900 R |
| ZINC | ug/l | T | | 4.3 U | <3.0 | 7.4 U | 18.7 U | 16000 R |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 243000 | 183000 | 296000 | 262000 | 176000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 3500 | 1500 | 1300 | 2000 | 10700 |
| BICARBONATE | MG/L AS CA | T | | 243 | 183 | 296 | 262 | 176 |
| BORON | ug/l | D | | 308 | 663 | 636 | 779 | 977 |
| BORON | ug/l | T | | 303 | 735 | 636 | 858 | 1010 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 139000 | 283000 | 333000 | 292000 | 82000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 UJ | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 1660 | 3490 | 3470 | 4980 | 10400 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | <30 | <30 UJ | <30 |
| PHOSPHORUS | ug/l | T | | 200 | 9360 | 11600 | 11100 | 2360 |
| SULFATE | ug/l | T | | 484000 | 1450000 | 1520000 | 1540000 | 2440000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 3200 J | 2400 | 2400 | 2500 J | 11200 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | LT BROWN | | CLEAR | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 1590 | 3600 | | 2490 | 1500 |
| ODOR (FIELD) | NONE | N | | | NONE | | | NONE |
| PH (FIELD) | STD UNITS | N | | 7.24 | 6.8 | | 7.06 | 6.6 |
| REDOX (FIELD) | MV | N | | -101 | 115.4 | | -140 | -45.2 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2760 | 3160 | | 3920 | 3030 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 3 | | | -1.2 | |
| DEPTH TO WATER FROM TOC | Feet | N | | | 7.12 | | | 4.02 |
| HEXANE | ug/l | T | | | | | | <2. |
| OVABZONE | NONE | N | | 0 | | | 0 | |
| OVACASING | NONE | N | | 0 | | | 0 | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 11.33 | 12.8 | | 12.34 | 10 |
| TOTAL WELL DEPTH | Feet | N | | | 29.33 | | | 29.33 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-10 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 13:05 | 11/3/2000 13:30 | 3/22/2000 9:20 | 7/21/2000 9:05 | 11/3/2000 10:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| 1,1-DICHLOROETHANE | ug/l | T | | 40 | 120 | <2. | <1. | <1. |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | <3. | <3. | <7. | <3. | <3. |
| ACETONE | ug/l | T | | <6. | <6. | <6. | <6. | <6. |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| BROMOFORM | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CARBON DISULFIDE | ug/l | T | | <1. | <1. | <3. | <1. | <1. |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CHLOROBENZENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| CHLOROFORM | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. | <2. UJ | <2. | <2. | <2. UJ |
| ETHYL CHLORIDE | ug/l | T | | <2. | <2. | <3. | <2. | <2. |
| ETHYLBENZENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| METHYL BROMIDE | ug/l | T | | <2. | <2. | <3. UJ | <2. | <2. |
| METHYL CHLORIDE | ug/l | T | | <2. | <2. UJ | <3. UJ | <2. | <2. UJ |
| METHYL ETHYL KETONE | ug/l | T | | <3. | <3. | <3. | <3. | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | <3. | <5. | <3. | <3. |
| METHYLENE CHLORIDE | ug/l | T | | <2. | <2. | <2. | <2. | <2. |
| STYRENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TOLUENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TRICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | <2. | <2. | <2. | <2. |
| VINYL CHLORIDE | ug/l | T | | <1. | <1. | <2. | <1. | <1. |
| XYLENES | ug/l | T | | <1. | <1. | <1. | <1. | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-10 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 13:05 | 11/3/2000 13:30 | 3/22/2000 9:20 | 7/21/2000 9:05 | 11/3/2000 10:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-10 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 13:05 | 11/3/2000 13:30 | 3/22/2000 9:20 | 7/21/2000 9:05 | 11/3/2000 10:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-10 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 13:05 | 11/3/2000 13:30 | 3/22/2000 9:20 | 7/21/2000 9:05 | 11/3/2000 10:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | 30.2 U | <77 | <19.0 | <19.0 |
| ALUMINUM | ug/l | T | | 162 J | 74.1 U | <77 | 73.9 U | 79.0 U |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ARSENIC | ug/l | D | | 121 | 124 | 256 | 344 | 361 |
| ARSENIC | ug/l | T | | 136 | 140 | 341 | 495 | 432 |
| BARIUM | ug/l | D | | 27.2 J | 24.5 | 77 | 78.8 J | 80.2 |
| BARIUM | ug/l | T | | 29.9 | 30.5 | 79.6 | 111 | 101 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.90 | 2.3 J | <.81 | <.90 | 1.4 J |
| CADMIUM | ug/l | T | | <.90 | .94 J | <.81 | <.90 | <.90 |
| CALCIUM | ug/l | D | | 641000 | 590000 | 579000 | 587000 | 575000 |
| CALCIUM | ug/l | T | | 618000 | 588000 | 599000 | 606000 | 614000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.7 | <1.6 | <1.6 |
| CHROMIUM | ug/l | T | | <1.6 | <1.6 | <1.7 | <1.6 | <1.6 |
| COPPER | ug/l | D | | <1.9 | <1.9 | <2.9 | <1.9 | <1.9 |
| COPPER | ug/l | T | | <1.9 | <1.9 | <2.9 | 2.8 U | <1.9 |
| IRON | ug/l | D | | 83000 | 81000 | 43600 | 58700 | 59700 |
| IRON | ug/l | T | | 86500 | 86200 | 58900 | 72400 | 67200 |
| LEAD | ug/l | D | | <9.8 | <9.8 | <7.9 | <9.8 | <9.8 |
| LEAD | ug/l | T | | <9.8 | <9.8 | <7.9 | <9.8 | <9.8 |
| MAGNESIUM | ug/l | D | | 218000 | 201000 | 32800 | 37600 | 38300 |
| MAGNESIUM | ug/l | T | | 209000 | 214000 | 37900 | 39700 | 40800 |
| MANGANESE | ug/l | D | | 2940 | 2980 | 635 | 676 | 696 |
| MANGANESE | ug/l | T | | 2860 | 3060 | 711 | 714 | 740 |
| MERCURY | ug/l | D | | <.048 | <.12 | <.10 | <.048 | <.12 |
| MERCURY | ug/l | T | | <.048 | <.12 | <.10 | <.048 | <.12 |
| NICKEL | ug/l | D | | 114 | 80.6 | <1.6 | <1.9 | <1.9 |
| NICKEL | ug/l | T | | 111 | 88.6 | <1.6 | <1.9 | 2.3 J |
| SELENIUM | ug/l | D | | 5.2 J | 5.5 J | <4.4 | 4.5 J | <3.5 |
| SELENIUM | ug/l | T | | <3.5 | <3.5 | <4.4 | <3.5 | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-10 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 13:05 | 11/3/2000 13:30 | 3/22/2000 9:20 | 7/21/2000 9:05 | 11/3/2000 10:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 725000 | 625000 | 398000 | 394000 | 401000 |
| SODIUM | ug/l | T | | 735000 | 636000 | 372000 | 451000 | 439000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | 6.8 | 2.5 J | <1.9 | 5.7 | 2.8 J |
| VANADIUM | ug/l | T | | 6.2 | <1.5 | <1.9 | 5.8 | <1.5 |
| ZINC | ug/l | D | | 38600 J | 28200 J | <3.0 | 5.6 U | 10.6 U |
| ZINC | ug/l | T | | 41800 J | 31200 J | <3.0 | 13.3 U | 8.1 U |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 394000 | 350000 | 125000 | 224000 | 198000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 60000 | 46500 | 42600 | 45000 | 42300 |
| BICARBONATE | MG/L AS CA | T | | 394 | 350 | 125 | 224 | 198 |
| BORON | ug/l | D | | 1570 | 1500 | 298 | 308 | 344 |
| BORON | ug/l | T | | 1540 | 1550 | 325 | 318 | 360 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 980000 | 670000 | 352000 | 413000 | 410000 |
| CYANIDE | ug/l | T | | <4.0 UJ | <4.0 | <4.0 | <4.0 UJ | 4.8 J |
| FLUORIDE | ug/l | T | | 10300 | 10400 | 1740 | 1470 | 1630 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 UJ | 70 J | <30 | <30 UJ |
| PHOSPHORUS | ug/l | T | | 2420 | 2220 | 8010 | 16000 | 12000 |
| SULFATE | ug/l | T | | 2740000 | 2770000 | 2050000 | 2110000 | 2040000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 65000 J | 46000 J | 44000 | 46000 | 47000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | CLEAR | | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 970 | 2000 | | 1530 |
| ODOR (FIELD) | NONE | N | | | | NONE | | |
| PH (FIELD) | STD UNITS | N | | | 6.86 | 6.94 | | 7.3 |
| REDOX (FIELD) | MV | N | | | -86 | -61.5 | | -153 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 5430 | 4220 | | 5710 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 10.2 | | | 30 |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 5.86 | | |
| HEXANE | ug/l | T | | <2. | <2. | <2. | <2. | <2. |
| OVABZONE | NONE | N | | | 0 | | | 0 |
| OVACASING | NONE | N | | | 0 | | | 0 |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 11.62 | 13 | | 12.38 |
| TOTAL WELL DEPTH | Feet | N | | | | 33.83 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-11 | MW-11 | MW-11 | MW-12 | MW-12 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 15:40 | 7/20/2000 8:30 | 11/2/2000 8:00 | 3/21/2000 10:55 | 7/24/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | <2. |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | | | <40. |
| ACRYLONITRILE | ug/l | T | | | | | | <4. |
| BENZENE | ug/l | T | | | | | | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMOFORM | ug/l | T | | | | | | <1. |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | <1. |
| CHLOROBENZENE | ug/l | T | | | | | | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | <1. |
| CHLOROFORM | ug/l | T | | | | | | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | <1. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | <2. |
| ETHYLBENZENE | ug/l | T | | | | | | <1. |
| METHYL BROMIDE | ug/l | T | | | | | | <2. |
| METHYL CHLORIDE | ug/l | T | | | | | | <2. |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | <2. |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | <1. |
| TOLUENE | ug/l | T | | | | | | <1. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| TRICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | <2. |
| VINYL CHLORIDE | ug/l | T | | | | | | <1. |
| XYLENES | ug/l | T | | | | | | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | <1. |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-11 | MW-11 | MW-11 | MW-12 | MW-12 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 15:40 | 7/20/2000 8:30 | 11/2/2000 8:00 | 3/21/2000 10:55 | 7/24/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | <1. |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | <1. |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | <1. |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | <2. |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | <1. |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | <1. |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | <20. |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | <1. |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | <2. |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | <1. |
| 2-CHLOROPHENOL | ug/l | T | | | | | | <1. |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | <1. |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | <2. |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | <5. |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | <2. |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | <1. |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | <1. |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | <10. |
| ACENAPHTHENE | ug/l | T | | | | | | <1. |
| ACENAPHTHYLENE | ug/l | T | | | | | | <1. |
| ANTHRACENE | ug/l | T | | | | | | <1. |
| BENZIDINE | ug/l | T | | | | | | <20. |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | <1. |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | <1. |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | <1. |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | <1. |
| BENZO[A]PYRENE | ug/l | T | | | | | | <1. |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | <1. |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | <1. |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | <1. |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | <2. |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | <2. |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | <0.047 |
| CHRYSENE | ug/l | T | | | | | | <1. |

< and ND = Non detect at stated reporting limit



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Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-11 | MW-11 | MW-11 | MW-12 | MW-12 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 15:40 | 7/20/2000 8:30 | 11/2/2000 8:00 | 3/21/2000 10:55 | 7/24/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | <1. |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | <2. |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | <2. |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | <2. |
| FLUORANTHENE | ug/l | T | | | | | | <1. |
| FLUORENE | ug/l | T | | | | | | <1. |
| HEXACHLOROBENZENE | ug/l | T | | | | | | <2. |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | <2. |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | <5. |
| HEXACHLOROETHANE | ug/l | T | | | | | | <1. |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | <1. |
| ISOPHORONE | ug/l | T | | | | | | <1. |
| NAPHTHALENE | ug/l | T | | | | | | <1. |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | <2. |
| NITROBENZENE | ug/l | T | | | | | | <1. |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | <2. |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | <1. |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | <1. |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | <3. |
| PHENANTHRENE | ug/l | T | | | | | | <1. |
| PHENOL | ug/l | T | | | | | | <1. |
| PYRENE | ug/l | T | | | | | | <1. |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1221 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1232 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1242 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1248 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1254 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1260 | ug/l | T | | | | | | <0.095 |
| ALDRIN | ug/l | T | | | | | | <0.0019 |
| ALPHA-BHC | ug/l | T | | | | | | <0.0019 |
| BETA-BHC | ug/l | T | | | | | | <0.0019 |
| DDT | ug/l | T | | | | | | <0.0038 |
| DELTA-BHC | ug/l | T | | | | | | <0.0055 |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | <0.0038 |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | <0.0038 |
| DIELDRIN | ug/l | T | | | | | | <0.0038 |
| ENDOSULFAN I | ug/l | T | | | | | | <0.0019 |
| ENDOSULFAN II | ug/l | T | | | | | | <0.0038 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-11 | MW-11 | MW-11 | MW-12 | MW-12 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 15:40 | 7/20/2000 8:30 | 11/2/2000 8:00 | 3/21/2000 10:55 | 7/24/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | <0.0038 |
| ENDRIN | ug/l | T | | | | | | <0.0038 |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | <0.0038 |
| HEPTACHLOR | ug/l | T | | | | | | <0.0019 |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | <0.0019 |
| LINDANE | ug/l | T | | | | | | <0.0019 |
| METHOXYCHLOR | ug/l | T | | | | | | <0.019 |
| TOXAPHENE | ug/l | T | | | | | | <0.28 |
| ALUMINUM | ug/l | D | | <77 | <19.0 | <19.0 | <77 | <19.0 |
| ALUMINUM | ug/l | T | | <77 | 1170 | 295 | <77 | 39.7 U |
| ANTIMONY | ug/l | D | | <8.4 | <9.4 | <9.4 | <8.4 | <9.4 |
| ANTIMONY | ug/l | T | | <8.4 | <9.4 | <9.4 | <8.4 | <9.4 |
| ARSENIC | ug/l | D | | 11 | 20.3 | 20.2 | 61 J | 71.6 |
| ARSENIC | ug/l | T | | 8.4 J | 110 | 50.8 | 53 J | 76.6 |
| BARIUM | ug/l | D | | 25.2 J | 23.4 J | 22.8 | 65.1 | 68.1 |
| BARIUM | ug/l | T | | 21.1 J | 36.5 | 29.4 | 59.9 | 65.8 |
| BERYLLIUM | ug/l | D | | | | | | <.40 |
| BERYLLIUM | ug/l | T | | | | | | <.40 |
| CADMIUM | ug/l | D | | <.81 | <.90 | <.90 | <.81 | <.90 |
| CADMIUM | ug/l | T | | <.81 | 1.1 J | .91 J | <.81 | <.90 |
| CALCIUM | ug/l | D | | 587000 | 613000 | 602000 | 384000 J | 308000 J |
| CALCIUM | ug/l | T | | 618000 | 626000 | 632000 | 280000 J | 257000 J |
| CHROMIUM | ug/l | D | | 1.8 J | <1.6 | <1.6 | 3 | 2.1 J |
| CHROMIUM | ug/l | T | | 2.9 U | 3.8 | 4 | <1.7 | <1.6 |
| COPPER | ug/l | D | | <2.9 | <1.9 | <1.9 | <2.9 | <1.9 |
| COPPER | ug/l | T | | <2.9 | 8.4 | 2.0 J | <2.9 | 4.3 U |
| IRON | ug/l | D | | 10500 | 18500 | 16300 | 17500 J | 17500 J |
| IRON | ug/l | T | | 11300 | 56400 | 24300 | 12500 J | 15800 J |
| LEAD | ug/l | D | | <7.9 | <9.8 | <9.8 | <7.9 | <9.8 |
| LEAD | ug/l | T | | <7.9 | <9.8 | <9.8 | <7.9 | <9.8 |
| MAGNESIUM | ug/l | D | | 20600 | 20100 | 22700 | 33400 R | 24100 J |
| MAGNESIUM | ug/l | T | | 20100 | 37900 | 30000 | 21600 R | 20400 J |
| MANGANESE | ug/l | D | | 614 | 721 | 573 | 802 J | 762 |
| MANGANESE | ug/l | T | | 619 | 834 | 696 | 625 J | 693 |
| MERCURY | ug/l | D | | <.10 | <.048 | <.12 | <.10 | <.048 |
| MERCURY | ug/l | T | | <.10 | <.048 | <.12 | <.10 | <.048 |
| NICKEL | ug/l | D | | 4.2 J | 1.9 J | 4.5 J | <1.6 | <1.9 |
| NICKEL | ug/l | T | | 5.1 | 3.4 J | 7.4 | <1.6 | <1.9 |
| SELENIUM | ug/l | D | | <4.4 | 3.8 J | <3.5 | <4.4 | <3.5 |
| SELENIUM | ug/l | T | | <4.4 | <3.5 | <3.5 | <4.4 | <3.5 |
| SILVER | ug/l | D | | | | | | <1.6 |
| SILVER | ug/l | T | | | | | | <1.6 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-11 | MW-11 | MW-11 | MW-12 | MW-12 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 15:40 | 7/20/2000 8:30 | 11/2/2000 8:00 | 3/21/2000 10:55 | 7/24/2000 10:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 43000 | 42200 | 47900 | 45300 J | 41500 J |
| SODIUM | ug/l | T | | 39800 | 94700 | 45700 | 32700 J | 32400 J |
| THALLIUM | ug/l | D | | | | | | <9.5 |
| THALLIUM | ug/l | T | | | | | | <9.5 |
| VANADIUM | ug/l | D | | <1.9 | 1.6 J | <1.5 | <1.9 | <1.5 |
| VANADIUM | ug/l | T | | <1.9 | 6.4 | <1.5 | <1.9 | <1.5 |
| ZINC | ug/l | D | | 4500 | 1950 R | 6060 J | 3.3 J | 3.3 J |
| ZINC | ug/l | T | | 4680 | 1010 R | 4580 J | 11.7 U | <3.1 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 100000 | 132000 | 121000 | 251000 | 260000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 1300 | 2100 | 1100 U | 7500 | 7700 |
| BICARBONATE | MG/L AS CA | T | | 100 | 132 | 121 | 251 | 260 |
| BORON | ug/l | D | | 481 | 485 | 519 | 399 | 398 |
| BORON | ug/l | T | | 473 | 666 | 522 | 375 | 366 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 69400 | 107000 | 88000 | 180000 | 180000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | <400 | 670 | 430 J | 620 | 590 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 170 | <30 | <30 UJ | 58 J | <30 |
| PHOSPHORUS | ug/l | T | | 130 J | 690 | 300 | 200 | 480 |
| SULFATE | ug/l | T | | 1450000 | 1490000 | 1550000 | 370000 | 360000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 1260 J | 2200 | 1300 J | 8100 J | 8600 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | | CLEAR | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 430 | 9300 | |
| ODOR (FIELD) | NONE | N | | NONE | | | NONE | |
| PH (FIELD) | STD UNITS | N | | 7.01 | | 7.15 | 6.94 | |
| REDOX (FIELD) | MV | N | | -52.3 | | -136 | -83.1 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2290 | | 2850 | 1425 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | 34.9 | | |
| DEPTH TO WATER FROM TOC | Feet | N | | 6.61 | | | 6 | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | 0 | | |
| OVACASING | NONE | N | | | | 0 | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 12.6 | | 7.15 | 12.7 | |
| TOTAL WELL DEPTH | Feet | N | | 33.7 | | | 32.42 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-13 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 13:00 | 3/21/2000 15:36 | 7/24/2000 11:30 | 11/6/2000 10:00 | 3/21/2000 16:17 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | <100. | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | <100. | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | <100. | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | <100. | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | <100. | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | <100. | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | <100. | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | <200. | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | <4000. | | |
| ACRYLONITRILE | ug/l | T | | | | <400. | | |
| BENZENE | ug/l | T | | | | <100. | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | <100. | | |
| BROMOFORM | ug/l | T | | | | <100. | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | <100. | | |
| CHLOROBENZENE | ug/l | T | | | | <100. | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | <100. | | |
| CHLOROFORM | ug/l | T | | | | <100. | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | <100. | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | <100. | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | <200. | | |
| ETHYLBENZENE | ug/l | T | | | | <100. | | |
| METHYL BROMIDE | ug/l | T | | | | <200. | | |
| METHYL CHLORIDE | ug/l | T | | | | <200. | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | <200. | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | <100. | | |
| TOLUENE | ug/l | T | | | | <100. | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | <100. | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | <100. | | |
| TRICHLOROETHENE | ug/l | T | | | | <100. | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | <200. | | |
| VINYL CHLORIDE | ug/l | T | | | | <100. | | |
| XYLENES | ug/l | T | | | | <100. | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | <1. | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | <1. | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-13 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 13:00 | 3/21/2000 15:36 | 7/24/2000 11:30 | 11/6/2000 10:00 | 3/21/2000 16:17 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | <1. | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | <1. | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | <1. | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | <2. | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | <1. | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | <1. | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | <19. | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | <1. | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | <2. | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | <1. | | |
| 2-CHLOROPHENOL | ug/l | T | | | | <1. | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | <1. | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | <2. | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | <5. | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | <2. | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | <1. | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | <1. | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | <10. | | |
| ACENAPHTHENE | ug/l | T | | | | <1. | | |
| ACENAPHTHYLENE | ug/l | T | | | | <1. | | |
| ANTHRACENE | ug/l | T | | | | <1. | | |
| BENZIDINE | ug/l | T | | | | <19. | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | <1. | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | <1. | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | <1. | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | <1. | | |
| BENZO[A]PYRENE | ug/l | T | | | | <1. | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | <1. | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | <1. | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | <1. | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | 2. J | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | <2. | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | <0.25 | | |
| CHRYSENE | ug/l | T | | | | <1. | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-13 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 13:00 | 3/21/2000 15:36 | 7/24/2000 11:30 | 11/6/2000 10:00 | 3/21/2000 16:17 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | <1. | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | <2. | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | <2. | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | <2. | | |
| FLUORANTHENE | ug/l | T | | | | <1. | | |
| FLUORENE | ug/l | T | | | | <1. | | |
| HEXACHLOROBENZENE | ug/l | T | | | | <2. | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | <2. | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | <5. | | |
| HEXACHLOROETHANE | ug/l | T | | | | <1. | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | <1. | | |
| ISOPHORONE | ug/l | T | | | | <1. | | |
| NAPHTHALENE | ug/l | T | | | | <1. | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | <2. | | |
| NITROBENZENE | ug/l | T | | | | <1. | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | <2. | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | <1. | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | <1. | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | <3. | | |
| PHENANTHRENE | ug/l | T | | | | <1. | | |
| PHENOL | ug/l | T | | | | 54 | | |
| PYRENE | ug/l | T | | | | <1. | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | <0.50 | | |
| AROCLOR 1221 | ug/l | T | | | | <0.50 | | |
| AROCLOR 1232 | ug/l | T | | | | <0.50 | | |
| AROCLOR 1242 | ug/l | T | | | | <0.50 | | |
| AROCLOR 1248 | ug/l | T | | | | <0.50 | | |
| AROCLOR 1254 | ug/l | T | | | | <0.50 | | |
| AROCLOR 1260 | ug/l | T | | | | <0.50 | | |
| ALDRIN | ug/l | T | | | | <0.010 | | |
| ALPHA-BHC | ug/l | T | | | | <0.010 | | |
| BETA-BHC | ug/l | T | | | | <0.010 | | |
| DDT | ug/l | T | | | | <0.020 | | |
| DELTA-BHC | ug/l | T | | | | <0.029 | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | 0.076 J | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | <0.020 | | |
| DIELDRIN | ug/l | T | | | | <0.020 | | |
| ENDOSULFAN I | ug/l | T | | | | <0.010 | | |
| ENDOSULFAN II | ug/l | T | | | | <0.020 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-13 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 13:00 | 3/21/2000 15:36 | 7/24/2000 11:30 | 11/6/2000 10:00 | 3/21/2000 16:17 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | <0.020 | | |
| ENDRIN | ug/l | T | | | | <0.020 | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | <0.020 | | |
| HEPTACHLOR | ug/l | T | | | | <0.010 | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | <0.010 | | |
| LINDANE | ug/l | T | | | | <0.010 | | |
| METHOXYCHLOR | ug/l | T | | | | <0.10 | | |
| TOXAPHENE | ug/l | T | | | | <1.5 | | |
| ALUMINUM | ug/l | D | | <19.0 | 600 | | 583 | <77 |
| ALUMINUM | ug/l | T | | <19.0 | 530 | 590 | 618 | <77 |
| ANTIMONY | ug/l | D | | <9.4 | 36 J | 26 | 11.3 J | <8.4 |
| ANTIMONY | ug/l | T | | <9.4 | 16 J | 32.8 | <9.4 | <8.4 |
| ARSENIC | ug/l | D | | 71.7 | 200 | 188 | 203 | 16 |
| ARSENIC | ug/l | T | | 71.2 | 197 | 185 | 187 | 17 |
| BARIUM | ug/l | D | | 69.0 J | 121 | | 175 J | 9.9 R |
| BARIUM | ug/l | T | | 66.8 | 118 | 134 | 182 | 6.3 R |
| BERYLLIUM | ug/l | D | | | | <.40 | | |
| BERYLLIUM | ug/l | T | | | | <.40 | | |
| CADMIUM | ug/l | D | | <.90 | <.81 | .94 J | <.90 | <.81 |
| CADMIUM | ug/l | T | | <.90 | <.81 | <.90 | <.90 | <.81 |
| CALCIUM | ug/l | D | | 259000 | 3610 | | 5150 | 683000 |
| CALCIUM | ug/l | T | | 248000 | 3470 | 5060 | 5220 | 638000 |
| CHROMIUM | ug/l | D | | <1.6 | 15.2 | 19.2 | 20.2 | <1.7 |
| CHROMIUM | ug/l | T | | <1.6 | 18.4 | 15.6 | 19.7 | <1.7 |
| COPPER | ug/l | D | | <1.9 | 90.8 | 83.6 | 76 | <2.9 |
| COPPER | ug/l | T | | <1.9 | 90.1 | 77.7 | 75.5 | <2.9 |
| IRON | ug/l | D | | 14500 | 2350 | | 3050 | 8740 |
| IRON | ug/l | T | | 14300 | 2380 | 2550 | 3180 | 11600 |
| LEAD | ug/l | D | | <9.8 | 41 | 59.8 | 50.4 | <7.9 |
| LEAD | ug/l | T | | <9.8 | 56 | 46.8 | 52.7 | <7.9 |
| MAGNESIUM | ug/l | D | | 18900 | 130 | | 85.1 J | 36800 J |
| MAGNESIUM | ug/l | T | | 18200 | 200 | 383 | 118 U | 31300 J |
| MANGANESE | ug/l | D | | 674 | 22 | | 28.3 | 366 |
| MANGANESE | ug/l | T | | 646 | 24 | 28.1 | 30.1 | 335 |
| MERCURY | ug/l | D | | <.12 | <.10 | <.48 | <1.2 | <.10 |
| MERCURY | ug/l | T | | <.12 | <.10 | <.48 | <1.2 | <.10 |
| NICKEL | ug/l | D | | <1.9 | 47.5 | 38.3 | 44.8 | 13.1 J |
| NICKEL | ug/l | T | | <1.9 | 60.9 | 49.5 | 41.2 | 10.8 J |
| SELENIUM | ug/l | D | | 3.8 J | 23 J | <3.5 | 14.2 | <4.4 |
| SELENIUM | ug/l | T | | <3.5 | 18 J | 8.2 J | 11.5 | <4.4 |
| SILVER | ug/l | D | | | | <1.6 | | |
| SILVER | ug/l | T | | | | <1.6 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-13 | MW-13 | MW-14 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 13:00 | 3/21/2000 15:36 | 7/24/2000 11:30 | 11/6/2000 10:00 | 3/21/2000 16:17 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 32900 | 2480000 | | 2350000 | 76000 |
| SODIUM | ug/l | T | | 31600 | 2480000 | 2690000 | 2420000 | 76500 |
| THALLIUM | ug/l | D | | | | <9.5 | | |
| THALLIUM | ug/l | T | | | | <9.5 | | |
| VANADIUM | ug/l | D | | <1.5 | 121 | | 146 | <1.9 |
| VANADIUM | ug/l | T | | <1.5 | 129 | 130 | 147 | <1.9 |
| ZINC | ug/l | D | | <3.1 | 44 | 71 | 50.6 U | 1140 J |
| ZINC | ug/l | T | | <3.1 | 85 | 132 | 42.8 | 960 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 249000 | 5270000 | 5480000 | 5010000 | 182000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | 3320000 | 3530000 | 3000000 | <370 |
| AMMONIA | ug/l | T | | 6800 | 20600 | 18000 | 19300 | 7000 |
| BICARBONATE | MG/L AS CA | T | | 249 | 5267 | <1.0 | <1.0 | 182 |
| BORON | ug/l | D | | 378 | 731 | | 778 | 225 |
| BORON | ug/l | T | | 362 | 736 | 733 | 751 | 219 |
| CARBONATE | MG/L AS CA | T | | <1.0 | 3324 | 3900 | 4020 | <1.0 |
| CHLORIDE | ug/l | T | | 155000 | 212000 | 225000 | 186000 | 272000 |
| CYANIDE | ug/l | T | | <4.0 | <20 | <4.0 | <20 | <4.0 |
| FLUORIDE | ug/l | T | | 440 J | <400 | 9200 J | 1250 | 1540 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | 220 | 320 | 280 | <30 |
| PHOSPHORUS | ug/l | T | | 530 | 13400 | 13500 | 18900 | <130 |
| SULFATE | ug/l | T | | 347000 | 150000 | 160000 | 218000 | 1430000 |
| SULFIDE | ug/l | T | | <530 | 41700 | 41000 | 41000 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 6700 | 45000 J | 31000 | 34000 J | 4500 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | DK BROWN | | DK BROWN | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 740 | 600 | | 360 | 5900 |
| ODOR (FIELD) | NONE | N | | | YES | | | NONE |
| PH (FIELD) | STD UNITS | N | | 7.18 | 11.21 | | 11.07 | 6.35 |
| REDOX (FIELD) | MV | N | | -102 | -430.2 | | -285 | -22 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 1780 | 7770 | | 8870 | 2770 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 20.4 | | | 12.2 | |
| DEPTH TO WATER FROM TOC | Feet | N | | | 8.54 | | | 8.74 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | 0 | | | 0 | |
| OVACASING | NONE | N | | 0 | | | 0 | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.4 | 15 | | 14.21 | 15.2 |
| TOTAL WELL DEPTH | Feet | N | | | 31.7 | | | 29.95 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-14 | MW-14 | MW-15 | MW-15 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 17:00 | 11/6/2000 11:00 | 3/21/2000 14:35 | 3/21/2000 14:35 | 7/24/2000 16:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | <2. | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | <40. | | | | |
| ACRYLONITRILE | ug/l | T | | <4. | | | | |
| BENZENE | ug/l | T | | <1. | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | | | | |
| BROMOFORM | ug/l | T | | <1. | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | | | | |
| CHLOROBENZENE | ug/l | T | | <1. | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | | | | |
| CHLOROFORM | ug/l | T | | <1. | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | <2. | | | | |
| ETHYLBENZENE | ug/l | T | | <1. | | | | |
| METHYL BROMIDE | ug/l | T | | <2. | | | | |
| METHYL CHLORIDE | ug/l | T | | <2. | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | | | | |
| TOLUENE | ug/l | T | | <1. | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | | |
| TRICHLOROETHENE | ug/l | T | | <1. | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | | | | |
| VINYL CHLORIDE | ug/l | T | | <1. | | | | |
| XYLENES | ug/l | T | | <1. | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | <1. | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | <1. | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-14 | MW-14 | MW-15 | MW-15 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 17:00 | 11/6/2000 11:00 | 3/21/2000 14:35 | 3/21/2000 14:35 | 7/24/2000 16:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | <1. | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | <1. | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | <1. | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | <2. | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | <1. | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | <1. | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | <19. | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | <1. | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | <2. | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | <1. | | | | |
| 2-CHLOROPHENOL | ug/l | T | | <1. | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | <1. | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | <2. | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | <5. | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | <2. | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | <1. | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | <1. | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | <10. | | | | |
| ACENAPHTHENE | ug/l | T | | <1. | | | | |
| ACENAPHTHYLENE | ug/l | T | | <1. | | | | |
| ANTHRACENE | ug/l | T | | <1. | | | | |
| BENZIDINE | ug/l | T | | <19. | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | <1. | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | <1. | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | <1. | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | <1. | | | | |
| BENZO[A]PYRENE | ug/l | T | | <1. | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | <1. | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | <1. | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | <1. | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | <2. | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | <2. | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | <0.048 | | | | |
| CHRYSENE | ug/l | T | | <1. | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-14 | MW-14 | MW-15 | MW-15 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 17:00 | 11/6/2000 11:00 | 3/21/2000 14:35 | 3/21/2000 14:35 | 7/24/2000 16:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | <1. | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | <2. | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | <2. | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | <2. | | | | |
| FLUORANTHENE | ug/l | T | | <1. | | | | |
| FLUORENE | ug/l | T | | <1. | | | | |
| HEXACHLOROBENZENE | ug/l | T | | <2. | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | <2. | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | <5. | | | | |
| HEXACHLOROETHANE | ug/l | T | | <1. | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | <1. | | | | |
| ISOPHORONE | ug/l | T | | <1. | | | | |
| NAPHTHALENE | ug/l | T | | <1. | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | <2. | | | | |
| NITROBENZENE | ug/l | T | | <1. | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | <2. | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | <1. | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | <1. | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | <3. | | | | |
| PHENANTHRENE | ug/l | T | | <1. | | | | |
| PHENOL | ug/l | T | | <1. | | | | |
| PYRENE | ug/l | T | | <1. | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | <0.095 | <0.095 | <0.095 |
| AROCLOR 1016 | ug/l | T | | <0.097 | | | | |
| AROCLOR 1221 | ug/l | T | | <0.097 | | | | |
| AROCLOR 1232 | ug/l | T | | <0.097 | | | | |
| AROCLOR 1242 | ug/l | T | | <0.097 | | | | |
| AROCLOR 1248 | ug/l | T | | <0.097 | | | | |
| AROCLOR 1254 | ug/l | T | | <0.097 | | | | |
| AROCLOR 1260 | ug/l | T | | <0.097 | | | | |
| ALDRIN | ug/l | T | | <0.0019 | | | | |
| ALPHA-BHC | ug/l | T | | <0.0019 | | | | |
| BETA-BHC | ug/l | T | | <0.0019 | | | | |
| DDT | ug/l | T | | <0.0039 | | <0.0038 | <0.0038 | <0.0038 |
| DELTA-BHC | ug/l | T | | <0.0056 | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | <0.0039 | | <0.0038 | <0.0038 | <0.0038 |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | <0.0039 | | <0.0038 | <0.0038 | <0.0038 |
| DIELDRIN | ug/l | T | | <0.0039 | | | | |
| ENDOSULFAN I | ug/l | T | | <0.0019 | | | | |
| ENDOSULFAN II | ug/l | T | | <0.0039 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-14 | MW-14 | MW-15 | MW-15 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 17:00 | 11/6/2000 11:00 | 3/21/2000 14:35 | 3/21/2000 14:35 | 7/24/2000 16:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | <0.0039 | | | | |
| ENDRIN | ug/l | T | | <0.0039 | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | <0.0039 | | | | |
| HEPTACHLOR | ug/l | T | | <0.0019 | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | <0.0019 | | | | |
| LINDANE | ug/l | T | | <0.0019 | | | | |
| METHOXYCHLOR | ug/l | T | | <0.019 | | <0.019 | <0.019 | <0.019 |
| TOXAPHENE | ug/l | T | | <0.29 | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <19.0 | 97 J | <77 | 56.6 J |
| ALUMINUM | ug/l | T | | 829 | 275 U | <77 | <77 | 124 U |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <8.4 | <8.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <8.4 | <8.4 | <9.4 |
| ARSENIC | ug/l | D | | 15.9 | 23.5 | 482 | 492 | 454 |
| ARSENIC | ug/l | T | | 108 | 54 | 522 | 506 | 809 |
| BARIUM | ug/l | D | | 7.5 | 9.3 J | 30.5 | 30.7 | 29.1 |
| BARIUM | ug/l | T | | 13.7 | 9.8 | 28.3 | 29.2 | 39 |
| BERYLLIUM | ug/l | D | | <.40 | | | | |
| BERYLLIUM | ug/l | T | | .58 J | | | | |
| CADMIUM | ug/l | D | | <.90 | <.90 | 3.8 | 3.7 | 3.7 |
| CADMIUM | ug/l | T | | <.90 | <.90 | 4.1 | 3.8 | 4.9 |
| CALCIUM | ug/l | D | | 712000 | 649000 | 480000 | 484000 | 422000 |
| CALCIUM | ug/l | T | | 659000 | 625000 | 442000 | 444000 | 423000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.7 | <1.7 | <1.6 |
| CHROMIUM | ug/l | T | | <1.6 | <1.6 | 4.3 | 3.1 | <1.6 |
| COPPER | ug/l | D | | 5.4 | <1.9 | <2.9 | <2.9 | 3.0 U |
| COPPER | ug/l | T | | <1.9 | <1.9 | 10.5 U | 8.5 U | 36.4 J |
| IRON | ug/l | D | | 13800 | 11500 | 14200 | 14400 | 13900 |
| IRON | ug/l | T | | 72000 | 28900 | 17100 | 16700 | 22700 |
| LEAD | ug/l | D | | <9.8 | <9.8 | <7.9 | <7.9 | <9.8 |
| LEAD | ug/l | T | | <9.8 | <9.8 | <7.9 | <7.9 | <9.8 |
| MAGNESIUM | ug/l | D | | 47000 | 30600 | 88300 | 89700 | 69200 |
| MAGNESIUM | ug/l | T | | 47600 | 29500 | 97600 | 92800 | 69600 |
| MANGANESE | ug/l | D | | 426 | 303 | 602 | 608 | 550 |
| MANGANESE | ug/l | T | | 468 | 291 | 610 | 642 | 587 |
| MERCURY | ug/l | D | | <.048 | <.12 | <.10 | <.10 | <.048 |
| MERCURY | ug/l | T | | <.048 | <.12 | <.10 | <.10 | <.048 |
| NICKEL | ug/l | D | | 18.2 | 9 | 3.9 J | 4.6 J | 4.4 J |
| NICKEL | ug/l | T | | 20.5 | 9.4 | 6.2 | 6.1 | 5.2 |
| SELENIUM | ug/l | D | | <3.5 | <3.5 | <4.4 | <4.4 | <3.5 |
| SELENIUM | ug/l | T | | <3.5 | <3.5 | <4.4 | <4.4 | <3.5 UJ |
| SILVER | ug/l | D | | <1.6 | | | | |
| SILVER | ug/l | T | | <1.6 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-14 | MW-14 | MW-15 | MW-15 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 17:00 | 11/6/2000 11:00 | 3/21/2000 14:35 | 3/21/2000 14:35 | 7/24/2000 16:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| SODIUM | ug/l | D | | 104000 | 96400 | 46400 | 47100 | 35300 |
| SODIUM | ug/l | T | | 98100 | 95900 | 47100 | 45600 | 34400 |
| THALLIUM | ug/l | D | | <9.5 | | | | |
| THALLIUM | ug/l | T | | <9.5 | | | | |
| VANADIUM | ug/l | D | | <1.5 | <1.5 | <1.9 | <1.9 | <1.5 |
| VANADIUM | ug/l | T | | 4.1 | <1.5 | <1.9 | <1.9 | <1.5 |
| ZINC | ug/l | D | | 1460 | 1010 | 1710 | 1710 | 1600 |
| ZINC | ug/l | T | | 2480 | 1230 | 1630 | 1670 | 2300 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 193000 | 170000 | 273000 | 268000 | 239000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 11700 | 3700 J | 1500 | 2300 | 2100 |
| BICARBONATE | MG/L AS CA | T | | 193 | 170 | 273 | 268 | 239 |
| BORON | ug/l | D | | 227 | 217 | 455 | 461 | 430 |
| BORON | ug/l | T | | 210 | 208 | 484 | 485 | 440 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 466000 | 265000 | 15400 | 14900 | 12800 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 610 | 460 J | 9730 | 9510 | 8400 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | <30 | <30 | <30 |
| PHOSPHORUS | ug/l | T | | 340 | 500 | 8500 | 8180 | 11400 |
| SULFATE | ug/l | T | | 1460000 | 1430000 | 1270000 | 1260000 | 1190000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 15000 | 4100 | 3200 J | 2600 J | 2600 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | LT ORANGE | 6.56 | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 760 | 1700 | | |
| ODOR (FIELD) | NONE | N | | | | NONE | | |
| PH (FIELD) | STD UNITS | N | | | 6.89 | 6.56 | | |
| REDOX (FIELD) | MV | N | | | -41 | -75.1 | | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 3230 | 2120 | | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 165 | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 11.01 | | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | 0 | | | |
| OVACASING | NONE | N | | | 0 | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 15.9 | 14.4 | | |
| TOTAL WELL DEPTH | Feet | N | | | | 29.33 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-15 | MW-16 | MW-16 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 16:00 | 11/6/2000 15:00 | 11/6/2000 15:00 | 3/21/2000 11:45 | 7/24/2000 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | <2. |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | | | <40. |
| ACRYLONITRILE | ug/l | T | | | | | | <4. |
| BENZENE | ug/l | T | | | | | | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMOFORM | ug/l | T | | | | | | <1. |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | <1. |
| CHLOROBENZENE | ug/l | T | | | | | | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | <1. |
| CHLOROFORM | ug/l | T | | | | | | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | <1. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | <2. |
| ETHYLBENZENE | ug/l | T | | | | | | <1. |
| METHYL BROMIDE | ug/l | T | | | | | | <2. |
| METHYL CHLORIDE | ug/l | T | | | | | | <2. |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | <2. |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | <1. |
| TOLUENE | ug/l | T | | | | | | <1. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| TRICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | <2. |
| VINYL CHLORIDE | ug/l | T | | | | | | <1. |
| XYLENES | ug/l | T | | | | | | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | <0.9 |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | <0.9 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-15 | MW-16 | MW-16 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 16:00 | 11/6/2000 15:00 | 11/6/2000 15:00 | 3/21/2000 11:45 | 7/24/2000 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | <0.9 |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | <0.9 |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | <0.9 |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | <2. |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | <0.9 |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | <0.9 |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | <19. |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | <0.9 |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | <2. |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | <0.9 |
| 2-CHLOROPHENOL | ug/l | T | | | | | | <0.9 |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | <0.9 |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | <2. |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | <5. |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | <2. |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | <0.9 |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | <0.9 |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | <9. |
| ACENAPHTHENE | ug/l | T | | | | | | <0.9 |
| ACENAPHTHYLENE | ug/l | T | | | | | | <0.9 |
| ANTHRACENE | ug/l | T | | | | | | <0.9 |
| BENZIDINE | ug/l | T | | | | | | <19. |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | <0.9 |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | <0.9 |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | <0.9 |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | <0.9 |
| BENZO[A]PYRENE | ug/l | T | | | | | | <0.9 |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | <0.9 |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | <0.9 |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | <0.9 |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | <2. |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | <2. |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | <0.047 |
| CHRYSENE | ug/l | T | | | | | | <0.9 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-15 | MW-16 | MW-16 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 16:00 | 11/6/2000 15:00 | 11/6/2000 15:00 | 3/21/2000 11:45 | 7/24/2000 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | <0.9 |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | <2. |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | <2. |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | <2. |
| FLUORANTHENE | ug/l | T | | | | | | <0.9 |
| FLUORENE | ug/l | T | | | | | | <0.9 |
| HEXACHLOROBENZENE | ug/l | T | | | | | | <2. |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | <2. |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | <5. |
| HEXACHLOROETHANE | ug/l | T | | | | | | <0.9 |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | <0.9 |
| ISOPHORONE | ug/l | T | | | | | | <0.9 |
| NAPHTHALENE | ug/l | T | | | | | | <0.9 |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | <2. |
| NITROBENZENE | ug/l | T | | | | | | <0.9 |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | <2. |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | <0.9 |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | <0.9 |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | <3. |
| PHENANTHRENE | ug/l | T | | | | | | <0.9 |
| PHENOL | ug/l | T | | | | | | <0.9 |
| PYRENE | ug/l | T | | | | | | <0.9 |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | <0.095 | <0.096 | <0.096 | | |
| AROCLOR 1016 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1221 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1232 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1242 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1248 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1254 | ug/l | T | | | | | | <0.095 |
| AROCLOR 1260 | ug/l | T | | | | | | <0.095 |
| ALDRIN | ug/l | T | | | | | | <0.0019 |
| ALPHA-BHC | ug/l | T | | | | | | <0.0019 |
| BETA-BHC | ug/l | T | | | | | | <0.0019 |
| DDT | ug/l | T | | <0.0038 | <0.0039 | <0.0038 | | <0.0038 |
| DELTA-BHC | ug/l | T | | | | | | <0.0055 |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | <0.0038 | <0.0039 | <0.0038 | | <0.0038 |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | <0.0038 | <0.0039 | <0.0038 | | <0.0038 |
| DIELDRIN | ug/l | T | | | | | | <0.0038 |
| ENDOSULFAN I | ug/l | T | | | | | | <0.0019 |
| ENDOSULFAN II | ug/l | T | | | | | | <0.0038 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-15 | MW-16 | MW-16 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 16:00 | 11/6/2000 15:00 | 11/6/2000 15:00 | 3/21/2000 11:45 | 7/24/2000 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | <0.0038 |
| ENDRIN | ug/l | T | | | | | | <0.0038 |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | <0.0038 |
| HEPTACHLOR | ug/l | T | | | | | | <0.0019 |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | <0.0019 |
| LINDANE | ug/l | T | | | | | | <0.0019 |
| METHOXYCHLOR | ug/l | T | | <0.019 | <0.019 | <0.019 | | <0.019 |
| TOXAPHENE | ug/l | T | | | | | | <0.28 |
| ALUMINUM | ug/l | D | | <19.0 | 37.0 J | 52.2 J | <77 | <19.0 |
| ALUMINUM | ug/l | T | | 166 J | 144 U | 113 U | <77 | 23.9 U |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <9.4 | <8.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <9.4 | <8.4 | <9.4 |
| ARSENIC | ug/l | D | | 461 | 469 | 482 | 10 | 12.1 |
| ARSENIC | ug/l | T | | 840 | 539 | 537 | <5.0 | 19.2 |
| BARIUM | ug/l | D | | 28.9 | 30.7 J | 31.1 J | 84.5 | 96.4 J |
| BARIUM | ug/l | T | | 39.7 | 35.5 | 33 | 78.5 | 83.6 J |
| BERYLLIUM | ug/l | D | | | | | | <.40 |
| BERYLLIUM | ug/l | T | | | | | | <.40 |
| CADMIUM | ug/l | D | | 3.7 | 3.8 | 3.9 | 4.5 | 5.1 |
| CADMIUM | ug/l | T | | 5.4 | 3.8 | 5.1 | 4.2 | 5.4 J |
| CALCIUM | ug/l | D | | 429000 | 425000 | 430000 | 323000 | 697000 R |
| CALCIUM | ug/l | T | | 428000 | 420000 | 444000 | 296000 | 360000 R |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.6 | <1.7 | <1.6 |
| CHROMIUM | ug/l | T | | <1.6 | <1.6 | <1.6 | <1.7 | <1.6 |
| COPPER | ug/l | D | | 2.8 U | 3.3 J | 3.6 J | <2.9 | 4.0 J |
| COPPER | ug/l | T | | 48.0 J | 29.4 J | 20.7 J | 4.0 U | <1.9 |
| IRON | ug/l | D | | 14100 | 13000 | 13100 | 3800 | 10600 R |
| IRON | ug/l | T | | 23800 | 15400 | 15000 | 4020 | 6100 R |
| LEAD | ug/l | D | | <9.8 | <9.8 | <9.8 | <7.9 | <9.8 |
| LEAD | ug/l | T | | <9.8 | <9.8 | <9.8 | <7.9 | <9.8 |
| MAGNESIUM | ug/l | D | | 70500 | 64300 | 65300 | 130000 | 313000 R |
| MAGNESIUM | ug/l | T | | 70500 | 61800 | 67800 | 127000 | 158000 R |
| MANGANESE | ug/l | D | | 554 | 520 | 527 | 913 | 1410 J |
| MANGANESE | ug/l | T | | 598 | 543 | 540 | 947 | 963 J |
| MERCURY | ug/l | D | | <.048 | <.12 | <.12 | <.10 | <.048 |
| MERCURY | ug/l | T | | <.048 | <.12 | <.12 | <.10 | <.048 |
| NICKEL | ug/l | D | | 3.6 J | 3.3 J | 3.8 J | 25.3 | 31.7 |
| NICKEL | ug/l | T | | 6.1 | 4.0 J | 4.1 J | 27.2 | 30.1 R |
| SELENIUM | ug/l | D | | <3.5 | <3.5 | <3.5 | <4.4 | <3.5 |
| SELENIUM | ug/l | T | | <3.5 UJ | <3.5 | <3.5 | <4.4 | <3.5 UJ |
| SILVER | ug/l | D | | | | | | <1.6 |
| SILVER | ug/l | T | | | | | | <1.6 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-15 | MW-15 | MW-16 | MW-16 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/24/2000 16:00 | 11/6/2000 15:00 | 11/6/2000 15:00 | 3/21/2000 11:45 | 7/24/2000 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 2 | 1 | 1 |
| SODIUM | ug/l | D | | 35100 | 32200 | 32600 | 26900 | 62800 R |
| SODIUM | ug/l | T | | 35200 | 31600 | 33800 | 24700 | 31600 R |
| THALLIUM | ug/l | D | | | | | | <9.5 |
| THALLIUM | ug/l | T | | | | | | <9.5 |
| VANADIUM | ug/l | D | | <1.5 | <1.5 | <1.5 | <1.9 | <1.5 |
| VANADIUM | ug/l | T | | 2.0 J | <1.5 | <1.5 | <1.9 | <1.5 |
| ZINC | ug/l | D | | 1640 | 1580 | 1610 | 8260 | 10000 |
| ZINC | ug/l | T | | 2420 | 1610 | 1760 | 7910 | 11900 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 247000 | 217000 | 227000 | 221000 | 249000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 2100 | 2000 J | 2300 | 52800 | 61700 |
| BICARBONATE | MG/L AS CA | T | | 247 | 217 | 227 | 221 | 249 |
| BORON | ug/l | D | | 434 | 447 | 453 | 498 | 619 |
| BORON | ug/l | T | | 443 | 426 | 458 | 504 | 590 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 12600 | 12100 | 13500 | 1070000 | 1290000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 8020 | 8960 | 9330 | 3020 | 1380 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | <30 | 440 | <30 |
| PHOSPHORUS | ug/l | T | | 11600 | 8930 | 8710 | <130 | <130 |
| SULFATE | ug/l | T | | 1180000 | 1180000 | 1170000 | 240000 | 250000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 2500 | 2400 | 1970 J | 52000 J | 74000 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 630 | | 7600 | |
| ODOR (FIELD) | NONE | N | | | | | NONE | |
| PH (FIELD) | STD UNITS | N | | | 6.75 | | 7.05 | |
| REDOX (FIELD) | MV | N | | | -84 | | 58.9 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 2590 | | 2800 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 20.8 | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | | 6.9 | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | 0 | | | |
| OVACASING | NONE | N | | | 0 | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 15.17 | | 12.8 | |
| TOTAL WELL DEPTH | Feet | N | | | | | 33.45 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-16 | MW-17 | MW-17 | MW-17 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 15:00 | 3/22/2000 8:40 | 7/24/2000 12:30 | 11/6/2000 14:00 | 3/22/2000 10:55 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | <2. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | <2. |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | <2. |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | <2. |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | <1. |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | <7. |
| ACETONE | ug/l | T | | | | | | <6. |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMOFORM | ug/l | T | | | | | | <1. |
| CARBON DISULFIDE | ug/l | T | | | | | | <3. |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | <1. |
| CHLOROBENZENE | ug/l | T | | | | | | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | <2. |
| CHLOROFORM | ug/l | T | | | | | | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | <2. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | <2. |
| ETHYL CHLORIDE | ug/l | T | | | | | | <3. |
| ETHYLBENZENE | ug/l | T | | | | | | <2. |
| METHYL BROMIDE | ug/l | T | | | | | | <3. UJ |
| METHYL CHLORIDE | ug/l | T | | | | | | <3. UJ |
| METHYL ETHYL KETONE | ug/l | T | | | | | | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | <5. |
| METHYLENE CHLORIDE | ug/l | T | | | | | | <2. |
| STYRENE | ug/l | T | | | | | | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | <1. |
| TOLUENE | ug/l | T | | | | | | <2. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | <2. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| TRICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | <2. |
| VINYL CHLORIDE | ug/l | T | | | | | | <2. |
| XYLENES | ug/l | T | | | | | | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-16 | MW-17 | MW-17 | MW-17 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 15:00 | 3/22/2000 8:40 | 7/24/2000 12:30 | 11/6/2000 14:00 | 3/22/2000 10:55 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-16 | MW-17 | MW-17 | MW-17 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 15:00 | 3/22/2000 8:40 | 7/24/2000 12:30 | 11/6/2000 14:00 | 3/22/2000 10:55 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-16 | MW-17 | MW-17 | MW-17 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 15:00 | 3/22/2000 8:40 | 7/24/2000 12:30 | 11/6/2000 14:00 | 3/22/2000 10:55 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <77 | <19.0 | 43.3 J | <77 |
| ALUMINUM | ug/l | T | | 21.5 U | 113 J | 1620 | 136 U | 79 J |
| ANTIMONY | ug/l | D | | <9.4 | <8.4 | <9.4 | <9.4 | <8.4 |
| ANTIMONY | ug/l | T | | <9.4 | <8.4 | <9.4 | <9.4 | <8.4 |
| ARSENIC | ug/l | D | | 14.4 | 10 | 11.5 | 14.9 | 79 |
| ARSENIC | ug/l | T | | 13.4 | 9.5 J | 26.5 | 13.1 | 129 |
| BARIUM | ug/l | D | | 77.7 J | 1320 R | 389 | 457 J | 15.2 |
| BARIUM | ug/l | T | | 78.3 | 694 R | 4540 | 1990 | 17.6 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | 2.5 | 78.4 | 88.7 | 64.7 | <.81 |
| CADMIUM | ug/l | T | | 2.9 | 123 | 242 | 79.2 | <.81 |
| CALCIUM | ug/l | D | | 230000 | 400000 | 436000 | 567000 J | 488000 |
| CALCIUM | ug/l | T | | 220000 | 397000 | 409000 | 386000 J | 500000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.7 | <1.6 | <1.6 | <1.7 |
| CHROMIUM | ug/l | T | | <1.6 | <1.7 | 2.5 U | <1.6 | <1.7 |
| COPPER | ug/l | D | | <1.9 | <2.9 | 3.1 U | 1.9 J | <2.9 |
| COPPER | ug/l | T | | <1.9 | <2.9 | 3.8 U | 2.2 J | <2.9 |
| IRON | ug/l | D | | 3000 | 141000 | 137000 | 122000 | 34000 |
| IRON | ug/l | T | | 3100 | 155000 | 164000 | 118000 | 46800 |
| LEAD | ug/l | D | | <9.8 | 81 | 11.4 J | <9.8 | <7.9 |
| LEAD | ug/l | T | | <9.8 | 94 | 745 | 103 | <7.9 |
| MAGNESIUM | ug/l | D | | 87600 | 162000 | 183000 | 254000 R | 46500 |
| MAGNESIUM | ug/l | T | | 82700 | 157000 | 173000 | 159000 R | 50000 |
| MANGANESE | ug/l | D | | 745 | 1380 | 1430 | 1480 J | 1340 |
| MANGANESE | ug/l | T | | 736 | 1500 | 1630 | 1220 J | 1450 |
| MERCURY | ug/l | D | | <.12 | <.10 | <.048 | <.12 | <.10 |
| MERCURY | ug/l | T | | <.12 | <.10 | <.048 | <.12 | <.10 |
| NICKEL | ug/l | D | | 17.9 | 66.2 | 74.1 | 97.0 R | 111 |
| NICKEL | ug/l | T | | 17.6 | 66.9 | 82.4 | 63.1 R | 127 |
| SELENIUM | ug/l | D | | <3.5 | <4.4 | 3.8 J | <3.5 | <4.4 |
| SELENIUM | ug/l | T | | <3.5 | <4.4 | <3.5 UJ | <3.5 | <4.4 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-16 | MW-17 | MW-17 | MW-17 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/6/2000 15:00 | 3/22/2000 8:40 | 7/24/2000 12:30 | 11/6/2000 14:00 | 3/22/2000 10:55 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 20500 | 35100 | 37600 | 37600 J | 947000 |
| SODIUM | ug/l | T | | 21500 | 36500 | 40800 | 33200 J | 909000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.5 | <1.9 | 4.7 | <1.5 | <1.9 |
| VANADIUM | ug/l | T | | <1.5 | <1.9 | 9.4 | <1.5 | <1.9 |
| ZINC | ug/l | D | | 6210 | 124000 | 117000 | 80700 | 3760 |
| ZINC | ug/l | T | | 5960 | 124000 | 167000 | 93400 | 4280 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 244000 | 76800 | 114000 | 109000 | 328000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 34500 | 28300 | 30700 | 16600 | 8500 |
| BICARBONATE | MG/L AS CA | T | | 244 | 76.8 | 114 | 109 | 328 |
| BORON | ug/l | D | | 519 | 492 | 584 | 589 | 830 |
| BORON | ug/l | T | | 540 | 513 | 580 | 574 | 902 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 426000 | 1290000 | 1650000 | 891000 | 120000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 1430 | 590 | 900 | 600 | 8610 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 95 J | <300 | <30 | 110 | 36 J |
| PHOSPHORUS | ug/l | T | | 160 J | <130 | 400 | <130 | 680 |
| SULFATE | ug/l | T | | 183000 | 300000 | 280000 | 333000 | 2900000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 31000 J | 29000 | 37000 | 22000 J | 7500 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | | | LT BROWN |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 350 | 2500 | | 3740 | 2000 |
| ODOR (FIELD) | NONE | N | | | NONE | | | NONE |
| PH (FIELD) | STD UNITS | N | | 7.16 | 5.61 | | 5.95 | 6.71 |
| REDOX (FIELD) | MV | N | | -75 | 141.8 | | 20 | 80.6 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2510 | 3620 | | 9710 | 4770 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 22.8 | | | 216 | |
| DEPTH TO WATER FROM TOC | Feet | N | | | 7.14 | | | 7.83 |
| HEXANE | ug/l | T | | | | | | <2. |
| OVABZONE | NONE | N | | 0 | | | 0 | |
| OVACASING | NONE | N | | 0 | | | 0 | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 14.14 | 14.3 | | 14.24 | 13.3 |
| TOTAL WELL DEPTH | Feet | N | | | 32.87 | | | 34.67 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-19 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 14:50 | 11/3/2000 8:30 | 3/21/2000 9:37 | 3/21/2000 9:37 | 7/20/2000 11:45 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | <1. | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | <1. | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | <3. | <3. | | | |
| ACETONE | ug/l | T | | <6. | <6. | | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | <1. | <1. | | | |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | <1. | | | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | <1. | | | |
| BROMOFORM | ug/l | T | | <1. | <1. | | | |
| CARBON DISULFIDE | ug/l | T | | <1. | <1. | | | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | <1. | | | |
| CHLOROBENZENE | ug/l | T | | <1. | <1. | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | <1. | | | |
| CHLOROFORM | ug/l | T | | <1. | <1. | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. | <2. UJ | | | |
| ETHYL CHLORIDE | ug/l | T | | <2. | <2. | | | |
| ETHYLBENZENE | ug/l | T | | <1. | <1. | | | |
| METHYL BROMIDE | ug/l | T | | <2. | <2. | | | |
| METHYL CHLORIDE | ug/l | T | | <2. | <2. UJ | | | |
| METHYL ETHYL KETONE | ug/l | T | | <3. | <3. | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | <3. | | | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | <2. | | | |
| STYRENE | ug/l | T | | <1. | <1. | | | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | <1. | | | |
| TOLUENE | ug/l | T | | <1. | <1. | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | | | |
| TRICHLOROETHENE | ug/l | T | | <1. | <1. | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | <2. | | | |
| VINYL CHLORIDE | ug/l | T | | <1. | <1. | | | |
| XYLENES | ug/l | T | | <1. | <1. | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-19 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 14:50 | 11/3/2000 8:30 | 3/21/2000 9:37 | 3/21/2000 9:37 | 7/20/2000 11:45 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | <2. |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | <2. |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | <0.9 |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | <0.9 |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | <19. |
| 2,4-DINITROTOLUENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 2,6-DINITROTOLUENE | ug/l | T | | | | <2. | <2. | <2. UJ |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 2-CHLOROPHENOL | ug/l | T | | | | | | <0.9 |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 2-NITROANILINE | ug/l | T | | | | <2. | <2. | <2. UJ |
| 2-NITROPHENOL | ug/l | T | | | | | | <0.9 |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | <2. | <2. | <2. UJ |
| 3-NITROANILINE | ug/l | T | | | | <2. | <2. | <2. UJ |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | <5. |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | <2. | <2. | <2. UJ |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | <0.9 |
| 4-CHLOROANILINE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 4-METHYLPHENOL | ug/l | T | | | | | | <3. |
| 4-NITROANILINE | ug/l | T | | | | <2. | <2. | <2. UJ |
| 4-NITROPHENOL | ug/l | T | | | | | | <9. UJ |
| ACENAPHTHENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| ACENAPHTHYLENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| ANTHRACENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BENZO[A]PYRENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | <2. | <2. | <2. UJ |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | <2. | <2. | <2. UJ |
| CARBAZOLE | ug/l | T | | | | <3. | <3. | <3. UJ |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-19 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 14:50 | 11/3/2000 8:30 | 3/21/2000 9:37 | 3/21/2000 9:37 | 7/20/2000 11:45 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| DIBENZOFURAN | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| DIETHYL PHTHALATE | ug/l | T | | | | <2. | <2. | <2. UJ |
| DIMETHYL PHTHALATE | ug/l | T | | | | <2. | <2. | <2. UJ |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | <2. | <2. | <2. UJ |
| FLUORANTHENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| FLUORENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| HEXACHLOROBENZENE | ug/l | T | | | | <2. | <2. | <2. UJ |
| HEXACHLOROBUTADIENE | ug/l | T | | | | <2. | <2. | <2. UJ |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | <5. | <5. | <5. UJ |
| HEXACHLOROETHANE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| ISOPHORONE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| NAPHTHALENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | <2. | <2. | <2. UJ |
| NITROBENZENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| O-CRESOL | ug/l | T | | | | | | <0.9 |
| PENTACHLOROPHENOL | ug/l | T | | | | | | <3. |
| PHENANTHRENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| PHENOL | ug/l | T | | | | <1. UJ | <1. UJ | <0.9 UJ |
| PYRENE | ug/l | T | | | | <1. | <1. | <0.9 UJ |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-19 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 14:50 | 11/3/2000 8:30 | 3/21/2000 9:37 | 3/21/2000 9:37 | 7/20/2000 11:45 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <19.0 | <77 | <77 | <19.0 |
| ALUMINUM | ug/l | T | | 114 U | 124 J | <77 | 159 J | 352 J |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <8.4 | <8.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <8.4 | <8.4 | <9.4 |
| ARSENIC | ug/l | D | | 87.5 | 98.1 | 21 | 22 | 27.3 |
| ARSENIC | ug/l | T | | 97.6 | 132 | 24 J | 40 J | 47.4 |
| BARIUM | ug/l | D | | 13.5 J | 12.6 | 31.9 | 31.8 | 31.6 J |
| BARIUM | ug/l | T | | 14.6 | 17.6 | 30.2 | 32 | 35.7 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.90 | 1.2 J | <.81 | <.81 | <.90 |
| CADMIUM | ug/l | T | | <.90 | <.90 | 1.31 J | 1.7 | <.90 |
| CALCIUM | ug/l | D | | 526000 | 496000 | 608000 | 601000 | 660000 |
| CALCIUM | ug/l | T | | 504000 | 510000 | 628000 | 629000 | 662000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.7 | <1.7 | 1.7 J |
| CHROMIUM | ug/l | T | | <1.6 | 2.1 J | 2.7 J | 14.1 J | 3.4 |
| COPPER | ug/l | D | | <1.9 | <1.9 | <2.9 | <2.9 | <1.9 |
| COPPER | ug/l | T | | <1.9 | 2.5 J | 5.2 U | 10.3 U | 3.0 J |
| IRON | ug/l | D | | 42400 | 40100 | 39100 | 39600 | 44800 |
| IRON | ug/l | T | | 46900 | 44900 | 48000 | 51300 | 57600 |
| LEAD | ug/l | D | | <9.8 | <9.8 | <7.9 | <7.9 | <9.8 |
| LEAD | ug/l | T | | <9.8 | <9.8 | <7.9 | 13 | <9.8 |
| MAGNESIUM | ug/l | D | | 53300 | 49400 | 292000 | 328000 | 324000 |
| MAGNESIUM | ug/l | T | | 50400 | 48700 | 304000 | 311000 | 405000 J |
| MANGANESE | ug/l | D | | 1520 | 1550 | 390 | 383 | 391 |
| MANGANESE | ug/l | T | | 1510 | 1590 | 424 | 442 | 373 |
| MERCURY | ug/l | D | | <.048 | <.12 | <.10 | <.10 | <.048 |
| MERCURY | ug/l | T | | <.048 | <.12 | <.10 | <.10 | <.048 |
| NICKEL | ug/l | D | | 115 | 107 | <1.6 | 2.0 J | <1.9 |
| NICKEL | ug/l | T | | 112 | 122 | 2.8 J | 10.2 J | <1.9 |
| SELENIUM | ug/l | D | | 4.6 J | <3.5 | <4.4 | <4.4 | <3.5 |
| SELENIUM | ug/l | T | | 4.0 J | <3.5 | <4.4 | <4.4 | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-19 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/21/2000 14:50 | 11/3/2000 8:30 | 3/21/2000 9:37 | 3/21/2000 9:37 | 7/20/2000 11:45 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| SODIUM | ug/l | D | | 893000 | 852000 | 625000 | 662000 | 704000 |
| SODIUM | ug/l | T | | 898000 | 885000 | 640000 | 640000 | 921000 J |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | 4 | <1.5 | <1.9 | <1.9 | 4.6 |
| VANADIUM | ug/l | T | | 3.4 J | <1.5 | 3.1 J | 3.2 J | 5.5 |
| ZINC | ug/l | D | | 5170 J | 4230 J | 301 | 288 | 189 J |
| ZINC | ug/l | T | | 5300 J | 4440 J | 350 J | 467 J | 151 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 374000 | 364000 | 504000 | 469000 | 633000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 9400 | 7800 | 7400 | 7600 | 12500 J |
| BICARBONATE | MG/L AS CA | T | | 374 | 364 | 504 | 469 | 633 |
| BORON | ug/l | D | | 887 | 886 | 836 | 862 | 863 |
| BORON | ug/l | T | | 855 | 894 | 862 | 860 | 902 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 136000 | 130000 | 285000 | 271000 | 382000 |
| CYANIDE | ug/l | T | | <4.0 UJ | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 9530 | 9970 | <400 | <400 | 610 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 UJ | 66 J | 66 J | <30 |
| PHOSPHORUS | ug/l | T | | 1040 | 900 | 870 | 880 | 2990 J |
| SULFATE | ug/l | T | | 2850000 | 2880000 | 3260000 | 2950000 | 3800000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 10300 | 8200 J | 8000 J | 8700 J | 14000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | LT BROWN | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 3000 | | | |
| ODOR (FIELD) | NONE | N | | | | NONE | | |
| PH (FIELD) | STD UNITS | N | | | 7.05 | 6.79 | | |
| REDOX (FIELD) | MV | N | | | -92 | -33.1 | | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 5900 | 5420 | | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 34.3 | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 9.76 | | |
| HEXANE | ug/l | T | | <2. | <2. | | | |
| OVABZONE | NONE | N | | | 0 | | | |
| OVACASING | NONE | N | | | 0 | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 11.92 | 14.2 | | |
| TOTAL WELL DEPTH | Feet | N | | | | 34.2 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-19 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 11:45 | 11/2/2000 13:30 | 11/2/2000 13:30 | 3/23/2000 11:43 | 3/23/2000 11:43 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | <2. | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | <2. | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | <2. | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | <1. | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | <2. | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | <1. | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | <7. | |
| ACETONE | ug/l | T | | | | | <6. | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | <1. | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | <1. | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | <1. | |
| BROMOFORM | ug/l | T | | | | | <1. | |
| CARBON DISULFIDE | ug/l | T | | | | | <3. | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | <1. | |
| CHLOROBENZENE | ug/l | T | | | | | <1. | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | <2. | |
| CHLOROFORM | ug/l | T | | | | | <1. | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | <2. | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | <2. UJ | |
| ETHYL CHLORIDE | ug/l | T | | | | | <3. | |
| ETHYLBENZENE | ug/l | T | | | | | <2. | |
| METHYL BROMIDE | ug/l | T | | | | | <3. | |
| METHYL CHLORIDE | ug/l | T | | | | | <3. | |
| METHYL ETHYL KETONE | ug/l | T | | | | | <3. | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | <5. | |
| METHYLENE CHLORIDE | ug/l | T | | | | | <2. | |
| STYRENE | ug/l | T | | | | | <1. | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | <1. | |
| TOLUENE | ug/l | T | | | | | <2. | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | <2. | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | |
| TRICHLOROETHENE | ug/l | T | | | | | <1. | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | <2. UJ | |
| VINYL CHLORIDE | ug/l | T | | | | | <2. | |
| XYLENES | ug/l | T | | | | | <1. | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 1,2-DICHLOROBENZENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-19 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 11:45 | 11/2/2000 13:30 | 11/2/2000 13:30 | 3/23/2000 11:43 | 3/23/2000 11:43 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 2 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 1,4-DICHLOROBENZENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | <2. | <2. | <2. | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | <2. | <2. | <2. | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | <0.9 | <0.9 | <1. | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | <0.9 | <0.9 | <1. | | |
| 2,4-DINITROPHENOL | ug/l | T | | <19. | <19. | <19. | | |
| 2,4-DINITROTOLUENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 2,6-DINITROTOLUENE | ug/l | T | | <2. | <2. | <2. | <2. | |
| 2-CHLORONAPHTHALENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 2-CHLOROPHENOL | ug/l | T | | <0.9 | <0.9 | <1. | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 2-NITROANILINE | ug/l | T | | <2. | <2. | <2. | <2. | |
| 2-NITROPHENOL | ug/l | T | | <0.9 | <0.9 | <1. | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | <2. | <2. | <2. | <2. | |
| 3-NITROANILINE | ug/l | T | | <2. | <2. | <2. | <2. | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | <5. | <5. | <5. | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | <2. | <2. | <2. | <2. | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | <0.9 | <0.9 | <1. | | |
| 4-CHLOROANILINE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 4-METHYLPHENOL | ug/l | T | | <3. | <3. | <3. | | |
| 4-NITROANILINE | ug/l | T | | <2. | <2. | <2. | <2. | |
| 4-NITROPHENOL | ug/l | T | | <9. UJ | <9. UJ | <10. UJ | | |
| ACENAPHTHENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| ACENAPHTHYLENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| ANTHRACENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BENZO(B)FLUORANTHENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BENZO(K)FLUORANTHENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BENZO[A]PYRENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | <2. | <2. | <2. | <2. | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | <2. | <2. | <2. | <2. | |
| CARBAZOLE | ug/l | T | | <3. | <3. | <3. | <3. | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-19 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 11:45 | 11/2/2000 13:30 | 11/2/2000 13:30 | 3/23/2000 11:43 | 3/23/2000 11:43 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 2 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| DIBENZOFURAN | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| DIETHYL PHTHALATE | ug/l | T | | <2. | <2. | <2. | <2. | |
| DIMETHYL PHTHALATE | ug/l | T | | <2. UJ | <2. UJ | <2. UJ | <2. UJ | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | <2. | <2. | <2. | <2. | |
| FLUORANTHENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| FLUORENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| HEXACHLOROBENZENE | ug/l | T | | <2. | <2. | <2. | <2. | |
| HEXACHLOROBUTADIENE | ug/l | T | | <2. UJ | <2. UJ | <2. UJ | <2. UJ | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | <5. UJ | <5. UJ | <5. UJ | <5. UJ | |
| HEXACHLOROETHANE | ug/l | T | | <0.9 UJ | <0.9 UJ | <1. UJ | <1. UJ | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| ISOPHORONE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| NAPHTHALENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| N-DIOCTYL PHTHALATE | ug/l | T | | <2. | <2. | <2. | <2. | |
| NITROBENZENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| O-CRESOL | ug/l | T | | <0.9 | <0.9 | <1. | | |
| PENTACHLOROPHENOL | ug/l | T | | <3. | <3. | <3. | | |
| PHENANTHRENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| PHENOL | ug/l | T | | <0.9 UJ | <0.9 UJ | <1. UJ | <1. | |
| PYRENE | ug/l | T | | <0.9 | <0.9 | <1. | <1. | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | <0.095 | <0.095 |
| AROCLOR 1221 | ug/l | T | | | | | <0.095 | <0.095 |
| AROCLOR 1232 | ug/l | T | | | | | <0.095 | <0.095 |
| AROCLOR 1242 | ug/l | T | | | | | <0.095 | <0.095 |
| AROCLOR 1248 | ug/l | T | | | | | <0.095 | <0.095 |
| AROCLOR 1254 | ug/l | T | | | | | <0.095 | <0.095 |
| AROCLOR 1260 | ug/l | T | | | | | <0.095 | <0.095 |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-19 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 11:45 | 11/2/2000 13:30 | 11/2/2000 13:30 | 3/23/2000 11:43 | 3/23/2000 11:43 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 2 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <19.0 | <19.0 | <77 | |
| ALUMINUM | ug/l | T | | 143 J | 41.2 U | 76.1 U | <77 | |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <9.4 | <8.4 | |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <9.4 | <8.4 | |
| ARSENIC | ug/l | D | | 25.7 | 25.4 | 26.3 | 1610 | |
| ARSENIC | ug/l | T | | 38.7 | 28.6 | 34.7 | 1980 | |
| BARIUM | ug/l | D | | 34.2 J | 28 | 28.3 | 18.1 | |
| BARIUM | ug/l | T | | 34.1 | 33.9 | 34 | 18 | |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.90 | 1.1 J | 1.2 J | <.81 | |
| CADMIUM | ug/l | T | | <.90 | <.90 | <.90 | <.81 | |
| CALCIUM | ug/l | D | | 640000 | 631000 | 644000 J | 382000 | |
| CALCIUM | ug/l | T | | 624000 | 647000 | 572000 J | 443000 | |
| CHROMIUM | ug/l | D | | 2.0 J | 1.8 J | <1.6 | <1.7 | |
| CHROMIUM | ug/l | T | | <1.6 | <1.6 | <1.6 | <1.7 | |
| COPPER | ug/l | D | | <1.9 | <1.9 | <1.9 | <2.9 | |
| COPPER | ug/l | T | | <1.9 | <1.9 | <1.9 | <2.9 | |
| IRON | ug/l | D | | 44800 | 44200 | 44200 | 8410 | |
| IRON | ug/l | T | | 49800 | 45700 | 44700 | 10500 | |
| LEAD | ug/l | D | | <9.8 | <9.8 | <9.8 | <7.9 | |
| LEAD | ug/l | T | | <9.8 | <9.8 | <9.8 | <7.9 | |
| MAGNESIUM | ug/l | D | | 336000 | 310000 | 313000 | 57900 | |
| MAGNESIUM | ug/l | T | | 320000 J | 319000 | 296000 | 65700 | |
| MANGANESE | ug/l | D | | 387 | 433 | 433 | 962 | |
| MANGANESE | ug/l | T | | 398 | 437 | 402 | 1090 | |
| MERCURY | ug/l | D | | .058 U | <.12 | <.12 | <.10 | |
| MERCURY | ug/l | T | | <.048 | <.12 | <.12 | <.10 | |
| NICKEL | ug/l | D | | 2.1 J | <1.9 | <1.9 | <1.6 | |
| NICKEL | ug/l | T | | <1.9 | 2.0 J | 2.8 J | <1.6 | |
| SELENIUM | ug/l | D | | <3.5 | 3.8 J | 3.9 J | <4.4 | |
| SELENIUM | ug/l | T | | <3.5 | <3.5 | <3.5 | <4.4 | |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-19 | MW-19 | MW-19 | MW-20 | MW-20 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 11:45 | 11/2/2000 13:30 | 11/2/2000 13:30 | 3/23/2000 11:43 | 3/23/2000 11:43 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 2 |
| SODIUM | ug/l | D | | 693000 | 627000 | 634000 | 473000 | |
| SODIUM | ug/l | T | | 702000 J | 661000 | 657000 | 447000 | |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | 3.6 J | <1.5 | 2.0 J | <1.9 | |
| VANADIUM | ug/l | T | | 3.7 J | <1.5 | <1.5 | <1.9 | |
| ZINC | ug/l | D | | 187 J | 288 J | 286 J | 103 | |
| ZINC | ug/l | T | | 221 J | 268 J | 209 J | 143 | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 614000 | 546000 | 543000 | 240000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | |
| AMMONIA | ug/l | T | | 8100 J | 7800 | 7700 | 8100 | |
| BICARBONATE | MG/L AS CA | T | | 614 | 546 | 543 | 240 | |
| BORON | ug/l | D | | 874 | 871 | 882 | 807 | |
| BORON | ug/l | T | | 878 | 889 | 862 | 845 | |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | |
| CHLORIDE | ug/l | T | | 353000 | 287000 | 320000 | 252000 | |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | |
| FLUORIDE | ug/l | T | | 670 | 640 | 650 | 4340 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 UJ | <30 UJ | <30 UJ | |
| PHOSPHORUS | ug/l | T | | 1400 J | 770 | 850 | 1090 | |
| SULFATE | ug/l | T | | 3620000 | 3350000 | 3220000 | 2200000 | |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | 1680 J | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 7900 J | 8100 J | 7300 J | 8400 J | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 1700 | | 3100 | |
| ODOR (FIELD) | NONE | N | | | | | NONE | |
| PH (FIELD) | STD UNITS | N | | | 6.93 | | 7.17 | |
| REDOX (FIELD) | MV | N | | | -101 | | -125.6 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 8990 | | 3410 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 130 | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | | 8.6 | |
| HEXANE | ug/l | T | | | | | <2. | |
| OVABZONE | NONE | N | | | 0 | | | |
| OVACASING | NONE | N | | | 0 | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 14.22 | | 14.6 | |
| TOTAL WELL DEPTH | Feet | N | | | | | 33.89 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-20 | MW-20 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 13:30 | 7/25/2000 13:30 | 11/7/2000 12:00 | 11/7/2000 12:00 | 3/20/2000 12:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | | <1. | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | | <1. | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | | <1. | | |
| 1,1-DICHLOROETHANE | ug/l | T | | <1. | | <1. | | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | | <1. | | |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | | <1. | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | | <1. | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | <3. | | <3. | | |
| ACETONE | ug/l | T | | <6. | | <6. | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | <1. | | <1. | | |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | | <1. | | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | | <1. | | |
| BROMOFORM | ug/l | T | | <1. | | <1. | | |
| CARBON DISULFIDE | ug/l | T | | <1. | | <1. | | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | | <1. | | |
| CHLOROBENZENE | ug/l | T | | <1. | | <1. | | |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | | <1. | | |
| CHLOROFORM | ug/l | T | | <1. | | <1. | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | | <1. | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | <1. | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. | | <2. | | |
| ETHYL CHLORIDE | ug/l | T | | <2. | | <2. UJ | | |
| ETHYLBENZENE | ug/l | T | | <1. | | <1. | | |
| METHYL BROMIDE | ug/l | T | | <2. | | <2. UJ | | |
| METHYL CHLORIDE | ug/l | T | | <2. | | <2. UJ | | |
| METHYL ETHYL KETONE | ug/l | T | | <3. | | <3. | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | | <3. | | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | | <2. | | |
| STYRENE | ug/l | T | | <1. | | <1. | | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | | <1. | | |
| TOLUENE | ug/l | T | | <1. | | <1. | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | | <1. | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | <1. | | |
| TRICHLOROETHENE | ug/l | T | | <1. | | <1. | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | | <2. | | |
| VINYL CHLORIDE | ug/l | T | | <1. | | <1. | | |
| XYLENES | ug/l | T | | <1. | | <1. | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | <1. | | <1. | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | <1. | | <1. | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-20 | MW-20 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 13:30 | 7/25/2000 13:30 | 11/7/2000 12:00 | 11/7/2000 12:00 | 3/20/2000 12:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 2 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | <1. | | <1. | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | <1. | | <1. | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | <2. | | <2. | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | <2. | | <2. | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | <1. | | <1. | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | <1. | | <1. | | |
| 2,4-DINITROPHENOL | ug/l | T | | <19. UJ | | <19. | | |
| 2,4-DINITROTOLUENE | ug/l | T | | <1. | | <1. | | |
| 2,6-DINITROTOLUENE | ug/l | T | | <2. | | <2. | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | <1. | | <1. | | |
| 2-CHLOROPHENOL | ug/l | T | | <1. | | <1. | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | <1. | | <1. | | |
| 2-NITROANILINE | ug/l | T | | <2. | | <2. | | |
| 2-NITROPHENOL | ug/l | T | | <1. | | <1. | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | <2. | | <2. | | |
| 3-NITROANILINE | ug/l | T | | <2. | | <2. | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | <5. | | <5. | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | <2. | | <2. | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | <1. | | <1. | | |
| 4-CHLOROANILINE | ug/l | T | | <1. | | <1. | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | <1. | | <1. | | |
| 4-METHYLPHENOL | ug/l | T | | <3. | | <3. | | |
| 4-NITROANILINE | ug/l | T | | <2. | | <2. | | |
| 4-NITROPHENOL | ug/l | T | | <10. UJ | | <10. UJ | | |
| ACENAPHTHENE | ug/l | T | | <1. | | <1. | | |
| ACENAPHTHYLENE | ug/l | T | | <1. | | <1. | | |
| ANTHRACENE | ug/l | T | | <1. | | <1. | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | <1. | | <1. | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | <1. | | <1. | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | <1. | | <1. | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | <1. | | <1. | | |
| BENZO[A]PYRENE | ug/l | T | | <1. | | <1. | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | <1. | | <1. | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | <1. | | <1. | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | <1. | | <1. | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | <2. | | <2. | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | <2. | | <2. | | |
| CARBAZOLE | ug/l | T | | <3. | | <3. | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | <1. | | <1. | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-20 | MW-20 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 13:30 | 7/25/2000 13:30 | 11/7/2000 12:00 | 11/7/2000 12:00 | 3/20/2000 12:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 2 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | <1. | | <1. | | |
| DIBENZOFURAN | ug/l | T | | <1. | | <1. | | |
| DIETHYL PHTHALATE | ug/l | T | | <2. | | 8. J | | |
| DIMETHYL PHTHALATE | ug/l | T | | <2. | | <2. UJ | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | <2. | | <2. | | |
| FLUORANTHENE | ug/l | T | | <1. | | <1. | | |
| FLUORENE | ug/l | T | | <1. | | <1. | | |
| HEXACHLOROBENZENE | ug/l | T | | <2. | | <2. | | |
| HEXACHLOROBUTADIENE | ug/l | T | | <2. | | <2. UJ | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | <5. | | <5. UJ | | |
| HEXACHLOROETHANE | ug/l | T | | <1. | | <1. UJ | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | <1. | | <1. | | |
| ISOPHORONE | ug/l | T | | <1. | | <1. | | |
| NAPHTHALENE | ug/l | T | | <1. | | <1. | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | <2. | | <2. | | |
| NITROBENZENE | ug/l | T | | <1. | | <1. | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | <1. | | <1. | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | <1. | | <1. | | |
| O-CRESOL | ug/l | T | | <1. | | <1. | | |
| PENTACHLOROPHENOL | ug/l | T | | <3. | | <3. | | |
| PHENANTHRENE | ug/l | T | | <1. | | <1. | | |
| PHENOL | ug/l | T | | <1. UJ | | <1. UJ | | |
| PYRENE | ug/l | T | | <1. | | <1. | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | <0.095 | <0.095 | <0.095 | <0.095 | |
| AROCLOR 1221 | ug/l | T | | <0.095 | <0.095 | <0.095 | <0.095 | |
| AROCLOR 1232 | ug/l | T | | <0.095 | <0.095 | <0.095 | <0.095 | |
| AROCLOR 1242 | ug/l | T | | <0.095 | <0.095 | <0.095 | <0.095 | |
| AROCLOR 1248 | ug/l | T | | <0.095 | <0.095 | <0.095 | <0.095 | |
| AROCLOR 1254 | ug/l | T | | <0.095 | <0.095 | <0.095 | <0.095 | |
| AROCLOR 1260 | ug/l | T | | <0.095 | <0.095 | <0.095 | <0.095 | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-20 | MW-20 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 13:30 | 7/25/2000 13:30 | 11/7/2000 12:00 | 11/7/2000 12:00 | 3/20/2000 12:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 2 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | | <19.0 | | <77 |
| ALUMINUM | ug/l | T | | 142 U | | 396 | | <77 |
| ANTIMONY | ug/l | D | | <9.4 | | <9.4 | | <8.4 |
| ANTIMONY | ug/l | T | | <9.4 | | <9.4 | | <8.4 |
| ARSENIC | ug/l | D | | 3560 J | | 3910 | | 1760 |
| ARSENIC | ug/l | T | | 2780 J | | 3890 | | 2090 |
| BARIUM | ug/l | D | | 19 | | 19.6 | | 32.2 |
| BARIUM | ug/l | T | | 23.6 | | 23.3 | | 32.4 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.90 | | <.90 | | 11.2 |
| CADMIUM | ug/l | T | | <.90 | | <.90 | | 11.1 |
| CALCIUM | ug/l | D | | 498000 J | | 481000 | | 561000 |
| CALCIUM | ug/l | T | | 393000 J | | 478000 | | 560000 |
| CHROMIUM | ug/l | D | | <1.6 | | <1.6 | | <1.7 |
| CHROMIUM | ug/l | T | | 2.1 J | | 3.7 | | 1.7 U |
| COPPER | ug/l | D | | <1.9 | | <1.9 | | <2.9 |
| COPPER | ug/l | T | | <1.9 | | 9.6 | | 3.3 U |
| IRON | ug/l | D | | 14000 | | 12600 | | 23200 |
| IRON | ug/l | T | | 14100 | | 17600 | | 30100 |
| LEAD | ug/l | D | | <9.8 | | <9.8 | | <7.9 |
| LEAD | ug/l | T | | <9.8 | | <9.8 | | <7.9 |
| MAGNESIUM | ug/l | D | | 85900 | | 80300 | | 107000 |
| MAGNESIUM | ug/l | T | | 137000 | | 82500 | | 134000 |
| MANGANESE | ug/l | D | | 1320 R | | 1250 | | 723 |
| MANGANESE | ug/l | T | | 845 R | | 1280 | | 759 |
| MERCURY | ug/l | D | | <.048 | | <.12 | | <.10 |
| MERCURY | ug/l | T | | <.048 | | <.12 | | <.10 |
| NICKEL | ug/l | D | | <1.9 | | <1.9 | | 22.3 |
| NICKEL | ug/l | T | | 2.1 J | | 5.5 | | 22.1 |
| SELENIUM | ug/l | D | | <3.5 | | <3.5 | | <4.4 |
| SELENIUM | ug/l | T | | <3.5 | | <3.5 | | <4.4 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-20 | MW-20 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 13:30 | 7/25/2000 13:30 | 11/7/2000 12:00 | 11/7/2000 12:00 | 3/20/2000 12:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 2 | 1 |
| SODIUM | ug/l | D | | 507000 | | 319000 | | 86700 |
| SODIUM | ug/l | T | | 719000 | | 384000 | | 103000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.5 | | <1.5 | | <1.9 |
| VANADIUM | ug/l | T | | <1.5 | | <1.5 | | <1.9 |
| ZINC | ug/l | D | | 59.3 | | 84.4 | | 13600 |
| ZINC | ug/l | T | | 110 | | 453 | | 13000 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 290000 | | 275000 | | 181000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | | <370 | | <370 |
| AMMONIA | ug/l | T | | 35000 | | 11400 | | 4000 |
| BICARBONATE | MG/L AS CA | T | | 290 | | 275 | | 181 |
| BORON | ug/l | D | | 891 | | 814 | | 406 |
| BORON | ug/l | T | | 1290 | | 870 | | 462 |
| CARBONATE | MG/L AS CA | T | | <1.0 | | <1.0 | | <1.0 |
| CHLORIDE | ug/l | T | | 339000 | | 100000 | | 77000 |
| CYANIDE | ug/l | T | | <4.0 | | <4.0 | | <4.0 |
| FLUORIDE | ug/l | T | | 760 | | 1290 | | 1330 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | | <30 | | <30 |
| PHOSPHORUS | ug/l | T | | 1900 | | 3250 | | 1630 |
| SULFATE | ug/l | T | | 3120000 | | 2080000 | | 1890000 |
| SULFIDE | ug/l | T | | 2600 | | 1250 J | | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 36000 | | 11600 J | | 3700 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | CLEAR | | LT BROWN |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 2550 | | |
| ODOR (FIELD) | NONE | N | | | | | | NONE |
| PH (FIELD) | STD UNITS | N | | | | 7.61 | | 6.91 |
| REDOX (FIELD) | MV | N | | | | -116 | | -38 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | | 5590 | | 2600 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | 21.9 | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | | | 6.72 |
| HEXANE | ug/l | T | | <2. | | <2. | | |
| OVABZONE | NONE | N | | | | 0 | | |
| OVACASING | NONE | N | | | | 0 | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | | 13.99 | | 11.7 |
| TOTAL WELL DEPTH | Feet | N | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-21 | MW-22 | MW-22 | MW-22 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 10:45 | 11/2/2000 10:00 | 3/20/2000 14:40 | 7/20/2000 9:45 | 11/2/2000 9:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-21 | MW-22 | MW-22 | MW-22 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 10:45 | 11/2/2000 10:00 | 3/20/2000 14:40 | 7/20/2000 9:45 | 11/2/2000 9:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-21 | MW-22 | MW-22 | MW-22 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 10:45 | 11/2/2000 10:00 | 3/20/2000 14:40 | 7/20/2000 9:45 | 11/2/2000 9:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-21 | MW-22 | MW-22 | MW-22 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 10:45 | 11/2/2000 10:00 | 3/20/2000 14:40 | 7/20/2000 9:45 | 11/2/2000 9:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <19.0 | <77 | <19.0 | <19.0 |
| ALUMINUM | ug/l | T | | 271 | 177 J | <77 | 61.1 U | 26.2 U |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ARSENIC | ug/l | D | | 1720 | 2000 | 299 | 224 | 458 |
| ARSENIC | ug/l | T | | 2050 | 2170 | 620 | 506 | 602 |
| BARIUM | ug/l | D | | 32.4 J | 32.2 | 22.9 J | 20.4 J | 20.9 |
| BARIUM | ug/l | T | | 34.5 | 38 | 20.3 J | 22.5 | 24.4 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | 12.6 | 9.8 | <.81 | <.90 | <.90 |
| CADMIUM | ug/l | T | | 16.9 | 12.1 | <.81 | <.90 | <.90 |
| CALCIUM | ug/l | D | | 615000 | 577000 | 566000 | 602000 | 574000 |
| CALCIUM | ug/l | T | | 597000 | 569000 | 569000 | 586000 | 574000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.7 | <1.6 | <1.6 |
| CHROMIUM | ug/l | T | | <1.6 | 1.8 J | 2.3 U | <1.6 | 2.0 J |
| COPPER | ug/l | D | | <1.9 | <1.9 | <2.9 | <1.9 | <1.9 |
| COPPER | ug/l | T | | <1.9 | 7.1 | 4.2 U | <1.9 | 2.1 J |
| IRON | ug/l | D | | 23400 | 23000 | 16500 | 15000 | 19700 |
| IRON | ug/l | T | | 27900 | 24800 | 20900 | 18100 | 21200 |
| LEAD | ug/l | D | | <9.8 | <9.8 | <7.9 | <9.8 | <9.8 |
| LEAD | ug/l | T | | <9.8 | <9.8 | <7.9 | <9.8 | <9.8 |
| MAGNESIUM | ug/l | D | | 106000 | 109000 | 23400 | 18300 | 21200 |
| MAGNESIUM | ug/l | T | | 111000 | 111000 | 24900 | 17800 | 20400 |
| MANGANESE | ug/l | D | | 713 | 730 | 1020 | 858 | 1030 |
| MANGANESE | ug/l | T | | 748 | 756 | 1040 | 856 | 987 |
| MERCURY | ug/l | D | | <.048 | <.12 | <.10 | <.048 | <.12 |
| MERCURY | ug/l | T | | <.048 | <.12 | <.10 | <.048 | <.12 |
| NICKEL | ug/l | D | | 26.7 | 23.7 | 2.9 J | 5.5 J | 2.1 J |
| NICKEL | ug/l | T | | 27.6 | 27.1 | 4.1 J | 2.7 J | 2.8 J |
| SELENIUM | ug/l | D | | <3.5 | 3.7 J | <4.4 | <3.5 | <3.5 |
| SELENIUM | ug/l | T | | <3.5 | <3.5 | <4.4 | <3.5 | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-21 | MW-21 | MW-22 | MW-22 | MW-22 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/20/2000 10:45 | 11/2/2000 10:00 | 3/20/2000 14:40 | 7/20/2000 9:45 | 11/2/2000 9:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 93500 | 88800 | 23800 | 25600 | 23300 |
| SODIUM | ug/l | T | | 87900 | 89100 | 25200 | 25200 | 22700 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | 1.9 J | 1.8 J | <1.9 | 1.6 J | <1.5 |
| VANADIUM | ug/l | T | | 3.2 J | <1.5 | <1.9 | <1.5 | <1.5 |
| ZINC | ug/l | D | | 15100 J | 14800 J | 2300 | 3230 J | 1750 J |
| ZINC | ug/l | T | | 15900 J | 14800 J | 2750 | 3360 J | 1860 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 206000 | 214000 | 106000 | 142000 | 134000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 3500 | 3800 | 1500 | 810 J | 1800 U |
| BICARBONATE | MG/L AS CA | T | | 206 | 214 | 106 | 142 | 134 |
| BORON | ug/l | D | | 432 | 443 | 252 | 234 | 283 |
| BORON | ug/l | T | | 431 | 447 | 265 | 239 | 270 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 59000 | 69000 | 33600 | 26100 | 34000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 670 | 650 | 1180 | 820 | 830 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 UJ | <30 | <30 | <30 UJ |
| PHOSPHORUS | ug/l | T | | 5510 | 2500 | 420 | 800 | 490 |
| SULFATE | ug/l | T | | 1760000 | 1850000 | 1460000 | 1450000 | 1430000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 5500 J | 3000 | 1820 J | 1330 J | 1530 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | CLEAR | | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 530 | | | 2880 |
| ODOR (FIELD) | NONE | N | | | | NONE | | |
| PH (FIELD) | STD UNITS | N | | | 7.1 | 7.12 | | 7.29 |
| REDOX (FIELD) | MV | N | | | 328 | -59.8 | | -100 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 3320 | 2100 | | 2590 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | -100 | | | 9.8 |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 6.4 | | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | 0 | | | 0 |
| OVACASING | NONE | N | | | 0 | | | 0 |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 12.79 | 12.5 | | 12.39 |
| TOTAL WELL DEPTH | Feet | N | | | | 23.24 | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-23 | MW-23 | MW-23 | MW-24 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 18:15 | 7/20/2000 13:30 | 11/2/2000 11:30 | 3/20/2000 16:40 | 7/20/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-23 | MW-23 | MW-23 | MW-24 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 18:15 | 7/20/2000 13:30 | 11/2/2000 11:30 | 3/20/2000 16:40 | 7/20/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-23 | MW-23 | MW-23 | MW-24 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 18:15 | 7/20/2000 13:30 | 11/2/2000 11:30 | 3/20/2000 16:40 | 7/20/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-23 | MW-23 | MW-23 | MW-24 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 18:15 | 7/20/2000 13:30 | 11/2/2000 11:30 | 3/20/2000 16:40 | 7/20/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <77 | 21.6 J | 44.8 U | <77 | <19.0 |
| ALUMINUM | ug/l | T | | 151 J | 1240 | 840 | <77 | 1320 |
| ANTIMONY | ug/l | D | | <8.4 | <9.4 | <9.4 | <8.4 | <9.4 |
| ANTIMONY | ug/l | T | | <8.4 | <9.4 | <9.4 | <8.4 | <9.4 |
| ARSENIC | ug/l | D | | 53 | 57.5 | 59.2 | 285 | 235 |
| ARSENIC | ug/l | T | | 55 | 58.4 | 62 | 290 | 230 |
| BARIUM | ug/l | D | | 23.5 | 21.4 J | 19.5 | 63.3 | 66.8 J |
| BARIUM | ug/l | T | | 35.5 | 123 | 164 | 58.9 | 74.6 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.81 | <.90 | <.90 | <.81 | <.90 |
| CADMIUM | ug/l | T | | 1.27 J | 1.2 J | 1.9 | .86 J | <.90 |
| CALCIUM | ug/l | D | | 695000 | 718000 | 696000 | 798000 | 857000 |
| CALCIUM | ug/l | T | | 673000 | 737000 | 750000 | 821000 | 865000 |
| CHROMIUM | ug/l | D | | <1.7 | <1.6 | <1.6 | <1.7 | <1.6 |
| CHROMIUM | ug/l | T | | 2.0 U | 7 | 3.7 | 3.0 U | 4.4 |
| COPPER | ug/l | D | | <2.9 | <1.9 | <1.9 | <2.9 | <1.9 |
| COPPER | ug/l | T | | 3.5 U | 6.8 | 8.7 | 3.0 U | 4.6 |
| IRON | ug/l | D | | 25300 | 27400 | 27600 | 43400 | 47500 |
| IRON | ug/l | T | | 27300 | 30600 | 33400 | 47100 | 48700 |
| LEAD | ug/l | D | | <7.9 | <9.8 | <9.8 | <7.9 | <9.8 |
| LEAD | ug/l | T | | 12 | 53.8 | 68.2 | <7.9 | <9.8 |
| MAGNESIUM | ug/l | D | | 41500 | 42800 | 42500 | 71000 | 75000 |
| MAGNESIUM | ug/l | T | | 43500 | 53200 | 47400 | 70800 | 74600 |
| MANGANESE | ug/l | D | | 698 | 775 | 745 | 682 | 689 |
| MANGANESE | ug/l | T | | 745 | 869 | 925 | 739 | 736 |
| MERCURY | ug/l | D | | <.10 | <.048 | <.12 | <.10 | <.048 |
| MERCURY | ug/l | T | | <.10 | <.048 | <.12 | <.10 | <.048 |
| NICKEL | ug/l | D | | 2.0 J | 2.4 J | 2.5 J | <1.6 | <1.9 |
| NICKEL | ug/l | T | | 3.2 J | 6.4 | 6.3 | 2.1 J | 2.8 J |
| SELENIUM | ug/l | D | | <4.4 | <3.5 | 8.4 J | <4.4 | <3.5 |
| SELENIUM | ug/l | T | | <4.4 | 4.7 J | <3.5 | <4.4 | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-23 | MW-23 | MW-23 | MW-24 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/20/2000 18:15 | 7/20/2000 13:30 | 11/2/2000 11:30 | 3/20/2000 16:40 | 7/20/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 35400 | 36000 | 36200 | 411000 | 449000 |
| SODIUM | ug/l | T | | 34800 | 34900 | 36400 | 408000 | 458000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.9 | 2.9 J | <1.5 | <1.9 | 4.4 |
| VANADIUM | ug/l | T | | 2.3 J | 5.5 | 2.3 J | 3.9 J | 6.7 |
| ZINC | ug/l | D | | 1230 | 1460 J | 1490 J | 608 | 114 J |
| ZINC | ug/l | T | | 1480 | 1890 J | 2260 J | 612 | 221 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 148000 | 164000 | 169000 | 183000 | 230000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 5900 | 5900 | 6000 | 4700 | 4700 |
| BICARBONATE | MG/L AS CA | T | | 148 | 164 | 169 | 183 | 230 |
| BORON | ug/l | D | | 460 | 460 | 494 | 255 | 262 |
| BORON | ug/l | T | | 473 | 459 | 520 | 267 | 259 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 280000 | 325000 | 301000 | 154000 | 203000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | 4.1 J | <4.0 |
| FLUORIDE | ug/l | T | | 470 J | 870 | 630 | <400 | 530 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 75 J | <30 | <30 UJ | <30 | <30 |
| PHOSPHORUS | ug/l | T | | 350 | 1230 | 540 | 4210 | 5600 |
| SULFATE | ug/l | T | | 1440000 | 1470000 | 1440000 | 2670000 | 2790000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 6200 J | 7300 J | 34000 J | 5100 J | 5100 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | | CLEAR | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 1180 | | |
| ODOR (FIELD) | NONE | N | | NONE | | | NONE | |
| PH (FIELD) | STD UNITS | N | | 6.99 | | 7.28 | 7.09 | |
| REDOX (FIELD) | MV | N | | 49.9 | | -111 | 51.4 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2770 | | 3210 | 4290 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | 240 | | |
| DEPTH TO WATER FROM TOC | Feet | N | | 6.76 | | | 7.74 | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | 0 | | |
| OVACASING | NONE | N | | | | 0 | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.1 | | 13.45 | 12.8 | |
| TOTAL WELL DEPTH | Feet | N | | 32.34 | | | 35.82 | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-25 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 15:30 | 3/22/2000 15:10 | 3/22/2000 15:10 | 7/21/2000 9:40 | 7/21/2000 9:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-25 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 15:30 | 3/22/2000 15:10 | 3/22/2000 15:10 | 7/21/2000 9:40 | 7/21/2000 9:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 2 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-25 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 15:30 | 3/22/2000 15:10 | 3/22/2000 15:10 | 7/21/2000 9:40 | 7/21/2000 9:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 2 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-25 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 15:30 | 3/22/2000 15:10 | 3/22/2000 15:10 | 7/21/2000 9:40 | 7/21/2000 9:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 2 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <77 | <77 | 21.5 J | 21.2 J |
| ALUMINUM | ug/l | T | | 837 | 3750 J | 3380 J | 2530 J | 5510 J |
| ANTIMONY | ug/l | D | | <9.4 | <8.4 | <8.4 | <9.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <8.4 | <8.4 | <9.4 | <9.4 |
| ARSENIC | ug/l | D | | 240 | 198 J | 256 J | 178 | 167 |
| ARSENIC | ug/l | T | | 237 | 219 | 219 J | 169 | 176 |
| BARIUM | ug/l | D | | 68 | 89.6 | 79.9 | 94.6 J | 98.2 J |
| BARIUM | ug/l | T | | 80.3 | 110 | 104 | 116 | 137 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | 1.2 J | <.81 | <.81 | <.90 | <.90 |
| CADMIUM | ug/l | T | | <.90 | <.81 | <.81 | <.90 | <.90 |
| CALCIUM | ug/l | D | | 886000 | 582000 | 686000 R | 671000 | 654000 |
| CALCIUM | ug/l | T | | 889000 | 641000 J | 341000 R | 643000 | 719000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.7 | <1.7 | 1.8 J | <1.6 |
| CHROMIUM | ug/l | T | | 4.4 | 9.3 | 10.1 | 5.3 J | 11.9 J |
| COPPER | ug/l | D | | <1.9 | <2.9 | <2.9 | 3.3 J | <1.9 |
| COPPER | ug/l | T | | 4.5 | 10.9 U | 10.2 U | 8.5 U | 15.7 J |
| IRON | ug/l | D | | 49000 | 82000 J | 109000 J | 95900 | 90800 |
| IRON | ug/l | T | | 50400 | 104000 | 103000 | 95500 | 108000 |
| LEAD | ug/l | D | | <9.8 | <7.9 | <7.9 | <9.8 | <9.8 |
| LEAD | ug/l | T | | <9.8 | 22 | 19 | 11.0 J | 32.7 J |
| MAGNESIUM | ug/l | D | | 77000 | 57400 J | 82900 J | 72200 | 67200 |
| MAGNESIUM | ug/l | T | | 77400 | 76600 | 76000 | 72200 J | 96300 J |
| MANGANESE | ug/l | D | | 703 | 1990 J | 2770 J | 2310 | 2150 |
| MANGANESE | ug/l | T | | 745 | 2450 | 2410 J | 2270 | 2610 |
| MERCURY | ug/l | D | | <.12 | <.10 | <.10 | <.048 | <.048 |
| MERCURY | ug/l | T | | <.12 | <.10 | <.10 | <.048 | .052 J |
| NICKEL | ug/l | D | | <1.9 | <1.6 | <1.6 | 3.1 J | <1.9 |
| NICKEL | ug/l | T | | 3.9 J | 12.2 | 13.9 | 6.1 J | 15.7 J |
| SELENIUM | ug/l | D | | <3.5 | <4.4 | <4.4 | 5.4 J | 7.0 J |
| SELENIUM | ug/l | T | | <3.5 | <4.4 | <4.4 | 4.3 J | 6.2 J |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-25 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 15:30 | 3/22/2000 15:10 | 3/22/2000 15:10 | 7/21/2000 9:40 | 7/21/2000 9:40 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 2 |
| SODIUM | ug/l | D | | 524000 | 1240000 | 1170000 | 1170000 | 1170000 |
| SODIUM | ug/l | T | | 503000 | 1190000 | 1160000 | 1170000 | 1160000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | 2.5 J | 2.2 J | 2.0 J | 11.3 | 11.5 |
| VANADIUM | ug/l | T | | 1.8 J | 13.1 | 13.1 | 16.2 J | 24.9 J |
| ZINC | ug/l | D | | 65.5 J | 39 U | 51 U | 67.7 J | 59.8 J |
| ZINC | ug/l | T | | 142 J | 237 J | 190 J | 141 J | 282 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 221000 | 393000 | 384000 | 438000 | 465000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 5200 | 204000 | 207000 | 166000 | 173000 |
| BICARBONATE | MG/L AS CA | T | | 221 | 393 | 384 | 438 | 465 |
| BORON | ug/l | D | | 288 | 510 J | 638 J | 567 | 532 |
| BORON | ug/l | T | | 280 | 556 | 537 J | 518 | 524 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 226000 | 465000 | 466000 | 480000 | 480000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | 9.2 J | <4.0 UJ | <4.0 UJ |
| FLUORIDE | ug/l | T | | 430 J | <400 | <400 | 470 U | 460 U |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 UJ | <30 | <30 UJ | <30 | <30 |
| PHOSPHORUS | ug/l | T | | 5450 | 23400 | 26200 | 29700 | 27600 |
| SULFATE | ug/l | T | | 3180000 | 4300000 | 4400000 | 4190000 | 4300000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 4800 J | 200000 | 200000 | 200000 | 190000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | LT GRAY | | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 2080 | 1700 | | | |
| ODOR (FIELD) | NONE | N | | | NONE | | | |
| PH (FIELD) | STD UNITS | N | | 7.15 | 6.81 | | | |
| REDOX (FIELD) | MV | N | | -135 | 308.9 | | | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 6030 | 7200 | | | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 263 | | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | 6.68 | | | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | 0 | | | | |
| OVACASING | NONE | N | | 0 | | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.07 | 13.3 | | | |
| TOTAL WELL DEPTH | Feet | N | | | 31.52 | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-25 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 16:30 | 11/2/2000 16:30 | 3/22/2000 12:28 | 7/21/2000 11:15 | 11/3/2000 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-25 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 16:30 | 11/2/2000 16:30 | 3/22/2000 12:28 | 7/21/2000 11:15 | 11/3/2000 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-25 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 16:30 | 11/2/2000 16:30 | 3/22/2000 12:28 | 7/21/2000 11:15 | 11/3/2000 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-25 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 16:30 | 11/2/2000 16:30 | 3/22/2000 12:28 | 7/21/2000 11:15 | 11/3/2000 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | <19.0 | 130 J | 104 J | 78.0 U |
| ALUMINUM | ug/l | T | | 1660 J | 1100 J | 810 J | 3120 | 2240 |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <8.4 | <9.4 | <9.4 |
| ARSENIC | ug/l | D | | 163 | 160 | 200 | 197 | 196 |
| ARSENIC | ug/l | T | | 187 | 169 | 211 | 195 | 203 |
| BARIUM | ug/l | D | | 93.4 | 96.3 | 29.2 | 24.9 J | 22.4 |
| BARIUM | ug/l | T | | 121 | 107 | 31.5 | 37.2 | 35.4 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | 2.3 J | 2.2 J | <.81 | <.90 | 1.2 J |
| CADMIUM | ug/l | T | | <.90 | <.90 | <.81 | <.90 | 1.0 J |
| CALCIUM | ug/l | D | | 661000 | 642000 | 599000 | 615000 | 592000 |
| CALCIUM | ug/l | T | | 753000 | 679000 | 635000 | 616000 | 585000 |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.7 | <1.6 | <1.6 |
| CHROMIUM | ug/l | T | | 6.6 | 5.1 | 2.2 J | 8.5 | 6.4 |
| COPPER | ug/l | D | | <1.9 | <1.9 | <2.9 | <1.9 | <1.9 |
| COPPER | ug/l | T | | 6.4 | 5 | <2.9 | 7.9 U | 6.2 |
| IRON | ug/l | D | | 84900 | 84800 | 46600 | 53100 | 52400 |
| IRON | ug/l | T | | 102000 | 90100 | 53500 | 57000 | 58400 |
| LEAD | ug/l | D | | <9.8 | <9.8 | <7.9 | <9.8 | <9.8 |
| LEAD | ug/l | T | | 12.4 J | <9.8 | <7.9 | <9.8 | <9.8 |
| MAGNESIUM | ug/l | D | | 49500 | 49000 | 78200 | 82700 | 75500 |
| MAGNESIUM | ug/l | T | | 74800 | 55500 | 90500 | 83800 | 85200 |
| MANGANESE | ug/l | D | | 1950 | 1930 | 3000 | 4050 | 4050 |
| MANGANESE | ug/l | T | | 2320 | 2010 | 3250 | 4090 | 4110 |
| MERCURY | ug/l | D | | <.12 | <.12 | <.10 | <.048 | <.12 |
| MERCURY | ug/l | T | | <.12 | <.12 | <.10 | <.048 | <.12 |
| NICKEL | ug/l | D | | <1.9 | <1.9 | 7.8 | 9.2 | 9.6 |
| NICKEL | ug/l | T | | 7.8 | 6 | 10.1 | 15.4 | 15.6 |
| SELENIUM | ug/l | D | | <3.5 | 4.1 J | <4.4 | 4.4 J | <3.5 |
| SELENIUM | ug/l | T | | <3.5 | <3.5 | <4.4 | 5.9 J | <3.5 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-25 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/2/2000 16:30 | 11/2/2000 16:30 | 3/22/2000 12:28 | 7/21/2000 11:15 | 11/3/2000 15:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 1200000 | 1250000 | 2130000 | 2070000 | 2130000 |
| SODIUM | ug/l | T | | 1310000 | 1190000 | 1970000 | 2090000 | 2040000 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | 6.1 | 6.5 | <1.9 | 3.8 J | 1.7 J |
| VANADIUM | ug/l | T | | 6.2 | 5.3 | 2.1 J | 9.6 | 4.9 |
| ZINC | ug/l | D | | 49.6 J | 54.8 J | 4350 | 4890 J | 5290 J |
| ZINC | ug/l | T | | 124 J | 115 J | 4900 | 5040 J | 5570 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 415000 | 401000 | 427000 | 472000 | 445000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 136000 | 134000 | 73200 | 70600 | 68000 |
| BICARBONATE | MG/L AS CA | T | | 415 | 401 | 427 | 472 | 445 |
| BORON | ug/l | D | | 575 | 577 | 1920 | 1900 | 1940 |
| BORON | ug/l | T | | 612 | 564 | 2030 | 1830 | 1940 |
| CARBONATE | MG/L AS CA | T | | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 470000 | 470000 | 1840000 | 1590000 | 1540000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 UJ | <4.0 |
| FLUORIDE | ug/l | T | | <400 | <400 | 15900 | 12500 | 14000 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 UJ | <30 UJ | <30 UJ | <30 | <30 UJ |
| PHOSPHORUS | ug/l | T | | 28300 | 25500 | 450 | 780 | 510 |
| SULFATE | ug/l | T | | 4340000 | 4040000 | 4260000 | 4120000 | 4060000 |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 136000 J | 170000 J | 83000 | 59000 J | 55000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | GREY | | LT GRAY | | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 900 | | 2300 | | 1850 |
| ODOR (FIELD) | NONE | N | | | | NONE | | |
| PH (FIELD) | STD UNITS | N | | 7.09 | | 6.68 | | 6.94 |
| REDOX (FIELD) | MV | N | | -176 | | 320.9 | | -78 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 8520 | | 9630 | | 1920 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 999 | | | | 254 |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 6.92 | | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | 0 | | | | 0 |
| OVACASING | NONE | N | | 0 | | | | 0 |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.5 | | 12.1 | | 12.97 |
| TOTAL WELL DEPTH | Feet | N | | | | 35.18 | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-27 | MW27 | MW-27 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2000 10:47 | 7/26/2000 9:00 | 7/26/2000 9:00 | 11/7/2000 15:00 | 3/23/2000 16:18 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | | | | |
| ACRYLONITRILE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-27 | MW27 | MW-27 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2000 10:47 | 7/26/2000 9:00 | 7/26/2000 9:00 | 11/7/2000 15:00 | 3/23/2000 16:18 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZIDINE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-27 | MW27 | MW-27 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2000 10:47 | 7/26/2000 9:00 | 7/26/2000 9:00 | 11/7/2000 15:00 | 3/23/2000 16:18 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| ALDRIN | ug/l | T | | | | | | |
| ALPHA-BHC | ug/l | T | | | | | | |
| BETA-BHC | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DELTA-BHC | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| DIELDRIN | ug/l | T | | | | | | |
| ENDOSULFAN I | ug/l | T | | | | | | |
| ENDOSULFAN II | ug/l | T | | | | | | |

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~7766457.xls:2000
12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-27 | MW27 | MW-27 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2000 10:47 | 7/26/2000 9:00 | 7/26/2000 9:00 | 11/7/2000 15:00 | 3/23/2000 16:18 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | | | | |
| ENDRIN | ug/l | T | | | | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | | | | |
| HEPTACHLOR | ug/l | T | | | | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | | | | |
| LINDANE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| TOXAPHENE | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | 830 | 707 | | 629 | <77 |
| ALUMINUM | ug/l | T | | 980 J | | 1680 | 1610 | 550 J |
| ANTIMONY | ug/l | D | | <8.4 | <9.4 | | <9.4 | <8.4 |
| ANTIMONY | ug/l | T | | <8.4 | | <9.4 | <9.4 | <8.4 |
| ARSENIC | ug/l | D | | 44 | 46.2 | | 51.7 | 38 |
| ARSENIC | ug/l | T | | 46 | | 44.4 | 49.7 | 43 |
| BARIUM | ug/l | D | | 27.8 | 25.3 | | 24.6 | 38.9 |
| BARIUM | ug/l | T | | 27.1 | | 26.1 | 26.7 | 38.9 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | | | | |
| CADMIUM | ug/l | D | | <.81 | 2.2 | | <.90 | 6.4 |
| CADMIUM | ug/l | T | | <.81 | | 2.8 | 1.7 | 11.7 |
| CALCIUM | ug/l | D | | 892000 | 840000 | | 835000 | 932000 |
| CALCIUM | ug/l | T | | 882000 | | 925000 | 875000 | 892000 |
| CHROMIUM | ug/l | D | | <1.7 | <1.6 | | <1.6 | <1.7 |
| CHROMIUM | ug/l | T | | <1.7 | | 2.3 J | <1.6 | <1.7 |
| COPPER | ug/l | D | | <2.9 | 3.2 J | | 2.5 J | 13.0 J |
| COPPER | ug/l | T | | <2.9 | | 4.3 | 6.3 | 7.7 J |
| IRON | ug/l | D | | 313000 | 265000 | | 296000 J | 18800 |
| IRON | ug/l | T | | 312000 | | 255000 | 265000 J | 23000 |
| LEAD | ug/l | D | | <7.9 | <9.8 | | <9.8 | 9.2 J |
| LEAD | ug/l | T | | <7.9 | | <9.8 | <9.8 | 54 |
| MAGNESIUM | ug/l | D | | 1340000 | 985000 | | 967000 | 149000 |
| MAGNESIUM | ug/l | T | | 1220000 | | 1010000 | 968000 | 172000 |
| MANGANESE | ug/l | D | | 4260 | 3850 | | 3940 | 2430 |
| MANGANESE | ug/l | T | | 4690 | | 3970 | 3780 | 2810 |
| MERCURY | ug/l | D | | <.10 | <.048 | | <.12 | <.10 |
| MERCURY | ug/l | T | | <.10 | | <.048 | <.12 | <.10 |
| NICKEL | ug/l | D | | 20.1 | 25.9 | | 24.7 | 18.2 |
| NICKEL | ug/l | T | | 32.6 | | 28.5 | 26 | 23.1 |
| SELENIUM | ug/l | D | | <4.4 | <3.5 | | <3.5 | <4.4 |
| SELENIUM | ug/l | T | | <4.4 | | <3.5 | <3.5 | <4.4 |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-27 | MW27 | MW-27 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2000 10:47 | 7/26/2000 9:00 | 7/26/2000 9:00 | 11/7/2000 15:00 | 3/23/2000 16:18 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 951000 | 1010000 | | 1120000 | 58800 |
| SODIUM | ug/l | T | | 1010000 | | 982000 | 1160000 | 60100 |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | | | | |
| VANADIUM | ug/l | D | | <1.9 | <1.5 | | 3.6 J | <1.9 |
| VANADIUM | ug/l | T | | <1.9 | | 8.9 | <1.5 | <1.9 |
| ZINC | ug/l | D | | 2440 | 2290 | | 2340 | 7650 |
| ZINC | ug/l | T | | 2880 | | 2640 | 2500 | 8370 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 185000 | | 360000 | 364000 | 433000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | 17500 | | 17300 | 18100 | 484000 |
| BICARBONATE | MG/L AS CA | T | | 185 | | 360 | 364 | 433 |
| BORON | ug/l | D | | 4360 | 4230 | | 4790 | 608 |
| BORON | ug/l | T | | 4500 | | 4410 | 4690 | 616 |
| CARBONATE | MG/L AS CA | T | | <1.0 | | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | 5600000 | | 3980000 | 4100000 | 2660000 |
| CYANIDE | ug/l | T | | <4.0 | | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 1900 J | | 1630 | 1570 | 2060 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <300 UJ | | <30 | 59 J | <30 UJ |
| PHOSPHORUS | ug/l | T | | 430 | | 600 | 560 | 140 J |
| SULFATE | ug/l | T | | 5300000 | | 3900000 | 3240000 | 1600000 |
| SULFIDE | ug/l | T | | 4100 | | 730 J | 1750 J | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 20000 J | | 18000 | 15300 J | 450000 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | LT GRAY | | | LT ORANGE | LT GRAY |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 2800 | | | 8490 | 3000 |
| ODOR (FIELD) | NONE | N | | NONE | | | | NONE |
| PH (FIELD) | STD UNITS | N | | 5.72 | | | 5.83 | 6.63 |
| REDOX (FIELD) | MV | N | | 88.7 | | | 29 | 645.3 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 1331 | | | 15300 | 14940 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | | 592 | |
| DEPTH TO WATER FROM TOC | Feet | N | | 9.92 | | | | 8.7 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | | 0 | |
| OVACASING | NONE | N | | | | | 0 | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 14.5 | | | 13.94 | 14.6 |
| TOTAL WELL DEPTH | Feet | N | | 39.92 | | | | 35.3 |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW28 | MW-28 | MW-28 | MW-29 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 9:30 | 7/25/2000 9:30 | 11/6/2000 12:00 | 3/23/2000 15:30 | 7/24/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | <1. | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | <1. | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | <2. | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| ACROLEIN | ug/l | T | | | <40. | | | |
| ACRYLONITRILE | ug/l | T | | | <4. | | | |
| BENZENE | ug/l | T | | | <1. | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | <1. | | | |
| BROMOFORM | ug/l | T | | | <1. | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | <1. | | | |
| CHLOROBENZENE | ug/l | T | | | <1. | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | <1. | | | |
| CHLOROFORM | ug/l | T | | | <1. | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | <1. | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | <1. | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | <2. | | | |
| ETHYLBENZENE | ug/l | T | | | <1. | | | |
| METHYL BROMIDE | ug/l | T | | | <2. | | | |
| METHYL CHLORIDE | ug/l | T | | | <2. | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | <2. | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | <1. | | | |
| TOLUENE | ug/l | T | | | <1. | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | <1. | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | <1. | | | |
| TRICHLOROETHENE | ug/l | T | | | <1. | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | <2. | | | |
| VINYL CHLORIDE | ug/l | T | | | <1. | | | |
| XYLENES | ug/l | T | | | <1. | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | <0.9 | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | <0.9 | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW28 | MW-28 | MW-28 | MW-29 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 9:30 | 7/25/2000 9:30 | 11/6/2000 12:00 | 3/23/2000 15:30 | 7/24/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | <0.9 | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | <0.9 | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | <0.9 | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | <2. | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | <0.9 | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | <0.9 | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | <19. | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | <0.9 | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | <2. | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | <0.9 | | | |
| 2-CHLOROPHENOL | ug/l | T | | | <0.9 | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | <0.9 | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | <2. | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | <5. | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | <2. | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | <0.9 | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | <0.9 | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | <9. | | | |
| ACENAPHTHENE | ug/l | T | | | <0.9 | | | |
| ACENAPHTHYLENE | ug/l | T | | | <0.9 | | | |
| ANTHRACENE | ug/l | T | | | <0.9 | | | |
| BENZIDINE | ug/l | T | | | <19. | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | <0.9 | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | <0.9 | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | <0.9 | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | <0.9 | | | |
| BENZO[A]PYRENE | ug/l | T | | | <0.9 | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | <0.9 | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | <0.9 | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | <0.9 | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | <2. | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | <2. | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHLORDANE | ug/l | T | | | <0.047 | | | |
| CHRYSENE | ug/l | T | | | <0.9 | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW28 | MW-28 | MW-28 | MW-29 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 9:30 | 7/25/2000 9:30 | 11/6/2000 12:00 | 3/23/2000 15:30 | 7/24/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | <0.9 | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | <2. | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | <2. | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | <2. | | | |
| FLUORANTHENE | ug/l | T | | | <0.9 | | | |
| FLUORENE | ug/l | T | | | <0.9 | | | |
| HEXACHLOROBENZENE | ug/l | T | | | <2. | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | <2. | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | <5. | | | |
| HEXACHLOROETHANE | ug/l | T | | | <0.9 | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | <0.9 | | | |
| ISOPHORONE | ug/l | T | | | <0.9 | | | |
| NAPHTHALENE | ug/l | T | | | <0.9 | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | <2. | | | |
| NITROBENZENE | ug/l | T | | | <0.9 | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | <2. | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | <0.9 | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | <0.9 | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | <3. | | | |
| PHENANTHRENE | ug/l | T | | | <0.9 | | | |
| PHENOL | ug/l | T | | | <0.9 | | | |
| PYRENE | ug/l | T | | | <0.9 | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | <0.095 | | | |
| AROCLOR 1221 | ug/l | T | | | <0.095 | | | |
| AROCLOR 1232 | ug/l | T | | | <0.095 | | | |
| AROCLOR 1242 | ug/l | T | | | <0.095 | | | |
| AROCLOR 1248 | ug/l | T | | | <0.095 | | | |
| AROCLOR 1254 | ug/l | T | | | <0.095 | | | |
| AROCLOR 1260 | ug/l | T | | | <0.095 | | | |
| ALDRIN | ug/l | T | | | <0.0019 | | | |
| ALPHA-BHC | ug/l | T | | | <0.0019 | | | |
| BETA-BHC | ug/l | T | | | <0.0019 | | | |
| DDT | ug/l | T | | | <0.0038 | | | |
| DELTA-BHC | ug/l | T | | | <0.0055 | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | <0.0038 | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | <0.0038 | | | |
| DIELDRIN | ug/l | T | | | <0.0038 | | | |
| ENDOSULFAN I | ug/l | T | | | <0.0019 | | | |
| ENDOSULFAN II | ug/l | T | | | <0.0038 | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW28 | MW-28 | MW-28 | MW-29 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 9:30 | 7/25/2000 9:30 | 11/6/2000 12:00 | 3/23/2000 15:30 | 7/24/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | <0.0038 | | | |
| ENDRIN | ug/l | T | | | <0.0038 | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | <0.0038 | | | |
| HEPTACHLOR | ug/l | T | | | <0.0019 | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | <0.0019 | | | |
| LINDANE | ug/l | T | | | <0.0019 | | | |
| METHOXYCHLOR | ug/l | T | | | <0.019 | | | |
| TOXAPHENE | ug/l | T | | | <0.28 | | | |
| ALUMINUM | ug/l | D | | <19.0 | | <19.0 | <77 | 58.0 J |
| ALUMINUM | ug/l | T | | | 1450 | 1600 | 6730 J | 16500 |
| ANTIMONY | ug/l | D | | <9.4 | | <9.4 | <8.4 | <9.4 |
| ANTIMONY | ug/l | T | | | <9.4 | <9.4 | <8.4 | <9.4 |
| ARSENIC | ug/l | D | | 42.2 | | 38.2 | 6.2 J | <5.0 |
| ARSENIC | ug/l | T | | | 45.4 | 39.1 | 8.4 J | 24.8 |
| BARIUM | ug/l | D | | 47.4 | | 32.4 J | 132 | 110 |
| BARIUM | ug/l | T | | | 54.5 | 38.6 | 152 | 195 |
| BERYLLIUM | ug/l | D | | | | | | |
| BERYLLIUM | ug/l | T | | | <.40 | | | |
| CADMIUM | ug/l | D | | 7.8 | | <.90 | <.81 | <.90 |
| CADMIUM | ug/l | T | | | 10.8 | 4.4 | 1.6 | 1.8 |
| CALCIUM | ug/l | D | | 891000 | | 688000 | 88500 | 58500 |
| CALCIUM | ug/l | T | | | 963000 | 681000 | 151000 | 179000 |
| CHROMIUM | ug/l | D | | <1.6 | | <1.6 | <1.7 | 2.2 J |
| CHROMIUM | ug/l | T | | | 4.2 | 3.6 | 69.4 | 59.4 |
| COPPER | ug/l | D | | <1.9 | | <1.9 | <2.9 | <1.9 |
| COPPER | ug/l | T | | | 30.8 | 22.6 | 32.1 | 60.3 |
| IRON | ug/l | D | | 19300 | | 14700 | 280 | 419 |
| IRON | ug/l | T | | | 23300 | 18500 | 17500 | 36600 |
| LEAD | ug/l | D | | <9.8 | | <9.8 | <7.9 | <9.8 |
| LEAD | ug/l | T | | | 90.6 | 104 | 45 | 66.9 |
| MAGNESIUM | ug/l | D | | 138000 | | 48300 | 31400 | 22700 |
| MAGNESIUM | ug/l | T | | | 151000 | 51200 | 63000 | 75700 |
| MANGANESE | ug/l | D | | 2450 | | 1850 | 305 | 284 |
| MANGANESE | ug/l | T | | | 2610 | 1840 | 742 | 1110 |
| MERCURY | ug/l | D | | <.048 | | <.12 | <.10 | .049 J |
| MERCURY | ug/l | T | | | <.048 | <.12 | <.10 | <.048 |
| NICKEL | ug/l | D | | 19 | | 11.9 | 3.2 J | <1.9 |
| NICKEL | ug/l | T | | | 25.7 | 15.3 | 54.3 | 60.5 |
| SELENIUM | ug/l | D | | <3.5 | | <3.5 | <4.4 | <3.5 |
| SELENIUM | ug/l | T | | | <3.5 | <3.5 | <4.4 | <3.5 UJ |
| SILVER | ug/l | D | | | | | | |
| SILVER | ug/l | T | | | <1.6 | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW28 | MW-28 | MW-28 | MW-29 | MW-29 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/25/2000 9:30 | 7/25/2000 9:30 | 11/6/2000 12:00 | 3/23/2000 15:30 | 7/24/2000 15:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SODIUM | ug/l | D | | 54500 | | 38900 | 114000 | 111000 J |
| SODIUM | ug/l | T | | | 55800 | 38500 | 112000 | 100000 J |
| THALLIUM | ug/l | D | | | | | | |
| THALLIUM | ug/l | T | | | <9.5 | | | |
| VANADIUM | ug/l | D | | <1.5 | | <1.5 | <1.9 | <1.5 |
| VANADIUM | ug/l | T | | | 3.6 J | 3.1 J | 16.4 | 39.8 |
| ZINC | ug/l | D | | 7100 | | 2870 | 4.4 J | 5.4 U |
| ZINC | ug/l | T | | | 8210 | 3160 | 775 | 1440 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | 199000 | 208000 | 160000 | 292000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | <370 | <370 | <370 | <370 |
| AMMONIA | ug/l | T | | | 472000 | 235000 | 2500 | 1500 |
| BICARBONATE | MG/L AS CA | T | | | 199 | 208 | 160 | 292 |
| BORON | ug/l | D | | 646 | | 640 | 1350 | 1310 |
| BORON | ug/l | T | | | 664 | 617 | 1300 | 1340 |
| CARBONATE | MG/L AS CA | T | | | <1.0 | <1.0 | <1.0 | <1.0 |
| CHLORIDE | ug/l | T | | | 2180000 | 834000 | 288000 | 209000 |
| CYANIDE | ug/l | T | | | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | | 1680 | 1590 | 1350 | 1020 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | <30 | <30 | <30 UJ | <30 |
| PHOSPHORUS | ug/l | T | | | 350 | 460 | 730 | 1150 |
| SULFATE | ug/l | T | | | 1480000 | 1570000 | 69000 | 40300 |
| SULFIDE | ug/l | T | | | <530 | <530 | <530 | 580 J |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | 420000 J | 260000 J | 4600 J | 3600 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | | GRAY | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 1140 | 2000 | |
| ODOR (FIELD) | NONE | N | | | | | NONE | |
| PH (FIELD) | STD UNITS | N | | | | 7.07 | 7.65 | |
| REDOX (FIELD) | MV | N | | | | -78 | 428.2 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | | 4800 | 1135 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | 524 | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | | 10.36 | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | 0 | | |
| OVACASING | NONE | N | | | | 0 | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | | 14.7 | 16.1 | |
| TOTAL WELL DEPTH | Feet | N | | | | | 56.8 | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-2-D |
|---|---|---|---|---|---|
| | | | Date | 11/6/2000 16:00 | 5/24/2000 10:15 |
| | | | Top (ft) | | |
| | | Total (T)/ | Bottom (ft) | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | |
| 2-CHLOROETHYL VINYL ETHER | ug/l | T | | | |
| 2-HEXANONE | ug/l | T | | | |
| ACETONE | ug/l | T | | | |
| ACROLEIN | ug/l | T | | | |
| ACRYLONITRILE | ug/l | T | | | |
| BENZENE | ug/l | T | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | |
| BROMOFORM | ug/l | T | | | |
| CARBON DISULFIDE | ug/l | T | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | |
| CHLOROBENZENE | ug/l | T | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | |
| CHLOROFORM | ug/l | T | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | |
| ETHYL CHLORIDE | ug/l | T | | | |
| ETHYLBENZENE | ug/l | T | | | |
| METHYL BROMIDE | ug/l | T | | | |
| METHYL CHLORIDE | ug/l | T | | | |
| METHYL ETHYL KETONE | ug/l | T | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | |
| METHYLENE CHLORIDE | ug/l | T | | | |
| STYRENE | ug/l | T | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | |
| TOLUENE | ug/l | T | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | |
| TRICHLOROETHENE | ug/l | T | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | |
| VINYL CHLORIDE | ug/l | T | | | |
| XYLENES | ug/l | T | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-2-D |
|---|---|---|---|---|---|
| | | | Date | 11/6/2000 16:00 | 5/24/2000 10:15 |
| | | | Top (ft) | | |
| | | Total (T)/ | Bottom (ft) | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 |
| 1,2-DIPHENYLHYDRAZINE | ug/l | T | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | |
| 2-CHLOROPHENOL | ug/l | T | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | |
| 2-NITROANILINE | ug/l | T | | | |
| 2-NITROPHENOL | ug/l | T | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | |
| 3-NITROANILINE | ug/l | T | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | |
| 4-CHLOROANILINE | ug/l | T | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | |
| 4-METHYLPHENOL | ug/l | T | | | |
| 4-NITROANILINE | ug/l | T | | | |
| 4-NITROPHENOL | ug/l | T | | | |
| ACENAPHTHENE | ug/l | T | | | |
| ACENAPHTHYLENE | ug/l | T | | | |
| ANTHRACENE | ug/l | T | | | |
| BENZIDINE | ug/l | T | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | |
| BENZO[A]PYRENE | ug/l | T | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | |
| CARBAZOLE | ug/l | T | | | |
| CHLORDANE | ug/l | T | | | |
| CHRYSENE | ug/l | T | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-2-D |
|---|---|---|---|---|---|
| | | | Date | 11/6/2000 16:00 | 5/24/2000 10:15 |
| | | | Top (ft) | | |
| | | Total (T)/ | Bottom (ft) | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | |
| DIBENZOFURAN | ug/l | T | | | |
| DIETHYL PHTHALATE | ug/l | T | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | |
| FLUORANTHENE | ug/l | T | | | |
| FLUORENE | ug/l | T | | | |
| HEXACHLOROBENZENE | ug/l | T | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | |
| HEXACHLOROETHANE | ug/l | T | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | |
| ISOPHORONE | ug/l | T | | | |
| NAPHTHALENE | ug/l | T | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | |
| NITROBENZENE | ug/l | T | | | |
| N-NITROSODIMETHYLAMINE | ug/l | T | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | |
| O-CRESOL | ug/l | T | | | |
| PENTACHLOROPHENOL | ug/l | T | | | |
| PHENANTHRENE | ug/l | T | | | |
| PHENOL | ug/l | T | | | |
| PYRENE | ug/l | T | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | |
| AROCLOR 1016 | ug/l | T | | | |
| AROCLOR 1221 | ug/l | T | | | |
| AROCLOR 1232 | ug/l | T | | | |
| AROCLOR 1242 | ug/l | T | | | |
| AROCLOR 1248 | ug/l | T | | | |
| AROCLOR 1254 | ug/l | T | | | |
| AROCLOR 1260 | ug/l | T | | | |
| ALDRIN | ug/l | T | | | |
| ALPHA-BHC | ug/l | T | | | |
| BETA-BHC | ug/l | T | | | |
| DDT | ug/l | T | | | |
| DELTA-BHC | ug/l | T | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | |
| DIELDRIN | ug/l | T | | | |
| ENDOSULFAN I | ug/l | T | | | |
| ENDOSULFAN II | ug/l | T | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-2-D |
|---|---|---|---|---|---|
| | | | Date | 11/6/2000 16:00 | 5/24/2000 10:15 |
| | | | Top (ft) | | |
| | | Total (T)/ | Bottom (ft) | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 |
| ENDOSULFAN SULFATE | ug/l | T | | | |
| ENDRIN | ug/l | T | | | |
| ENDRIN ALDEHYDE | ug/l | T | | | |
| HEPTACHLOR | ug/l | T | | | |
| HEPTACHLOR EPOXIDE | ug/l | T | | | |
| LINDANE | ug/l | T | | | |
| METHOXYCHLOR | ug/l | T | | | |
| TOXAPHENE | ug/l | T | | | |
| ALUMINUM | ug/l | D | | <19.0 | |
| ALUMINUM | ug/l | T | | 10200 | |
| ANTIMONY | ug/l | D | | <9.4 | |
| ANTIMONY | ug/l | T | | <9.4 | |
| ARSENIC | ug/l | D | | 6.4 J | |
| ARSENIC | ug/l | T | | 10.9 | |
| BARIUM | ug/l | D | | 112 J | |
| BARIUM | ug/l | T | | 175 | |
| BERYLLIUM | ug/l | D | | | |
| BERYLLIUM | ug/l | T | | | |
| CADMIUM | ug/l | D | | <.90 | |
| CADMIUM | ug/l | T | | 2.8 | |
| CALCIUM | ug/l | D | | 49600 | |
| CALCIUM | ug/l | T | | 113000 | |
| CHROMIUM | ug/l | D | | <1.6 | |
| CHROMIUM | ug/l | T | | 29 | |
| COPPER | ug/l | D | | <1.9 | |
| COPPER | ug/l | T | | 32.4 | |
| IRON | ug/l | D | | 490 | |
| IRON | ug/l | T | | 22300 | |
| LEAD | ug/l | D | | <9.8 | |
| LEAD | ug/l | T | | 32.7 | |
| MAGNESIUM | ug/l | D | | 19200 | |
| MAGNESIUM | ug/l | T | | 45200 | |
| MANGANESE | ug/l | D | | 306 | |
| MANGANESE | ug/l | T | | 791 | |
| MERCURY | ug/l | D | | <.12 | |
| MERCURY | ug/l | T | | <.12 | |
| NICKEL | ug/l | D | | <1.9 | |
| NICKEL | ug/l | T | | 32.5 | |
| SELENIUM | ug/l | D | | <3.5 | |
| SELENIUM | ug/l | T | | <3.5 | |
| SILVER | ug/l | D | | | |
| SILVER | ug/l | T | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-2-D |
|---|---|---|---|---|---|
| | | | Date | 11/6/2000 16:00 | 5/24/2000 10:15 |
| | | | Top (ft) | | |
| | | Total (T)/ | Bottom (ft) | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 |
| SODIUM | ug/l | D | | 96700 | |
| SODIUM | ug/l | T | | 96700 | |
| THALLIUM | ug/l | D | | | |
| THALLIUM | ug/l | T | | | |
| VANADIUM | ug/l | D | | <1.5 | |
| VANADIUM | ug/l | T | | 21.5 | |
| ZINC | ug/l | D | | 20.3 U | |
| ZINC | ug/l | T | | 952 | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 232000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <370 | |
| AMMONIA | ug/l | T | | 1500 | |
| BICARBONATE | MG/L AS CA | T | | 232 | |
| BORON | ug/l | D | | 1410 | |
| BORON | ug/l | T | | 1370 | |
| CARBONATE | MG/L AS CA | T | | <1.0 | |
| CHLORIDE | ug/l | T | | 157000 | |
| CYANIDE | ug/l | T | | <4.0 | |
| FLUORIDE | ug/l | T | | 980 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | |
| PHOSPHORUS | ug/l | T | | 510 | |
| SULFATE | ug/l | T | | 36700 | |
| SULFIDE | ug/l | T | | 560 J | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 2000 | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | TAN/SILTY | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 1310 | 12710 |
| ODOR (FIELD) | NONE | N | | | |
| PH (FIELD) | STD UNITS | N | | 8.01 | 8.1 |
| REDOX (FIELD) | MV | N | | -159 | |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 826 | 1.32 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 999 | 5 |
| DEPTH TO WATER FROM TOC | Feet | N | | | 11.45 |
| HEXANE | ug/l | T | | | |
| OVABZONE | NONE | N | | 0 | |
| OVACASING | NONE | N | | 0 | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 14.59 | 18.1 |
| TOTAL WELL DEPTH | Feet | N | | | 36.45 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-02 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 10:20 | 3/23/2001 15:10 | 4/23/2002 10:10 | 7/15/2002 17:50 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | <1. | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | <1. | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | <1. | | | |
| 2-HEXANONE | ug/l | T | | | <3. | | | |
| ACETONE | ug/l | T | | | <6. | | | |
| BENZENE | ug/l | T | | | <1. | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | <1. | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | <1. | | | |
| BROMOFORM | ug/l | T | | | <1. | | | |
| CARBON DISULFIDE | ug/l | T | | | <1. | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | <1. | | | |
| CHLOROBENZENE | ug/l | T | | | <1. | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | <1. | | | |
| CHLOROFORM | ug/l | T | | | <1. | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | <1. | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | <1. | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | <2. | | | |
| ETHYL CHLORIDE | ug/l | T | | | <2. | | | |
| ETHYLBENZENE | ug/l | T | | | <1. | | | |
| METHYL BROMIDE | ug/l | T | | | <2. UJ | | | |
| METHYL CHLORIDE | ug/l | T | | | <2. | | | |
| METHYL ETHYL KETONE | ug/l | T | | | <3. | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | <3. | | | |
| METHYLENE CHLORIDE | ug/l | T | | | <2. | | | |
| STYRENE | ug/l | T | | | <1. | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | <1. | | | |
| TOLUENE | ug/l | T | | | <1. | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | <1. | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | <1. | | | |
| TRICHLOROETHENE | ug/l | T | | | <1. | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | <2. | | | |
| VINYL CHLORIDE | ug/l | T | | | <1. | | | |
| XYLENES | ug/l | T | | | <1. | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-02 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 10:20 | 3/23/2001 15:10 | 4/23/2002 10:10 | 7/15/2002 17:50 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-02 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 10:20 | 3/23/2001 15:10 | 4/23/2002 10:10 | 7/15/2002 17:50 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | 376 | 22.3 U | | | |
| ALUMINUM | ug/l | T | | 5770 | 1370 | | | |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | | | |
| ANTIMONY | ug/l | T | | 22.4 | <9.4 | | | |
| ARSENIC | ug/l | D | | 811 | 113 | 88.2 | 141 | |
| ARSENIC | ug/l | T | | 1300 | 119 | 98.1 | 141 | |
| BARIUM | ug/l | D | | 240 | 31.2 | | | |
| BARIUM | ug/l | T | | 1440 | 39.5 | | | |
| CADMIUM | ug/l | D | | 76.9 | <.64 | <.94 U | <.94 U | |
| CADMIUM | ug/l | T | | 255 | <.90 | <.94 U | <.94 U | |
| CALCIUM | ug/l | D | | 562000 | 519000 | | | |
| CALCIUM | ug/l | T | | 862000 | 636000 | | | |
| CHROMIUM | ug/l | D | | 23.8 | <1.6 | | | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-02 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 10:20 | 3/23/2001 15:10 | 4/23/2002 10:10 | 7/15/2002 17:50 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | 186 | 22.8 | | | |
| COPPER | ug/l | D | | 3.6 J | <1.9 | | | |
| COPPER | ug/l | T | | 39.3 | <1.9 | | | |
| IRON | ug/l | D | | 11700 | 61800 | | | |
| IRON | ug/l | T | | 31600 | 73100 | | | |
| LEAD | ug/l | D | | 195 | <9.8 | <8.9 U | <8.9 U | |
| LEAD | ug/l | T | | 2010 | <9.8 | <8.9 U | <8.9 U | |
| MAGNESIUM | ug/l | D | | 23100 | 86400 | | | |
| MAGNESIUM | ug/l | T | | 89400 | 134000 | | | |
| MANGANESE | ug/l | D | | 370 | 379 J | | | |
| MANGANESE | ug/l | T | | 1420 | 916 | | | |
| MERCURY | ug/l | D | | <.12 | <.12 | | | |
| MERCURY | ug/l | T | | 0.22 | <.12 | | | |
| NICKEL | ug/l | D | | 35.2 | <1.9 | | | |
| NICKEL | ug/l | T | | 200 | 18.4 | | | |
| SELENIUM | ug/l | D | | 7.6 J | <3.5 | | | |
| SELENIUM | ug/l | T | | 6.7 J | <3.5 | | | |
| SODIUM | ug/l | D | | 18600 | 119000 | | | |
| SODIUM | ug/l | T | | 19700 | 128000 | | | |
| VANADIUM | ug/l | D | | <1.5 | <1.5 | | | |
| VANADIUM | ug/l | T | | 12.1 | 2.8 J | | | |
| ZINC | ug/l | D | | 9570 | 3.8 U | 10.8 J | <4.9 U | |
| ZINC | ug/l | T | | 22800 | 32.0 U | 12.2 J | <4.9 U | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 104000 | 162000 | | | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | <410 | | | |
| AMMONIA | ug/l | T | | 640 J | 4300 J | | | |
| BICARBONATE | MG/L AS CA | T | | 104 | 162 | | | |
| BORON | ug/l | D | | 258 | 217 | | | |
| BORON | ug/l | T | | 254 | 202 | | | |
| CARBONATE | MG/L AS CA | T | | <0.41 | <0.41 | | | |
| CHLORIDE | ug/l | T | | 19100 | 18800 | | | |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | | | |
| FLUORIDE | ug/l | T | | 2640 | 540 | | | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 150 | 150 J | | | |
| PHOSPHORUS | ug/l | T | | 1690 | 1940 | | | |
| SULFATE | ug/l | T | | 1430000 | 1840000 | | | |
| SULFIDE | ug/l | T | | 600 J | <530 | | | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 1320 J | 4300 | | | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | LT.BROWN | | | LT BLACK | BLACK |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | | 720 | 1420 |
| PH (FIELD) | STD UNITS | N | | 6.3 | 6.28 | | 7 | 6.58 |
| REDOX (FIELD) | MV | N | | -26 | -64 | | -294 | -237 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-01 | MW-02 | MW-02 | MW-02 | MW-02 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 10:20 | 3/23/2001 15:10 | 4/23/2002 10:10 | 7/15/2002 17:50 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2.27 | 2.85 | | 4402 | 356 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 250 | 75.2 | | 27.7 | 9 |
| DEPTH TO WATER FROM TOC | Feet | N | | 6.34 | 3.58 | | 4.89 | 9.18 |
| HEXANE | ug/l | T | | | <2. | | | |
| OVABZONE | NONE | N | | NIR | NIR | | | |
| OVACASING | NONE | N | | NIR | NIR | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 11 | 10.9 | | 12.31 | 12.56 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-03 | MW-04 | MW-05 | MW-06 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 15:30 | 3/27/2001 9:40 | 3/27/2001 11:30 | 3/27/2001 16:30 | 3/27/2001 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | <1. | <1. | <1. | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | <1. | <1. | <1. | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | <1. | <1. | <1. | |
| 1,1-DICHLOROETHANE | ug/l | T | | <1. | 2. J | 2. J | <1. | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | <1. | 28 | <1. | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | <1. | <1. | <1. | |
| 2-HEXANONE | ug/l | T | | <3. | <3. | <3. | <3. | |
| ACETONE | ug/l | T | | <6. | <6. | <6. | <6. | |
| BENZENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | |
| BROMOFORM | ug/l | T | | <1. | <1. | <1. | <1. | |
| CARBON DISULFIDE | ug/l | T | | <1. | <1. | <1. | <1. | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | <1. | <1. | <1. | |
| CHLOROBENZENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | <1. | <1. | <1. | |
| CHLOROFORM | ug/l | T | | <1. | <1. | <1. | <1. | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | 49. J | 18. J | 14. J | 3. J | |
| ETHYL CHLORIDE | ug/l | T | | <2. | <2. | <2. | <2. | |
| ETHYLBENZENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| METHYL BROMIDE | ug/l | T | | <2. | <2. | <2. | <2. | |
| METHYL CHLORIDE | ug/l | T | | <2. | <2. | <2. | <2. | |
| METHYL ETHYL KETONE | ug/l | T | | <3. | <3. | <3. | <3. | |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | <3. | <3. | <3. | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | <2. | <2. | <2. | |
| STYRENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| TOLUENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| TRICHLOROETHENE | ug/l | T | | <1. | <1. | <1. | <1. | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | <2. | <2. | <2. | |
| VINYL CHLORIDE | ug/l | T | | <1. | <1. | <1. | <1. | |
| XYLENES | ug/l | T | | <1. | <1. | <1. | <1. | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | <1. | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | <1. | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | <1. | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | <1. | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | <2. | | | | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-03 | MW-04 | MW-05 | MW-06 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 15:30 | 3/27/2001 9:40 | 3/27/2001 11:30 | 3/27/2001 16:30 | 3/27/2001 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | <2. | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | <1. | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | <1. | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | <20. UJ | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | <1. | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | <2. | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | <1. | | | | |
| 2-CHLOROPHENOL | ug/l | T | | <1. | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | <1. | | | | |
| 2-NITROANILINE | ug/l | T | | <2. | | | | |
| 2-NITROPHENOL | ug/l | T | | <1. | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | <3. | | | | |
| 3-NITROANILINE | ug/l | T | | <2. | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | <5. UJ | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | <2. | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | <1. | | | | |
| 4-CHLOROANILINE | ug/l | T | | <1. | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | <1. | | | | |
| 4-METHYLPHENOL | ug/l | T | | <3. | | | | |
| 4-NITROANILINE | ug/l | T | | <2. | | | | |
| 4-NITROPHENOL | ug/l | T | | <10. UJ | | | | |
| ACENAPHTHENE | ug/l | T | | <1. | | | | |
| ACENAPHTHYLENE | ug/l | T | | <1. | | | | |
| ANTHRACENE | ug/l | T | | <1. | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | <1. | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | <1. | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | <1. | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | <1. | | | | |
| BENZO[A]PYRENE | ug/l | T | | <1. | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | <1. | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | <1. | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | <1. | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | <2. | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | <2. | | | | |
| CARBAZOLE | ug/l | T | | <2. | | | | |
| CHRYSENE | ug/l | T | | <1. | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | <1. | | | | |
| DIBENZOFURAN | ug/l | T | | <1. | | | | |
| DIETHYL PHTHALATE | ug/l | T | | <2. | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | <2. UJ | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | <2. | | | | |
| FLUORANTHENE | ug/l | T | | <1. | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-03 | MW-04 | MW-05 | MW-06 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 15:30 | 3/27/2001 9:40 | 3/27/2001 11:30 | 3/27/2001 16:30 | 3/27/2001 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | <1. | | | | |
| HEXACHLOROBENZENE | ug/l | T | | <2. | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | <2. UJ | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | <5. | | | | |
| HEXACHLOROETHANE | ug/l | T | | <1. UJ | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | <1. | | | | |
| ISOPHORONE | ug/l | T | | <1. | | | | |
| NAPHTHALENE | ug/l | T | | <1. | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | <2. | | | | |
| NITROBENZENE | ug/l | T | | <1. | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | <1. | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | <1. | | | | |
| O-CRESOL | ug/l | T | | <1. | | | | |
| PENTACHLOROPHENOL | ug/l | T | | <3. | | | | |
| PHENANTHRENE | ug/l | T | | <1. | | | | |
| PHENOL | ug/l | T | | <1. UJ | | | | |
| PYRENE | ug/l | T | | <1. | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1016 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1221 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1232 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1242 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1248 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1254 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1260 | ug/l | T | | <0.095 | <0.095 | | | |
| DDT | ug/l | T | | <0.0038 | <0.0038 | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | <0.0038 | <0.0038 | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | <0.0038 | <0.0038 | | | |
| METHOXYCHLOR | ug/l | T | | <0.019 | <0.019 | | | |
| ALUMINUM | ug/l | D | | 51.7 U | <32.0 | 59.9 U | 62.6 U | 87.6 U |
| ALUMINUM | ug/l | T | | <32.0 | 33.0 J | 343 | 153 J | 45.6 J |
| ANTIMONY | ug/l | D | | <5.9 | <5.9 | <5.9 | <5.9 | <5.9 |
| ANTIMONY | ug/l | T | | <5.9 | <5.9 | <5.9 | <5.9 | <5.9 |
| ARSENIC | ug/l | D | | 16800 | 37 | 88.6 | 27.6 J | 4.7 J |
| ARSENIC | ug/l | T | | 17500 | 171 | 249 | 22.8 J | 7.1 J |
| BARIUM | ug/l | D | | 66.6 | 9 | 19.2 | 46.8 | 66.6 |
| BARIUM | ug/l | T | | 66.6 | 10.8 | 23.8 | 42.5 | 72.5 |
| CADMIUM | ug/l | D | | <.64 | <.64 | <.64 | <.64 | <.64 |
| CADMIUM | ug/l | T | | <.64 | <.64 | <.64 | <.64 | <.64 |
| CALCIUM | ug/l | D | | 514000 | 578000 | 340000 | 1270000 | 203000 |
| CALCIUM | ug/l | T | | 565000 | 592000 | 584000 | 1200000 | 217000 |
| CHROMIUM | ug/l | D | | <1.7 | <1.7 | <1.7 | <1.7 | <1.7 |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-03 | MW-04 | MW-05 | MW-06 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 15:30 | 3/27/2001 9:40 | 3/27/2001 11:30 | 3/27/2001 16:30 | 3/27/2001 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | <1.7 | <1.7 | <1.7 | <1.7 | <1.7 |
| COPPER | ug/l | D | | <2.4 | <2.4 | <2.4 | <2.4 | <2.4 |
| COPPER | ug/l | T | | <2.4 | <2.4 | <2.4 | <2.4 | <2.4 |
| IRON | ug/l | D | | 38700 | 65100 | 51300 | 16600 J | 13400 |
| IRON | ug/l | T | | 40300 | 94400 | 74600 | 13400 J | 18200 |
| LEAD | ug/l | D | | <8.8 | <8.8 | <8.8 | <8.8 | <8.8 |
| LEAD | ug/l | T | | <8.8 | <8.8 | <8.8 | <8.8 | <8.8 |
| MAGNESIUM | ug/l | D | | 72600 | 97500 | 570000 | 126000 | 29400 |
| MAGNESIUM | ug/l | T | | 73300 | 101000 | 549000 | 128000 | 29600 |
| MANGANESE | ug/l | D | | 1860 | 842 | 1750 | 2880 | 642 |
| MANGANESE | ug/l | T | | 1950 | 867 | 1750 | 2780 | 680 |
| MERCURY | ug/l | D | | .031 U | <.026 | .047 U | <.026 | .041 U |
| MERCURY | ug/l | T | | .027 J | <.026 | .026 J | .047 J | .034 J |
| NICKEL | ug/l | D | | <1.6 | 40.6 | 18.2 | <1.6 | <1.6 |
| NICKEL | ug/l | T | | <1.6 | 44.7 | 17.5 | 2.0 J | <1.6 |
| SELENIUM | ug/l | D | | <4.3 | <4.3 | <4.3 | <4.3 | <4.3 |
| SELENIUM | ug/l | T | | <4.3 | <4.3 | <4.3 | <4.3 | <4.3 |
| SODIUM | ug/l | D | | 43800 | 45200 J | 89900 | 1130000 | 63000 |
| SODIUM | ug/l | T | | 40200 | 39100 J | 88500 | 1080000 | 62700 |
| VANADIUM | ug/l | D | | <1.6 | 2.0 J | 2.2 J | <1.6 | <1.6 |
| VANADIUM | ug/l | T | | <1.6 | <1.6 | <1.6 | <1.6 | <1.6 |
| ZINC | ug/l | D | | 5.8 U | 729 | 7860 | 8.8 U | 5.4 U |
| ZINC | ug/l | T | | <3.2 | 1090 | 8960 | <3.2 | <3.2 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 247000 | 235000 | 432000 | 228000 | 239000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | <410 | <410 | <410 | <410 |
| AMMONIA | ug/l | T | | 7400 | 9600 | 81200 | 2900 | 2600 |
| BICARBONATE | MG/L AS CA | T | | 247 | 235 | 432 | 228 | 239 |
| BORON | ug/l | D | | 406 | 666 | 928 | 3360 | 252 |
| BORON | ug/l | T | | 412 | 661 | 939 | 3180 | 264 |
| CARBONATE | MG/L AS CA | T | | <0.41 | <0.41 | <0.41 | <0.41 | <0.41 |
| CHLORIDE | ug/l | T | | 22500 | 25100 | 76000 | 3180000 | 106000 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 1720 | 1560 | 4480 | 8000 | 1890 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | <30 | <30 | 1420 | 86 J |
| PHOSPHORUS | ug/l | T | | 14000 J | 680 | 1450 | 280 | 200 |
| SULFATE | ug/l | T | | 1540000 | 1870000 | 3560000 | 1650000 | 430000 |
| SULFIDE | ug/l | T | | 1120 J | <530 | <530 | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 7700 | 8000 | 98000 | 2700 | 3400 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | | ORANGE | | LT.ORANGE |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | | | |
| PH (FIELD) | STD UNITS | N | | 6.21 | 6.12 | 6.1 | | 6.4 |
| REDOX (FIELD) | MV | N | | -49 | -58 | -25 | | -73 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-03 | MW-04 | MW-05 | MW-06 | MW-07 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 15:30 | 3/27/2001 9:40 | 3/27/2001 11:30 | 3/27/2001 16:30 | 3/27/2001 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2.42 | 2.97 | 5.19 | | 1.51 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 49.1 | 662 | 634 | | 131 |
| DEPTH TO WATER FROM TOC | Feet | N | | | 8.11 | | | 2.94 |
| HEXANE | ug/l | T | | <2. | <2. | <2. | <2. | |
| OVABZONE | NONE | N | | NIR | NIR | NIR | | NIR |
| OVACASING | NONE | N | | NIR | NIR | NIR | | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.3 | 12.6 | 10.2 | | 9 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-08 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2001 9:40 | 4/23/2002 12:15 | 7/15/2002 16:45 | 10/1/2002 9:00 | 3/23/2001 10:05 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | 610 |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | <1. |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | <1. |
| 2-HEXANONE | ug/l | T | | | | | | <3. |
| ACETONE | ug/l | T | | | | | | <6. |
| BENZENE | ug/l | T | | | | | | <1. |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | <1. |
| BROMOFORM | ug/l | T | | | | | | <1. |
| CARBON DISULFIDE | ug/l | T | | | | | | <1. |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | <1. |
| CHLOROBENZENE | ug/l | T | | | | | | <1. |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | <1. |
| CHLOROFORM | ug/l | T | | | | | | <1. |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | <1. |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | <2. |
| ETHYL CHLORIDE | ug/l | T | | | | | | 7 |
| ETHYLBENZENE | ug/l | T | | | | | | <1. |
| METHYL BROMIDE | ug/l | T | | | | | | <2. UJ |
| METHYL CHLORIDE | ug/l | T | | | | | | <2. |
| METHYL ETHYL KETONE | ug/l | T | | | | | | <3. |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | <3. |
| METHYLENE CHLORIDE | ug/l | T | | | | | | <2. |
| STYRENE | ug/l | T | | | | | | <1. |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | <1. |
| TOLUENE | ug/l | T | | | | | | <1. |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | <1. |
| TRICHLOROETHENE | ug/l | T | | | | | | <1. |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | <2. |
| VINYL CHLORIDE | ug/l | T | | | | | | <1. |
| XYLENES | ug/l | T | | | | | | <1. |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-08 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2001 9:40 | 4/23/2002 12:15 | 7/15/2002 16:45 | 10/1/2002 9:00 | 3/23/2001 10:05 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-08 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2001 9:40 | 4/23/2002 12:15 | 7/15/2002 16:45 | 10/1/2002 9:00 | 3/23/2001 10:05 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | 29.0 U | | | | 44.2 U |
| ALUMINUM | ug/l | T | | 185 U | | | | 113 U |
| ANTIMONY | ug/l | D | | <9.4 | | | | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | | | | <9.4 |
| ARSENIC | ug/l | D | | 16.3 | 28.3 | 30.8 | | 83.9 |
| ARSENIC | ug/l | T | | 20.9 | 541 | 34.3 | | 144 |
| BARIUM | ug/l | D | | 33.5 | | | | 25.2 |
| BARIUM | ug/l | T | | 50.1 | | | | 33.5 |
| CADMIUM | ug/l | D | | <.64 | <.94 U | <.94 U | | <.64 |
| CADMIUM | ug/l | T | | <.90 | <.94 U | <.94 U | | <.90 |
| CALCIUM | ug/l | D | | 619000 | | | | 580000 |
| CALCIUM | ug/l | T | | 605000 | | | | 591000 |
| CHROMIUM | ug/l | D | | <1.6 | | | | <1.6 |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-08 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2001 9:40 | 4/23/2002 12:15 | 7/15/2002 16:45 | 10/1/2002 9:00 | 3/23/2001 10:05 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | 2.4 J | | | | <1.7 |
| COPPER | ug/l | D | | <1.9 | | | | <1.9 |
| COPPER | ug/l | T | | <1.9 | | | | <1.9 |
| IRON | ug/l | D | | 65400 | | | | 80200 |
| IRON | ug/l | T | | 78300 | | | | 118000 |
| LEAD | ug/l | D | | <9.8 | <8.9 U | <8.9 U | | <9.8 |
| LEAD | ug/l | T | | <9.8 | 129 | <8.9 U | | <9.8 |
| MAGNESIUM | ug/l | D | | 73300 | | | | 217000 |
| MAGNESIUM | ug/l | T | | 71900 | | | | 210000 |
| MANGANESE | ug/l | D | | 1830 J | | | | 2930 J |
| MANGANESE | ug/l | T | | 1920 | | | | 3050 |
| MERCURY | ug/l | D | | <.12 | | | | <.12 |
| MERCURY | ug/l | T | | <.12 | | | | <.12 |
| NICKEL | ug/l | D | | <1.9 | | | | 63.8 |
| NICKEL | ug/l | T | | 3.1 J | | | | 64.5 |
| SELENIUM | ug/l | D | | <3.5 | | | | <3.5 |
| SELENIUM | ug/l | T | | <3.5 | | | | <3.5 |
| SODIUM | ug/l | D | | 209000 | | | | 637000 |
| SODIUM | ug/l | T | | 211000 | | | | 651000 |
| VANADIUM | ug/l | D | | <1.5 | | | | <1.5 |
| VANADIUM | ug/l | T | | <1.5 | | | | <1.5 |
| ZINC | ug/l | D | | <3.1 | 6.5 J | <4.9 U | | 22700 |
| ZINC | ug/l | T | | 4.7 U | 393 | <4.9 U | | 24000 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 255000 | | | | 361000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | | | | <410 |
| AMMONIA | ug/l | T | | 1800 J | | | | 44200 J |
| BICARBONATE | MG/L AS CA | T | | 255 | | | | 361 |
| BORON | ug/l | D | | 848 | | | | 1490 |
| BORON | ug/l | T | | 794 | | | | 1430 |
| CARBONATE | MG/L AS CA | T | | <0.41 | | | | <0.41 |
| CHLORIDE | ug/l | T | | 380000 | | | | 720000 |
| CYANIDE | ug/l | T | | <4.0 | | | | <4.0 |
| FLUORIDE | ug/l | T | | 4670 | | | | 10000 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | | | | 170 J |
| PHOSPHORUS | ug/l | T | | 10700 | | | | 5050 |
| SULFATE | ug/l | T | | 1820000 | | | | 2780000 |
| SULFIDE | ug/l | T | | <530 | | | | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 2800 | | | | 40000 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | CLEAR | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 870 | 1160 | |
| PH (FIELD) | STD UNITS | N | | 6.26 | | 6.7 | 6.59 | 6.25 |
| REDOX (FIELD) | MV | N | | -110 | | -361 | -140 | -63 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-08 | MW-08 | MW-08 | MW-08 | MW-09 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/23/2001 9:40 | 4/23/2002 12:15 | 7/15/2002 16:45 | 10/1/2002 9:00 | 3/23/2001 10:05 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 4.03 | | 6906 | 435 | 7.16 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 191 | | 6.51 | 11.2 | 212 |
| DEPTH TO WATER FROM TOC | Feet | N | | 5.01 | | 5.82 | 8.9 | 2.06 |
| HEXANE | ug/l | T | | | | | | <2. |
| OVABZONE | NONE | N | | NIR | | | | NIR |
| OVACASING | NONE | N | | NIR | | | | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 10.4 | | 14.2 | 13.31 | 9.9 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-09 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 4/23/2002 12:40 | 7/15/2002 17:10 | 10/1/2002 9:55 | 3/23/2001 14:00 | 4/23/2002 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | <1. | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | <1. | |
| 2-HEXANONE | ug/l | T | | | | | <3. | |
| ACETONE | ug/l | T | | | | | <6. | |
| BENZENE | ug/l | T | | | | | <1. | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | <1. | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | <1. | |
| BROMOFORM | ug/l | T | | | | | <1. | |
| CARBON DISULFIDE | ug/l | T | | | | | <1. | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | <1. | |
| CHLOROBENZENE | ug/l | T | | | | | <1. | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | <1. | |
| CHLOROFORM | ug/l | T | | | | | <1. | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | <1. | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | <2. | |
| ETHYL CHLORIDE | ug/l | T | | | | | <2. | |
| ETHYLBENZENE | ug/l | T | | | | | <1. | |
| METHYL BROMIDE | ug/l | T | | | | | <2. UJ | |
| METHYL CHLORIDE | ug/l | T | | | | | <2. | |
| METHYL ETHYL KETONE | ug/l | T | | | | | <3. | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | <3. | |
| METHYLENE CHLORIDE | ug/l | T | | | | | <2. | |
| STYRENE | ug/l | T | | | | | <1. | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | <1. | |
| TOLUENE | ug/l | T | | | | | <1. | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | <1. | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | |
| TRICHLOROETHENE | ug/l | T | | | | | <1. | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | <2. | |
| VINYL CHLORIDE | ug/l | T | | | | | <1. | |
| XYLENES | ug/l | T | | | | | <1. | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-09 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 4/23/2002 12:40 | 7/15/2002 17:10 | 10/1/2002 9:55 | 3/23/2001 14:00 | 4/23/2002 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-09 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 4/23/2002 12:40 | 7/15/2002 17:10 | 10/1/2002 9:55 | 3/23/2001 14:00 | 4/23/2002 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | | | | 22.4 U | |
| ALUMINUM | ug/l | T | | | | | 84.3 U | |
| ANTIMONY | ug/l | D | | | | | <9.4 | |
| ANTIMONY | ug/l | T | | | | | <9.4 | |
| ARSENIC | ug/l | D | | 11.6 | 162 | | 323 | 17.6 |
| ARSENIC | ug/l | T | | 182 | 179 | | 553 | 228 |
| BARIUM | ug/l | D | | | | | 79 | |
| BARIUM | ug/l | T | | | | | 112 | |
| CADMIUM | ug/l | D | | <.94 U | <.94 U | | <.64 | <.94 U |
| CADMIUM | ug/l | T | | <.94 U | <.94 U | | <.90 | <.94 U |
| CALCIUM | ug/l | D | | | | | 624000 | |
| CALCIUM | ug/l | T | | | | | 615000 | |
| CHROMIUM | ug/l | D | | | | | <1.6 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-09 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 4/23/2002 12:40 | 7/15/2002 17:10 | 10/1/2002 9:55 | 3/23/2001 14:00 | 4/23/2002 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | | | | 13.1 | |
| COPPER | ug/l | D | | | | | <1.9 | |
| COPPER | ug/l | T | | | | | <1.9 | |
| IRON | ug/l | D | | | | | 58400 | |
| IRON | ug/l | T | | | | | 91300 | |
| LEAD | ug/l | D | | <8.9 U | <8.9 U | | <9.8 | <8.9 U |
| LEAD | ug/l | T | | <8.9 U | <8.9 U | | <9.8 | <8.9 U |
| MAGNESIUM | ug/l | D | | | | | 42100 | |
| MAGNESIUM | ug/l | T | | | | | 41600 | |
| MANGANESE | ug/l | D | | | | | 633 J | |
| MANGANESE | ug/l | T | | | | | 669 | |
| MERCURY | ug/l | D | | | | | <.12 | |
| MERCURY | ug/l | T | | | | | <.12 | |
| NICKEL | ug/l | D | | | | | <1.9 | |
| NICKEL | ug/l | T | | | | | 7.7 J | |
| SELENIUM | ug/l | D | | | | | <3.5 | |
| SELENIUM | ug/l | T | | | | | <3.5 | |
| SODIUM | ug/l | D | | | | | 491000 | |
| SODIUM | ug/l | T | | | | | 538000 | |
| VANADIUM | ug/l | D | | | | | <1.5 | |
| VANADIUM | ug/l | T | | | | | <1.5 | |
| ZINC | ug/l | D | | 1190 | 5390 | | 4.8 U | 9.3 J |
| ZINC | ug/l | T | | 4110 | 7410 | | 12.6 U | 9.9 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | | | 237000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | | | <410 | |
| AMMONIA | ug/l | T | | | | | 46500 J | |
| BICARBONATE | MG/L AS CA | T | | | | | 237 | |
| BORON | ug/l | D | | | | | 347 | |
| BORON | ug/l | T | | | | | 332 | |
| CARBONATE | MG/L AS CA | T | | | | | <0.41 | |
| CHLORIDE | ug/l | T | | | | | 565000 | |
| CYANIDE | ug/l | T | | | | | <4.0 | |
| FLUORIDE | ug/l | T | | | | | 950 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | | | 190 | |
| PHOSPHORUS | ug/l | T | | | | | 15600 | |
| SULFATE | ug/l | T | | | | | 2410000 | |
| SULFIDE | ug/l | T | | | | | <530 | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | | | 46000 | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | LT BROWN | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 760 | | |
| PH (FIELD) | STD UNITS | N | | | | 6.53 | 6.47 | |
| REDOX (FIELD) | MV | N | | | | -189 | -122 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-09 | MW-09 | MW-09 | MW-10 | MW-10 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 4/23/2002 12:40 | 7/15/2002 17:10 | 10/1/2002 9:55 | 3/23/2001 14:00 | 4/23/2002 14:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | | 2.27 | 5.66 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | 36.7 | 485 | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | 6.2 | 4.21 | |
| HEXANE | ug/l | T | | | | | <2. | |
| OVABZONE | NONE | N | | | | | NIR | |
| OVACASING | NONE | N | | | | | NIR | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | | 12.87 | 11.3 | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-10 | MW-11 | MW-11 | MW-11 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 18:40 | 10/1/2002 14:00 | 3/22/2001 9:15 | 7/16/2002 11:40 | 10/2/2002 8:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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~7766457.xls:2001-2002
12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-10 | MW-11 | MW-11 | MW-11 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 18:40 | 10/1/2002 14:00 | 3/22/2001 9:15 | 7/16/2002 11:40 | 10/2/2002 8:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



~7766457.xls:2001-2002
12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-10 | MW-11 | MW-11 | MW-11 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 18:40 | 10/1/2002 14:00 | 3/22/2001 9:15 | 7/16/2002 11:40 | 10/2/2002 8:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | | | <19.0 | | |
| ALUMINUM | ug/l | T | | | | 50.1 J | | |
| ANTIMONY | ug/l | D | | | | <9.4 | | |
| ANTIMONY | ug/l | T | | | | <9.4 | | |
| ARSENIC | ug/l | D | | 319 | 411 | 12.8 | 33.4 | |
| ARSENIC | ug/l | T | | 329 | 411 | 23.9 | 209 | |
| BARIUM | ug/l | D | | | | 25.2 | | |
| BARIUM | ug/l | T | | | | 25.8 | | |
| CADMIUM | ug/l | D | | <.94 U | <.94 U | <.90 | | |
| CADMIUM | ug/l | T | | <.94 U | <.94 U | <.90 | | |
| CALCIUM | ug/l | D | | | | 618000 | | |
| CALCIUM | ug/l | T | | | | 615000 | | |
| CHROMIUM | ug/l | D | | | | <1.6 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-10 | MW-11 | MW-11 | MW-11 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 18:40 | 10/1/2002 14:00 | 3/22/2001 9:15 | 7/16/2002 11:40 | 10/2/2002 8:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | | | 2.4 J | | |
| COPPER | ug/l | D | | | | <1.9 | | |
| COPPER | ug/l | T | | | | 2.5 J | | |
| IRON | ug/l | D | | | | 11800 | | |
| IRON | ug/l | T | | | | 18600 | | |
| LEAD | ug/l | D | | <8.9 U | <8.9 U | <9.8 | | |
| LEAD | ug/l | T | | <8.9 U | <8.9 U | <9.8 | | |
| MAGNESIUM | ug/l | D | | | | 22900 | | |
| MAGNESIUM | ug/l | T | | | | 22700 | | |
| MANGANESE | ug/l | D | | | | 652 | | |
| MANGANESE | ug/l | T | | | | 634 | | |
| MERCURY | ug/l | D | | | | <.12 | | |
| MERCURY | ug/l | T | | | | <.12 | | |
| NICKEL | ug/l | D | | | | 3.9 J | | |
| NICKEL | ug/l | T | | | | 4.5 J | | |
| SELENIUM | ug/l | D | | | | <3.5 | | |
| SELENIUM | ug/l | T | | | | <3.5 | | |
| SODIUM | ug/l | D | | | | 47300 | | |
| SODIUM | ug/l | T | | | | 46500 | | |
| VANADIUM | ug/l | D | | | | <1.5 | | |
| VANADIUM | ug/l | T | | | | <1.5 | | |
| ZINC | ug/l | D | | 6.2 J | <4.9 U | 4810 | | |
| ZINC | ug/l | T | | 10.6 J | <4.9 U | 5040 | | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | | 117000 | | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | | <410 | | |
| AMMONIA | ug/l | T | | | | 1200 | | |
| BICARBONATE | MG/L AS CA | T | | | | 117 | | |
| BORON | ug/l | D | | | | 540 | | |
| BORON | ug/l | T | | | | 522 | | |
| CARBONATE | MG/L AS CA | T | | | | <0.41 | | |
| CHLORIDE | ug/l | T | | | | 90000 | | |
| CYANIDE | ug/l | T | | | | <4.0 | | |
| FLUORIDE | ug/l | T | | | | 530 | | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | | 170 | | |
| PHOSPHORUS | ug/l | T | | | | 700 | | |
| SULFATE | ug/l | T | | | | 1480000 | | |
| SULFIDE | ug/l | T | | | | 600 J | | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | | 1800 | | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | LT.BROWN | BROWN | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 750 | 920 | | 340 | 350 |
| PH (FIELD) | STD UNITS | N | | 6.94 | 6.7 | 6.09 | 6.97 | 6.75 |
| REDOX (FIELD) | MV | N | | -326 | -176 | -23 | -456 | -92 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-10 | MW-11 | MW-11 | MW-11 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 18:40 | 10/1/2002 14:00 | 3/22/2001 9:15 | 7/16/2002 11:40 | 10/2/2002 8:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 4097 | 293 | 2.62 | 2465 | 320 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 5.53 | 9.2 | 194 | 309 | 21.3 |
| DEPTH TO WATER FROM TOC | Feet | N | | 6.44 | 8.15 | 4.07 | 8.11 | 8.86 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | NIR | | |
| OVACASING | NONE | N | | | | NIR | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.95 | 15.69 | 11.6 | 13.46 | 13.02 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-14 | MW-14 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 13:00 | 3/26/2001 9:20 | 3/26/2001 11:30 | 3/28/2001 10:30 | 3/26/2001 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-14 | MW-14 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 13:00 | 3/26/2001 9:20 | 3/26/2001 11:30 | 3/28/2001 10:30 | 3/26/2001 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-14 | MW-14 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 13:00 | 3/26/2001 9:20 | 3/26/2001 11:30 | 3/28/2001 10:30 | 3/26/2001 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | <0.095 |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | <0.019 |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | <0.019 |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | <0.019 |
| METHOXYCHLOR | ug/l | T | | | | | | <0.093 |
| ALUMINUM | ug/l | D | | 32.1 U | 576 J | | <32.0 | 55.9 U |
| ALUMINUM | ug/l | T | | 35.9 U | 499 J | | 141 J | 121 U |
| ANTIMONY | ug/l | D | | <9.4 | 22.5 | | <5.9 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | 21 | | <5.9 | <9.4 |
| ARSENIC | ug/l | D | | 45.5 | 189 | | 10.9 | 519 |
| ARSENIC | ug/l | T | | 145 | 189 | | 30.9 | 1010 J |
| BARIUM | ug/l | D | | 82.4 | 138 | | 5 | 31.3 |
| BARIUM | ug/l | T | | 105 | 134 | | 5.3 | 39.4 |
| CADMIUM | ug/l | D | | <.64 | <.90 | | <.64 | 2.4 |
| CADMIUM | ug/l | T | | <.90 | 1.1 J | | <.64 | 5.7 J |
| CALCIUM | ug/l | D | | 754000 R | 4300 | | 646000 | 422000 |
| CALCIUM | ug/l | T | | 341000 R | 4770 | | 624000 | 439000 |
| CHROMIUM | ug/l | D | | <1.6 | 15.1 | | <1.7 | <1.6 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-14 | MW-14 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 13:00 | 3/26/2001 9:20 | 3/26/2001 11:30 | 3/28/2001 10:30 | 3/26/2001 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | <1.7 | 17 | | <1.7 | <1.7 |
| COPPER | ug/l | D | | <1.9 | 75.6 | | <2.4 | <1.9 |
| COPPER | ug/l | T | | <1.9 | 81.1 | | <2.4 | 21.3 J |
| IRON | ug/l | D | | 36400 | 2520 | | 8860 | 12400 |
| IRON | ug/l | T | | 49100 | 2480 | | 26700 | 24900 J |
| LEAD | ug/l | D | | <9.8 | 53.2 | | <8.8 | <9.8 |
| LEAD | ug/l | T | | <9.8 | 53 | | <8.8 | <9.8 |
| MAGNESIUM | ug/l | D | | 80600 R | 73.8 J | | 26200 J | 74800 |
| MAGNESIUM | ug/l | T | | 28600 R | 308 | | 23300 J | 70400 |
| MANGANESE | ug/l | D | | 1470 R | 26.4 J | | 256 | 499 J |
| MANGANESE | ug/l | T | | 813 R | 27.2 | | 250 | 513 |
| MERCURY | ug/l | D | | <.12 | <1.2 | | <.026 | <.12 |
| MERCURY | ug/l | T | | <.12 | <1.2 | | .028 J | <.12 |
| NICKEL | ug/l | D | | <1.9 | 59.2 | | 3.7 J | 3.9 U |
| NICKEL | ug/l | T | | <1.6 UJ | 72.8 | | 4.5 J | 3.7 J |
| SELENIUM | ug/l | D | | <3.5 | 20.4 J | | <4.3 | <3.5 |
| SELENIUM | ug/l | T | | <3.5 | 12.3 J | | <4.3 | <3.5 |
| SODIUM | ug/l | D | | 91000 R | 2550000 | | 113000 | 38700 |
| SODIUM | ug/l | T | | 41900 R | 2320000 | | 119000 | 36200 |
| VANADIUM | ug/l | D | | <1.5 | 132 | | <1.6 | <1.5 |
| VANADIUM | ug/l | T | | <1.5 | 129 | | <1.6 | <1.5 |
| ZINC | ug/l | D | | 15.8 U | 46.4 | | 834 | 1360 |
| ZINC | ug/l | T | | 14.3 U | 55.1 | | 1080 | 1980 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 218000 | 4960000 | | 153000 | 242000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | 3010000 | | <410 | <410 |
| AMMONIA | ug/l | T | | 11600 J | 17200 J | | 2500 | 1900 J |
| BICARBONATE | MG/L AS CA | T | | 218 | <0.41 | | 153 | 242 |
| BORON | ug/l | D | | 554 J | 727 | | 181 | 486 |
| BORON | ug/l | T | | 400 J | 671 | | 162 | 451 |
| CARBONATE | MG/L AS CA | T | | <0.41 | 3910 | | <0.41 | <0.41 |
| CHLORIDE | ug/l | T | | 294000 | 194000 | | 273000 | 15600 |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 810 | 3400 | | 690 | 9920 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | 300 | | <30 | 31 J |
| PHOSPHORUS | ug/l | T | | 1760 J | 12200 J | | 210 | 11600 J |
| SULFATE | ug/l | T | | 370000 | 300000 | | 1530000 | 1110000 |
| SULFIDE | ug/l | T | | <530 | 44800 | | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 12500 | 24000 | | 2800 J | 2600 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | | CLEAR | ORANGE | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | 1370 | 1900 | |
| PH (FIELD) | STD UNITS | N | | 6.19 | 10.3 | 5.31 | 5.81 | 6.02 |
| REDOX (FIELD) | MV | N | | -38 | -264 | 41 | 26 | -30 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-12 | MW-13 | MW-14 | MW-14 | MW-15 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 13:00 | 3/26/2001 9:20 | 3/26/2001 11:30 | 3/28/2001 10:30 | 3/26/2001 14:00 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 1.48 | 8.44 | 2.23 | 3.11 | 2.62 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 362 | 15.2 | 172 | 797 | 301 |
| DEPTH TO WATER FROM TOC | Feet | N | | | 7.7 | | | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | NIR | NIR | NIR | NIR | NIR |
| OVACASING | NONE | N | | NIR | NIR | NIR | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 10.8 | 12.8 | 12.1 | 13.3 | 11.1 |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-16 | MW-17 | MW-18 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 14:00 | 3/26/2001 13:30 | 3/26/2001 11:30 | 3/23/2001 12:55 | 4/23/2002 10:51 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | <1. | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | <1. | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | <1. | |
| 2-HEXANONE | ug/l | T | | | | | <3. | |
| ACETONE | ug/l | T | | | | | <6. | |
| BENZENE | ug/l | T | | | | | <1. | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | <1. | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | <1. | |
| BROMOFORM | ug/l | T | | | | | <1. | |
| CARBON DISULFIDE | ug/l | T | | | | | <1. | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | <1. | |
| CHLOROBENZENE | ug/l | T | | | | | <1. | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | <1. | |
| CHLOROFORM | ug/l | T | | | | | <1. | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | <1. | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | <2. | |
| ETHYL CHLORIDE | ug/l | T | | | | | <2. | |
| ETHYLBENZENE | ug/l | T | | | | | <1. | |
| METHYL BROMIDE | ug/l | T | | | | | <2. UJ | |
| METHYL CHLORIDE | ug/l | T | | | | | <2. | |
| METHYL ETHYL KETONE | ug/l | T | | | | | <3. | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | <3. | |
| METHYLENE CHLORIDE | ug/l | T | | | | | <2. | |
| STYRENE | ug/l | T | | | | | <1. | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | <1. | |
| TOLUENE | ug/l | T | | | | | <1. | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | <1. | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | <1. | |
| TRICHLOROETHENE | ug/l | T | | | | | <1. | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | <2. | |
| VINYL CHLORIDE | ug/l | T | | | | | <1. | |
| XYLENES | ug/l | T | | | | | <1. | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-16 | MW-17 | MW-18 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 14:00 | 3/26/2001 13:30 | 3/26/2001 11:30 | 3/23/2001 12:55 | 4/23/2002 10:51 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-16 | MW-17 | MW-18 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 14:00 | 3/26/2001 13:30 | 3/26/2001 11:30 | 3/23/2001 12:55 | 4/23/2002 10:51 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | <0.094 | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | <0.019 | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | <0.019 | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | <0.019 | | | | |
| METHOXYCHLOR | ug/l | T | | <0.095 | | | | |
| ALUMINUM | ug/l | D | | 65.7 U | 27.0 U | 78.4 U | 39.6 U | |
| ALUMINUM | ug/l | T | | 152 U | 101 U | 385 | 85.7 U | |
| ANTIMONY | ug/l | D | | <9.4 | <9.4 | <9.4 | <9.4 | |
| ANTIMONY | ug/l | T | | <9.4 | <9.4 | <9.4 | <9.4 | |
| ARSENIC | ug/l | D | | 534 | 12.4 | <5.0 | 91.7 | 120 |
| ARSENIC | ug/l | T | | 1420 J | 14.6 | 6.8 J | 127 | 873 |
| BARIUM | ug/l | D | | 31.1 | 78.6 | 315 | 13.8 | |
| BARIUM | ug/l | T | | 45.9 | 79.5 | 672 | 16.9 | |
| CADMIUM | ug/l | D | | 2.5 | 2.5 | 72.6 | <.64 | <.94 U |
| CADMIUM | ug/l | T | | 8.0 J | 3.3 | 99.9 | <.90 | 2.1 J |
| CALCIUM | ug/l | D | | 436000 | 263000 | 223000 | 462000 | |
| CALCIUM | ug/l | T | | 422000 | 247000 | 211000 | 536000 | |
| CHROMIUM | ug/l | D | | <1.6 | <1.6 | <1.6 | <1.6 | |

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DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-16 | MW-17 | MW-18 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 14:00 | 3/26/2001 13:30 | 3/26/2001 11:30 | 3/23/2001 12:55 | 4/23/2002 10:51 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | <1.7 | <1.7 | <1.7 | <1.7 | |
| COPPER | ug/l | D | | <1.9 | 6.5 J | <1.9 | <1.9 | |
| COPPER | ug/l | T | | 27.4 J | <1.9 | <1.9 | <1.9 | |
| IRON | ug/l | D | | 12800 | 3030 | 68900 | 35600 | |
| IRON | ug/l | T | | 35800 J | 3680 | 75000 | 47900 | |
| LEAD | ug/l | D | | <9.8 | <9.8 | 48.4 | <9.8 | <8.9 U |
| LEAD | ug/l | T | | <9.8 | <9.8 | 191 | <9.8 | 94.6 |
| MAGNESIUM | ug/l | D | | 77300 J | 101000 | 79900 | 45900 | |
| MAGNESIUM | ug/l | T | | 61000 J | 92300 | 74200 | 49500 | |
| MANGANESE | ug/l | D | | 514 J | 767 J | 912 J | 1470 J | |
| MANGANESE | ug/l | T | | 492 | 759 | 916 | 1690 | |
| MERCURY | ug/l | D | | <.12 | <.12 | <.12 | <.12 | |
| MERCURY | ug/l | T | | <.12 | <.12 | <.12 | <.12 | |
| NICKEL | ug/l | D | | 3.4 U | 18.2 | 31.4 | 103 | |
| NICKEL | ug/l | T | | 3.7 J | 20.2 | 31.4 | 120 | |
| SELENIUM | ug/l | D | | <3.5 | 4.6 J | <3.5 | <3.5 | |
| SELENIUM | ug/l | T | | <3.5 | <3.5 | <3.5 | <3.5 | |
| SODIUM | ug/l | D | | 40100 J | 23700 | 23400 | 747000 | |
| SODIUM | ug/l | T | | 32700 J | 21800 | 22600 | 900000 | |
| VANADIUM | ug/l | D | | <1.5 | <1.5 | <1.5 | <1.5 | |
| VANADIUM | ug/l | T | | <1.5 | <1.5 | <1.5 | <1.5 | |
| ZINC | ug/l | D | | 1420 | 7320 | 87200 | 4220 | 612 |
| ZINC | ug/l | T | | 2330 | 6900 | 97500 | 4870 | 5070 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 230000 | 244000 | 60100 | 345000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | <410 | <410 | <410 | |
| AMMONIA | ug/l | T | | 1900 J | 44100 J | 16600 J | 8500 J | |
| BICARBONATE | MG/L AS CA | T | | 230 | 244 | 60.1 | 345 | |
| BORON | ug/l | D | | 504 J | 532 | 546 | 832 | |
| BORON | ug/l | T | | 429 J | 483 | 515 | 888 | |
| CARBONATE | MG/L AS CA | T | | <0.41 | <0.41 | <0.41 | <0.41 | |
| CHLORIDE | ug/l | T | | 15200 | 620000 | 506000 | 123000 | |
| CYANIDE | ug/l | T | | <4.0 | <4.0 | <4.0 | <4.0 | |
| FLUORIDE | ug/l | T | | 9500 | 1600 | 680 | 10300 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | 110 | <30 | 150 J | |
| PHOSPHORUS | ug/l | T | | 12900 J | 270 U | 220 U | 1250 | |
| SULFATE | ug/l | T | | 1130000 | 200000 | 300000 | 2980000 | |
| SULFIDE | ug/l | T | | <530 | <530 | <530 | <530 | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 2200 | 50000 | 15200 | 9500 | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | | | |
| PH (FIELD) | STD UNITS | N | | | 6.43 | | 6.35 | |
| REDOX (FIELD) | MV | N | | | -40 | | -65 | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-15 | MW-16 | MW-17 | MW-18 | MW-18 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 14:00 | 3/26/2001 13:30 | 3/26/2001 11:30 | 3/23/2001 12:55 | 4/23/2002 10:51 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 2.53 | | 5.47 | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 39.3 | | 179 | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | | 6.41 | |
| HEXANE | ug/l | T | | | | | <2. | |
| OVABZONE | NONE | N | | | NIR | | NIR | |
| OVACASING | NONE | N | | | NIR | | NIR | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 11.5 | | 11.8 | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-2 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 14:40 | 10/1/2002 12:35 | 3/22/2001 13:45 | 3/22/2001 13:45 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | <1. | <0.9 | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | <1. | <0.9 | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | <1. | <0.9 | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | <1. | <0.9 | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | <2. | <2. | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-2 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 14:40 | 10/1/2002 12:35 | 3/22/2001 13:45 | 3/22/2001 13:45 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | <2. | <2. | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | <1. | <0.9 | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | <1. | <0.9 | |
| 2,4-DINITROPHENOL | ug/l | T | | | | <19. | <19. | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | <1. | <0.9 | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | <2. | <2. | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | <1. | <0.9 | |
| 2-CHLOROPHENOL | ug/l | T | | | | <1. | <0.9 | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | <1. | <0.9 | |
| 2-NITROANILINE | ug/l | T | | | | <2. | <2. | |
| 2-NITROPHENOL | ug/l | T | | | | <1. | <0.9 | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | <3. UJ | <3. UJ | |
| 3-NITROANILINE | ug/l | T | | | | <2. UJ | <2. UJ | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | <5. | <5. | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | <2. | <2. | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | <1. | <0.9 | |
| 4-CHLOROANILINE | ug/l | T | | | | <1. UJ | <0.9 UJ | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | <1. | <0.9 | |
| 4-METHYLPHENOL | ug/l | T | | | | <3. | <3. | |
| 4-NITROANILINE | ug/l | T | | | | <2. | <2. | |
| 4-NITROPHENOL | ug/l | T | | | | <10. UJ | <9. UJ | |
| ACENAPHTHENE | ug/l | T | | | | <1. | <0.9 | |
| ACENAPHTHYLENE | ug/l | T | | | | <1. | <0.9 | |
| ANTHRACENE | ug/l | T | | | | <1. | <0.9 | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | <1. | <0.9 | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | <1. | <0.9 | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | <1. | <0.9 | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | <1. | <0.9 | |
| BENZO[A]PYRENE | ug/l | T | | | | <1. | <0.9 | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | <1. | <0.9 | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | <1. | <0.9 | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | <1. | <0.9 | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | <2. | <2. | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | <2. | <2. | |
| CARBAZOLE | ug/l | T | | | | <2. | <2. | |
| CHRYSENE | ug/l | T | | | | <1. | <0.9 | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | <1. | <0.9 | |
| DIBENZOFURAN | ug/l | T | | | | <1. | <0.9 | |
| DIETHYL PHTHALATE | ug/l | T | | | | <2. | <2. | |
| DIMETHYL PHTHALATE | ug/l | T | | | | <2. | <2. | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | <2. | <2. | |
| FLUORANTHENE | ug/l | T | | | | <1. | <0.9 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-2 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 14:40 | 10/1/2002 12:35 | 3/22/2001 13:45 | 3/22/2001 13:45 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| FLUORENE | ug/l | T | | | | <1. | <0.9 | |
| HEXACHLOROBENZENE | ug/l | T | | | | <2. | <2. | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | <2. | <2. | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | <5. UJ | <5. UJ | |
| HEXACHLOROETHANE | ug/l | T | | | | <1. | <0.9 | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | <1. | <0.9 | |
| ISOPHORONE | ug/l | T | | | | <1. | <0.9 | |
| NAPHTHALENE | ug/l | T | | | | <1. | <0.9 | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | <2. | <2. | |
| NITROBENZENE | ug/l | T | | | | <1. | <0.9 | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | <1. | <0.9 | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | <1. | <0.9 | |
| O-CRESOL | ug/l | T | | | | <1. | <0.9 | |
| PENTACHLOROPHENOL | ug/l | T | | | | <3. | <3. | |
| PHENANTHRENE | ug/l | T | | | | <1. | <0.9 | |
| PHENOL | ug/l | T | | | | <1. UJ | <0.9 UJ | |
| PYRENE | ug/l | T | | | | <1. | <0.9 | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | | | <19.0 | <19.0 | |
| ALUMINUM | ug/l | T | | | | 45.8 J | <19.0 | |
| ANTIMONY | ug/l | D | | | | <9.4 | <9.4 | |
| ANTIMONY | ug/l | T | | | | <9.4 | <9.4 | |
| ARSENIC | ug/l | D | | 74 | 64.9 | 25.5 | 20.6 | 116 |
| ARSENIC | ug/l | T | | 89.9 | 73.7 | 39.6 | 35 | 121 |
| BARIUM | ug/l | D | | | | 30.2 | 30.4 | |
| BARIUM | ug/l | T | | | | 32.7 | 32.3 | |
| CADMIUM | ug/l | D | | <.94 U | 1.0 J | <.90 | <.90 | 1.6 J |
| CADMIUM | ug/l | T | | <.94 U | .95 J | <.90 | <.90 | 2.2 J |
| CALCIUM | ug/l | D | | | | 632000 | 629000 | |
| CALCIUM | ug/l | T | | | | 631000 | 632000 | |
| CHROMIUM | ug/l | D | | | | <1.6 | <1.6 | |

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-2 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 14:40 | 10/1/2002 12:35 | 3/22/2001 13:45 | 3/22/2001 13:45 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| CHROMIUM | ug/l | T | | | | <1.6 | <1.6 | |
| COPPER | ug/l | D | | | | <1.9 | <1.9 | |
| COPPER | ug/l | T | | | | 2.4 J | <1.9 | |
| IRON | ug/l | D | | | | 40700 | 40500 | |
| IRON | ug/l | T | | | | 51000 | 49100 | |
| LEAD | ug/l | D | | <8.9 U | <8.9 U | <9.8 | <9.8 | <8.9 U |
| LEAD | ug/l | T | | <8.9 U | <8.9 U | <9.8 | <9.8 | <8.9 U |
| MAGNESIUM | ug/l | D | | | | 328000 | 324000 | |
| MAGNESIUM | ug/l | T | | | | 317000 | 313000 | |
| MANGANESE | ug/l | D | | | | 365 | 364 | |
| MANGANESE | ug/l | T | | | | 399 | 391 | |
| MERCURY | ug/l | D | | | | <.12 | <.12 | |
| MERCURY | ug/l | T | | | | <.12 | <.12 | |
| NICKEL | ug/l | D | | | | <1.9 | <1.9 | |
| NICKEL | ug/l | T | | | | <1.9 | <1.9 | |
| SELENIUM | ug/l | D | | | | <3.5 | <3.5 | |
| SELENIUM | ug/l | T | | | | <3.5 | <3.5 | |
| SODIUM | ug/l | D | | | | 660000 | 664000 | |
| SODIUM | ug/l | T | | | | 685000 | 650000 | |
| VANADIUM | ug/l | D | | | | <1.5 | <1.5 | |
| VANADIUM | ug/l | T | | | | <1.5 | <1.5 | |
| ZINC | ug/l | D | | 8570 | 9230 | 216 | 215 | <4.9 U |
| ZINC | ug/l | T | | 8310 | 10100 | 224 | 279 | 17.1 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | | 573000 | 545000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | | <410 | <410 | |
| AMMONIA | ug/l | T | | | | 7800 | 7500 | |
| BICARBONATE | MG/L AS CA | T | | | | 573 | 545 | |
| BORON | ug/l | D | | | | 906 | 888 | |
| BORON | ug/l | T | | | | 938 | 906 | |
| CARBONATE | MG/L AS CA | T | | | | <0.41 | <0.41 | |
| CHLORIDE | ug/l | T | | | | 284000 | 271000 | |
| CYANIDE | ug/l | T | | | | <4.0 | <20 | |
| FLUORIDE | ug/l | T | | | | 570 | 610 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | | 190 | 200 | |
| PHOSPHORUS | ug/l | T | | | | 1160 | 1160 | |
| SULFATE | ug/l | T | | | | 3540000 | 3500000 | |
| SULFIDE | ug/l | T | | | | <530 | <530 | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | | 8400 J | 8600 | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 110 | | | | |
| PH (FIELD) | STD UNITS | N | | 6.77 | 6.39 | 6.23 | | |
| REDOX (FIELD) | MV | N | | -428 | -79 | -64 | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-18 | MW-18 | MW-19 | MW-19 | MW-2 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 14:40 | 10/1/2002 12:35 | 3/22/2001 13:45 | 3/22/2001 13:45 | 10/1/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 6753 | 482 | 6.31 | | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 26.9 | 20.4 | 147 | | |
| DEPTH TO WATER FROM TOC | Feet | N | | 6.72 | 9.54 | 4.88 | | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | NIR | | |
| OVACASING | NONE | N | | | | NIR | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.01 | 13.54 | 13.4 | | |

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-21 | MW-21 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 9:05 | 3/27/2001 9:05 | 3/22/2001 12:45 | 7/16/2002 13:40 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | <1. | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | <1. | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | <1. | | | | |
| 2-HEXANONE | ug/l | T | | <3. | | | | |
| ACETONE | ug/l | T | | <6. | | | | |
| BENZENE | ug/l | T | | <1. | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | <1. | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | <1. | | | | |
| BROMOFORM | ug/l | T | | <1. | | | | |
| CARBON DISULFIDE | ug/l | T | | <1. | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | <1. | | | | |
| CHLOROBENZENE | ug/l | T | | <1. | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | <1. | | | | |
| CHLOROFORM | ug/l | T | | <1. | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | <1. | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | <2. UJ | | | | |
| ETHYL CHLORIDE | ug/l | T | | <2. | | | | |
| ETHYLBENZENE | ug/l | T | | <1. | | | | |
| METHYL BROMIDE | ug/l | T | | <2. | | | | |
| METHYL CHLORIDE | ug/l | T | | <2. | | | | |
| METHYL ETHYL KETONE | ug/l | T | | <3. | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | <3. | | | | |
| METHYLENE CHLORIDE | ug/l | T | | <2. | | | | |
| STYRENE | ug/l | T | | <1. | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | <1. | | | | |
| TOLUENE | ug/l | T | | <1. | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | <1. | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | <1. | | | | |
| TRICHLOROETHENE | ug/l | T | | <1. | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | <2. | | | | |
| VINYL CHLORIDE | ug/l | T | | <1. | | | | |
| XYLENES | ug/l | T | | <1. | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | <0.9 | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | <0.9 | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | <0.9 | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | <0.9 | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | <2. | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-21 | MW-21 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 9:05 | 3/27/2001 9:05 | 3/22/2001 12:45 | 7/16/2002 13:40 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | <2. | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | <0.9 | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | <0.9 | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | <19. | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | <0.9 | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | <2. | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | <0.9 | | | | |
| 2-CHLOROPHENOL | ug/l | T | | <0.9 | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | <0.9 | | | | |
| 2-NITROANILINE | ug/l | T | | <2. | | | | |
| 2-NITROPHENOL | ug/l | T | | <0.9 | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | <3. | | | | |
| 3-NITROANILINE | ug/l | T | | <2. | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | <5. | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | <2. | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | <0.9 | | | | |
| 4-CHLOROANILINE | ug/l | T | | <0.9 | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | <0.9 | | | | |
| 4-METHYLPHENOL | ug/l | T | | <3. | | | | |
| 4-NITROANILINE | ug/l | T | | <2. | | | | |
| 4-NITROPHENOL | ug/l | T | | <9. UJ | | | | |
| ACENAPHTHENE | ug/l | T | | <0.9 | | | | |
| ACENAPHTHYLENE | ug/l | T | | <0.9 | | | | |
| ANTHRACENE | ug/l | T | | <0.9 | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | <0.9 | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | <0.9 | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | <0.9 | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | <0.9 | | | | |
| BENZO[A]PYRENE | ug/l | T | | <0.9 | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | <0.9 | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | <0.9 | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | <0.9 | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | <2. | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | <2. | | | | |
| CARBAZOLE | ug/l | T | | <2. | | | | |
| CHRYSENE | ug/l | T | | <0.9 | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | <0.9 | | | | |
| DIBENZOFURAN | ug/l | T | | <0.9 | | | | |
| DIETHYL PHTHALATE | ug/l | T | | <2. | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | <2. UJ | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | <2. | | | | |
| FLUORANTHENE | ug/l | T | | <0.9 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-21 | MW-21 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 9:05 | 3/27/2001 9:05 | 3/22/2001 12:45 | 7/16/2002 13:40 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | <0.9 | | | | |
| HEXACHLOROBENZENE | ug/l | T | | <2. | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | <2. UJ | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | <5. | | | | |
| HEXACHLOROETHANE | ug/l | T | | <0.9 UJ | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | <0.9 | | | | |
| ISOPHORONE | ug/l | T | | <0.9 | | | | |
| NAPHTHALENE | ug/l | T | | <0.9 | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | <2. | | | | |
| NITROBENZENE | ug/l | T | | <0.9 | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | <0.9 | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | <0.9 | | | | |
| O-CRESOL | ug/l | T | | <0.9 | | | | |
| PENTACHLOROPHENOL | ug/l | T | | <3. | | | | |
| PHENANTHRENE | ug/l | T | | <0.9 | | | | |
| PHENOL | ug/l | T | | <0.9 UJ | | | | |
| PYRENE | ug/l | T | | <0.9 | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1221 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1232 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1242 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1248 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1254 | ug/l | T | | <0.095 | <0.095 | | | |
| AROCLOR 1260 | ug/l | T | | <0.095 | <0.095 | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | 47.8 U | | <19.0 | | |
| ALUMINUM | ug/l | T | | 106 J | | 166 J | | |
| ANTIMONY | ug/l | D | | <5.9 | | <9.4 | | |
| ANTIMONY | ug/l | T | | <5.9 | | <9.4 | | |
| ARSENIC | ug/l | D | | 3390 | | 2090 | 2430 | |
| ARSENIC | ug/l | T | | 4640 | | 3960 | 2320 | |
| BARIUM | ug/l | D | | 21.9 | | 32.9 | | |
| BARIUM | ug/l | T | | 22.8 | | 36.3 | | |
| CADMIUM | ug/l | D | | <.64 | | 16.1 | | |
| CADMIUM | ug/l | T | | <.64 | | 23 | | |
| CALCIUM | ug/l | D | | 494000 | | 587000 | | |
| CALCIUM | ug/l | T | | 495000 | | 620000 | | |
| CHROMIUM | ug/l | D | | <1.7 | | <1.6 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-21 | MW-21 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 9:05 | 3/27/2001 9:05 | 3/22/2001 12:45 | 7/16/2002 13:40 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | <1.7 | | 1.9 J | | |
| COPPER | ug/l | D | | <2.4 | | <1.9 | | |
| COPPER | ug/l | T | | <2.4 | | 2.5 J | | |
| IRON | ug/l | D | | 14500 | | 17500 | | |
| IRON | ug/l | T | | 19800 | | 26200 | | |
| LEAD | ug/l | D | | <8.8 | | <9.8 | | |
| LEAD | ug/l | T | | <8.8 | | <9.8 | | |
| MAGNESIUM | ug/l | D | | 89300 | | 97600 | | |
| MAGNESIUM | ug/l | T | | 95900 | | 104000 | | |
| MANGANESE | ug/l | D | | 1400 | | 852 | | |
| MANGANESE | ug/l | T | | 1460 | | 912 | | |
| MERCURY | ug/l | D | | <.026 | | <.12 | | |
| MERCURY | ug/l | T | | <.026 | | <.12 | | |
| NICKEL | ug/l | D | | <1.6 | | 33.9 | | |
| NICKEL | ug/l | T | | 1.7 J | | 37.6 | | |
| SELENIUM | ug/l | D | | <4.3 | | <3.5 | | |
| SELENIUM | ug/l | T | | <4.3 | | <3.5 | | |
| SODIUM | ug/l | D | | 516000 | | 91200 | | |
| SODIUM | ug/l | T | | 500000 | | 89900 | | |
| VANADIUM | ug/l | D | | <1.6 | | <1.5 | | |
| VANADIUM | ug/l | T | | <1.6 | | <1.5 | | |
| ZINC | ug/l | D | | 111 | | 20800 | | |
| ZINC | ug/l | T | | 399 | | 22200 | | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 281000 | | 181000 | | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | | <410 | | |
| AMMONIA | ug/l | T | | 18000 | | 3100 | | |
| BICARBONATE | MG/L AS CA | T | | 281 | | 181 | | |
| BORON | ug/l | D | | 952 | | 421 | | |
| BORON | ug/l | T | | 948 | | 432 | | |
| CARBONATE | MG/L AS CA | T | | <0.41 | | <0.41 | | |
| CHLORIDE | ug/l | T | | 133000 | | 108000 | | |
| CYANIDE | ug/l | T | | <4.0 | | <20 | | |
| FLUORIDE | ug/l | T | | 1710 | | 570 | | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | | 160 | | |
| PHOSPHORUS | ug/l | T | | 4040 | | 3570 | | |
| SULFATE | ug/l | T | | 2300000 | | 1870000 | | |
| SULFIDE | ug/l | T | | 920 J | | <530 | | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 17400 | | 3800 J | | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | LT.BROWN | CLEAR | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | | 280 | 70 |
| PH (FIELD) | STD UNITS | N | | 6.68 | | 6.31 | 6.84 | 6.6 |
| REDOX (FIELD) | MV | N | | -136 | | -45 | -464 | -144 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-20 | MW-20 | MW-21 | MW-21 | MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/27/2001 9:05 | 3/27/2001 9:05 | 3/22/2001 12:45 | 7/16/2002 13:40 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 5.28 | | 3 | 3566 | 377 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 70.1 | | 183 | 60.5 | 11.2 |
| DEPTH TO WATER FROM TOC | Feet | N | | 6.35 | | 4.56 | 9.46 | 9.11 |
| HEXANE | ug/l | T | | <2. | | | | |
| OVABZONE | NONE | N | | NIR | | NIR | | |
| OVACASING | NONE | N | | NIR | | NIR | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13 | | 10.6 | 13.46 | 13.09 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-22 | MW-22 | MW-22 | MW-23 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 13:10 | 7/16/2002 12:05 | 10/2/2002 9:35 | 3/22/2001 11:00 | 3/22/2001 9:50 |
| | | | Top (ft) | | | | | |
| | | *Total (T)/* | *Bottom (ft)* | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-22 | MW-22 | MW-22 | MW-23 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 13:10 | 7/16/2002 12:05 | 10/2/2002 9:35 | 3/22/2001 11:00 | 3/22/2001 9:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-22 | MW-22 | MW-22 | MW-23 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 13:10 | 7/16/2002 12:05 | 10/2/2002 9:35 | 3/22/2001 11:00 | 3/22/2001 9:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | <19.0 | | | <19.0 | <19.0 |
| ALUMINUM | ug/l | T | | 113 J | | | 589 | 203 |
| ANTIMONY | ug/l | D | | <9.4 | | | <9.4 | <9.4 |
| ANTIMONY | ug/l | T | | <9.4 | | | <9.4 | <9.4 |
| ARSENIC | ug/l | D | | 66.4 | 656 | | 47.8 | 261 |
| ARSENIC | ug/l | T | | 1220 | 11600 | | 49.6 | 257 |
| BARIUM | ug/l | D | | 19.9 | | | 18 | 71.5 |
| BARIUM | ug/l | T | | 25 | | | 60.5 | 74.4 |
| CADMIUM | ug/l | D | | <.90 | | | <.90 | <.90 |
| CADMIUM | ug/l | T | | 2.9 | | | <.90 | <.90 |
| CALCIUM | ug/l | D | | 582000 | | | 699000 | 969000 |
| CALCIUM | ug/l | T | | 587000 | | | 703000 | 976000 |
| CHROMIUM | ug/l | D | | <1.6 | | | <1.6 | <1.6 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-22 | MW-22 | MW-22 | MW-23 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 13:10 | 7/16/2002 12:05 | 10/2/2002 9:35 | 3/22/2001 11:00 | 3/22/2001 9:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | <1.6 | | | 3.3 | 1.8 J |
| COPPER | ug/l | D | | <1.9 | | | <1.9 | 2.1 J |
| COPPER | ug/l | T | | 2.4 J | | | 3.8 J | 2.2 J |
| IRON | ug/l | D | | 11100 | | | 25900 | 50100 |
| IRON | ug/l | T | | 28800 | | | 27400 | 50400 |
| LEAD | ug/l | D | | <9.8 | | | <9.8 | <9.8 |
| LEAD | ug/l | T | | 16.9 J | | | 22.6 | <9.8 |
| MAGNESIUM | ug/l | D | | 18600 | | | 35000 | 69800 |
| MAGNESIUM | ug/l | T | | 20000 | | | 37000 | 69500 |
| MANGANESE | ug/l | D | | 756 | | | 910 | 698 |
| MANGANESE | ug/l | T | | 774 | | | 960 | 700 |
| MERCURY | ug/l | D | | <.12 | | | <.12 | <.12 |
| MERCURY | ug/l | T | | <.12 | | | <.12 | <.12 |
| NICKEL | ug/l | D | | 6.2 | | | <1.9 | <1.9 |
| NICKEL | ug/l | T | | 6.3 | | | 2.9 J | <1.9 |
| SELENIUM | ug/l | D | | <3.5 | | | <3.5 | <3.5 |
| SELENIUM | ug/l | T | | <3.5 | | | <3.5 | <3.5 |
| SODIUM | ug/l | D | | 40900 | | | 29100 | 613000 |
| SODIUM | ug/l | T | | 40300 | | | 28500 | 592000 |
| VANADIUM | ug/l | D | | <1.5 | | | <1.5 | <1.5 |
| VANADIUM | ug/l | T | | <1.5 | | | <1.5 | <1.5 |
| ZINC | ug/l | D | | 5760 | | | 1800 | 128 J |
| ZINC | ug/l | T | | 7180 | | | 1960 | 92.0 J |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 138000 | | | 172000 | 235000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | | | <410 | <410 |
| AMMONIA | ug/l | T | | 660 J | | | 4100 | 4300 |
| BICARBONATE | MG/L AS CA | T | | 138 | | | 172 | 235 |
| BORON | ug/l | D | | 236 | | | 488 | 283 |
| BORON | ug/l | T | | 247 | | | 496 | 284 |
| CARBONATE | MG/L AS CA | T | | <0.41 | | | <0.41 | <0.41 |
| CHLORIDE | ug/l | T | | 25700 | | | 214000 | 259000 |
| CYANIDE | ug/l | T | | <4.0 | | | <4.0 | <4.0 |
| FLUORIDE | ug/l | T | | 720 | | | 750 | 440 J |
| NITRATE/NITRITE NITROGEN | ug/l | T | | 150 | | | 150 | 170 |
| PHOSPHORUS | ug/l | T | | 3020 | | | 600 | 5080 |
| SULFATE | ug/l | T | | 1470000 | | | 1520000 | 3580000 |
| SULFIDE | ug/l | T | | <530 | | | <530 | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 1200 J | | | 4100 | 5500 J |
| COLOR QUALITATIVE (FIELD) | NONE | N | | LT.BROWN | BROWN | CLEAR | LT.BROWN | LT.BROWN |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 130 | 170 | | |
| PH (FIELD) | STD UNITS | N | | 6.38 | 6.97 | 6.66 | 6.36 | 6.3 |
| REDOX (FIELD) | MV | N | | -47 | -470 | -93 | -68 | -110 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-22 | MW-22 | MW-22 | MW-23 | MW-24 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/22/2001 13:10 | 7/16/2002 12:05 | 10/2/2002 9:35 | 3/22/2001 11:00 | 3/22/2001 9:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 2.4 | 2129 | 282 | 2.8 | 5.72 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 443 | 10000 | 21.5 | 567 | 150 |
| DEPTH TO WATER FROM TOC | Feet | N | | 4.05 | 9.13 | 8.85 | 4.67 | 5.73 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | NIR | | | NIR | NIR |
| OVACASING | NONE | N | | NIR | | | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | 10.9 | 13.13 | 12.67 | 12.9 | 11.9 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-24 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/16/2002 10:00 | 10/1/2002 15:25 | 3/23/2001 14:25 | 3/23/2001 14:25 | 7/16/2002 9:10 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-24 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/16/2002 10:00 | 10/1/2002 15:25 | 3/23/2001 14:25 | 3/23/2001 14:25 | 7/16/2002 9:10 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-24 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/16/2002 10:00 | 10/1/2002 15:25 | 3/23/2001 14:25 | 3/23/2001 14:25 | 7/16/2002 9:10 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | | | 37.4 U | 39.6 U | |
| ALUMINUM | ug/l | T | | | | 3590 | 3860 | |
| ANTIMONY | ug/l | D | | | | <9.4 | <9.4 | |
| ANTIMONY | ug/l | T | | | | <9.4 | <9.4 | |
| ARSENIC | ug/l | D | | 259 | | 151 J | 187 J | 111 |
| ARSENIC | ug/l | T | | 292 | | 170 J | 163 | 139 |
| BARIUM | ug/l | D | | | | 100 | 93.1 | |
| BARIUM | ug/l | T | | | | 125 | 134 | |
| CADMIUM | ug/l | D | | | | <.64 | <.64 | |
| CADMIUM | ug/l | T | | | | <.90 | <.90 | |
| CALCIUM | ug/l | D | | | | 693000 | 745000 | |
| CALCIUM | ug/l | T | | | | 689000 | 706000 | |
| CHROMIUM | ug/l | D | | | | <1.6 | <1.6 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-24 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/16/2002 10:00 | 10/1/2002 15:25 | 3/23/2001 14:25 | 3/23/2001 14:25 | 7/16/2002 9:10 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| CHROMIUM | ug/l | T | | | | 11.8 | 13.2 | |
| COPPER | ug/l | D | | | | <1.9 | <1.9 | |
| COPPER | ug/l | T | | | | 8.3 | 10.7 | |
| IRON | ug/l | D | | | | 71000 | 84600 | |
| IRON | ug/l | T | | | | 90700 | 90000 | |
| LEAD | ug/l | D | | | | <9.8 | <9.8 | |
| LEAD | ug/l | T | | | | 18.3 J | 19.4 J | |
| MAGNESIUM | ug/l | D | | | | 53400 J | 66200 J | |
| MAGNESIUM | ug/l | T | | | | 64700 | 64000 | |
| MANGANESE | ug/l | D | | | | 1540 J | 1860 J | |
| MANGANESE | ug/l | T | | | | 1870 | 1850 | |
| MERCURY | ug/l | D | | | | <.12 | <.12 | |
| MERCURY | ug/l | T | | | | <.12 | <.12 | |
| NICKEL | ug/l | D | | | | <1.9 | <1.9 | |
| NICKEL | ug/l | T | | | | <1.9 UJ | <1.9 UJ | |
| SELENIUM | ug/l | D | | | | <3.5 | <3.5 | |
| SELENIUM | ug/l | T | | | | <3.5 | <3.5 | |
| SODIUM | ug/l | D | | | | 1170000 | 1220000 | |
| SODIUM | ug/l | T | | | | 1310000 | 1310000 | |
| VANADIUM | ug/l | D | | | | 1.6 J | <1.5 | |
| VANADIUM | ug/l | T | | | | 9.6 | 11.4 | |
| ZINC | ug/l | D | | | | 41.9 | 22.4 | |
| ZINC | ug/l | T | | | | 163 | 177 | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | | 468000 | 471000 | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | | <410 | <410 | |
| AMMONIA | ug/l | T | | | | 118000 J | 119000 J | |
| BICARBONATE | MG/L AS CA | T | | | | 468 | 471 | |
| BORON | ug/l | D | | | | 709 | 839 J | |
| BORON | ug/l | T | | | | 694 | 684 J | |
| CARBONATE | MG/L AS CA | T | | | | <0.41 | <0.41 | |
| CHLORIDE | ug/l | T | | | | 393000 | 398000 | |
| CYANIDE | ug/l | T | | | | <4.0 | <4.0 | |
| FLUORIDE | ug/l | T | | | | 590 | 600 | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | | 190 J | 190 J | |
| PHOSPHORUS | ug/l | T | | | | 1440 J | 32200 J | |
| SULFATE | ug/l | T | | | | 4250000 | 4250000 | |
| SULFIDE | ug/l | T | | | | <530 | <530 | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | | 108000 | 109000 | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | CLEAR | | | BROWN |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | 260 | 160 | | | 2110 |
| PH (FIELD) | STD UNITS | N | | 7.05 | 6.76 | 6.46 | | 6.74 |
| REDOX (FIELD) | MV | N | | -449 | -179 | -136 | | -377 |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-24 | MW-24 | MW-25 | MW-25 | MW-25 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/16/2002 10:00 | 10/1/2002 15:25 | 3/23/2001 14:25 | 3/23/2001 14:25 | 7/16/2002 9:10 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 5456 | 686 | 7.97 | | 2630 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 42.9 | 11.4 | 999 | | 586 |
| DEPTH TO WATER FROM TOC | Feet | N | | 9.99 | 9.99 | 4.52 | | 8.01 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | NIR | | |
| OVACASING | NONE | N | | | | NIR | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.38 | 12.89 | 11.4 | | 12.81 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/1/2002 14:40 | 3/23/2001 9:15 | 4/23/2002 11:40 | 4/23/2002 12:15 | 7/15/2002 13:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/1/2002 14:40 | 3/23/2001 9:15 | 4/23/2002 11:40 | 4/23/2002 12:15 | 7/15/2002 13:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/1/2002 14:40 | 3/23/2001 9:15 | 4/23/2002 11:40 | 4/23/2002 12:15 | 7/15/2002 13:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | | 267 | | | |
| ALUMINUM | ug/l | T | | | 3980 | | | |
| ANTIMONY | ug/l | D | | | <9.4 | | | |
| ANTIMONY | ug/l | T | | | <9.4 | | | |
| ARSENIC | ug/l | D | | | 191 | <4.9 U | <4.9 U | 169 |
| ARSENIC | ug/l | T | | | 193 | 122 | 36.9 | 178 |
| BARIUM | ug/l | D | | | 25.5 | | | |
| BARIUM | ug/l | T | | | 42.4 | | | |
| CADMIUM | ug/l | D | | | <.64 | .96 J | 1.1 J | <.94 U |
| CADMIUM | ug/l | T | | | <.90 | 1.4 J | 1.2 J | <.94 U |
| CALCIUM | ug/l | D | | | 576000 | | | |
| CALCIUM | ug/l | T | | | 587000 | | | |
| CHROMIUM | ug/l | D | | | <1.6 | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/1/2002 14:40 | 3/23/2001 9:15 | 4/23/2002 11:40 | 4/23/2002 12:15 | 7/15/2002 13:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| CHROMIUM | ug/l | T | | | <1.6 | | | |
| COPPER | ug/l | D | | | <1.9 | | | |
| COPPER | ug/l | T | | | 7.2 | | | |
| IRON | ug/l | D | | | 50500 | | | |
| IRON | ug/l | T | | | 57300 | | | |
| LEAD | ug/l | D | | | <9.8 | <8.9 U | <8.9 U | <8.9 U |
| LEAD | ug/l | T | | | <9.8 | <8.9 U | <8.9 U | <8.9 U |
| MAGNESIUM | ug/l | D | | | 77200 | | | |
| MAGNESIUM | ug/l | T | | | 78700 | | | |
| MANGANESE | ug/l | D | | | 4120 J | | | |
| MANGANESE | ug/l | T | | | 4170 | | | |
| MERCURY | ug/l | D | | | <.026 | | | |
| MERCURY | ug/l | T | | | <.12 | | | |
| NICKEL | ug/l | D | | | 7.8 U | | | |
| NICKEL | ug/l | T | | | 18.8 | | | |
| SELENIUM | ug/l | D | | | <3.5 | | | |
| SELENIUM | ug/l | T | | | <3.5 | | | |
| SODIUM | ug/l | D | | | 2020000 | | | |
| SODIUM | ug/l | T | | | 1860000 | | | |
| VANADIUM | ug/l | D | | | <1.5 | | | |
| VANADIUM | ug/l | T | | | 6.6 | | | |
| ZINC | ug/l | D | | | 4980 | 2910 | 3230 | 4980 |
| ZINC | ug/l | T | | | 5030 | 3810 | 3350 | 4720 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | 455000 | | | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | <410 | | | |
| AMMONIA | ug/l | T | | | 65300 J | | | |
| BICARBONATE | MG/L AS CA | T | | | 455 | | | |
| BORON | ug/l | D | | | 1930 J | | | |
| BORON | ug/l | T | | | 1640 J | | | |
| CARBONATE | MG/L AS CA | T | | | <0.41 | | | |
| CHLORIDE | ug/l | T | | | 1430000 | | | |
| CYANIDE | ug/l | T | | | <4.0 | | | |
| FLUORIDE | ug/l | T | | | 13300 | | | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | 160 J | | | |
| PHOSPHORUS | ug/l | T | | | 800 | | | |
| SULFATE | ug/l | T | | | 4200000 | | | |
| SULFIDE | ug/l | T | | | <530 | | | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | 67000 | | | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | CLEAR | | | | CLEAR |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | | | 230 |
| PH (FIELD) | STD UNITS | N | | 6.64 | 6.29 | | | 6.67 |
| REDOX (FIELD) | MV | N | | -229 | -55 | | | -44.2 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-25 | MW-26 | MW-26 | MW-26 | MW-26 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/1/2002 14:40 | 3/23/2001 9:15 | 4/23/2002 11:40 | 4/23/2002 12:15 | 7/15/2002 13:30 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 469 | 11 | | | 10292 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 36 | 293 | | | 19.9 |
| DEPTH TO WATER FROM TOC | Feet | N | | 9.03 | 4.59 | | | 5.19 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | NIR | | | |
| OVACASING | NONE | N | | | NIR | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.22 | 11.5 | | | 12.05 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-26 | MW-26 | MW-26 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 13:30 | 10/1/2002 11:40 | 10/1/2002 11:40 | 3/28/2001 9:30 | 3/26/2001 10:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-26 | MW-26 | MW-26 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 13:30 | 10/1/2002 11:40 | 10/1/2002 11:40 | 3/28/2001 9:30 | 3/26/2001 10:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-26 | MW-26 | MW-26 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 13:30 | 10/1/2002 11:40 | 10/1/2002 11:40 | 3/28/2001 9:30 | 3/26/2001 10:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | | | | 614 | 31.0 U |
| ALUMINUM | ug/l | T | | | | | 1310 | 1260 |
| ANTIMONY | ug/l | D | | | | | <5.9 | <9.4 |
| ANTIMONY | ug/l | T | | | | | <5.9 | <9.4 |
| ARSENIC | ug/l | D | | 168 | 162 | 164 | 49.1 | 36.2 |
| ARSENIC | ug/l | T | | 178 | 177 | 168 | 61.4 | 38.3 |
| BARIUM | ug/l | D | | | | | 19.6 | 39.2 |
| BARIUM | ug/l | T | | | | | 23.5 | 44.6 |
| CADMIUM | ug/l | D | | <.94 U | 1.2 J | 1.0 J | <.64 | 5.7 |
| CADMIUM | ug/l | T | | <.94 U | <.94 U | 1.0 J | <.64 | 9.1 |
| CALCIUM | ug/l | D | | | | | 781000 | 861000 |
| CALCIUM | ug/l | T | | | | | 813000 | 849000 |
| CHROMIUM | ug/l | D | | | | | <1.7 | <1.6 |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-26 | MW-26 | MW-26 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 13:30 | 10/1/2002 11:40 | 10/1/2002 11:40 | 3/28/2001 9:30 | 3/26/2001 10:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 1 |
| CHROMIUM | ug/l | T | | | | | <1.7 | <1.6 |
| COPPER | ug/l | D | | | | | <2.4 | <1.9 |
| COPPER | ug/l | T | | | | | <2.4 | 10.8 |
| IRON | ug/l | D | | | | | 207000 | 17300 |
| IRON | ug/l | T | | | | | 230000 | 19600 |
| LEAD | ug/l | D | | <8.9 U | <8.9 U | <8.9 U | <8.8 | <9.8 |
| LEAD | ug/l | T | | <8.9 U | <8.9 U | <8.9 U | <8.8 | 55 |
| MAGNESIUM | ug/l | D | | | | | 885000 | 107000 |
| MAGNESIUM | ug/l | T | | | | | 952000 | 109000 |
| MANGANESE | ug/l | D | | | | | 3020 | 2310 J |
| MANGANESE | ug/l | T | | | | | 3160 | 2460 |
| MERCURY | ug/l | D | | | | | .040 U | <.12 |
| MERCURY | ug/l | T | | | | | .049 J | <.12 |
| NICKEL | ug/l | D | | | | | 19.9 | 16.5 |
| NICKEL | ug/l | T | | | | | 19 | 23 |
| SELENIUM | ug/l | D | | | | | <4.3 | <3.5 |
| SELENIUM | ug/l | T | | | | | <4.3 | <3.5 |
| SODIUM | ug/l | D | | | | | 1330000 | 46000 |
| SODIUM | ug/l | T | | | | | 1340000 | 46800 |
| VANADIUM | ug/l | D | | | | | 4.7 J | <1.5 |
| VANADIUM | ug/l | T | | | | | <1.6 | 2.5 J |
| ZINC | ug/l | D | | 4920 | 4320 | 4430 | 2080 | 6810 |
| ZINC | ug/l | T | | 4820 | 4500 | 4460 | 2450 | 6880 |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | | | 374000 | 209000 |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | | | <410 | <410 |
| AMMONIA | ug/l | T | | | | | 17100 | 346000 J |
| BICARBONATE | MG/L AS CA | T | | | | | 374 | 209 |
| BORON | ug/l | D | | | | | 4770 | 665 |
| BORON | ug/l | T | | | | | 4840 | 643 |
| CARBONATE | MG/L AS CA | T | | | | | <0.41 | <0.41 |
| CHLORIDE | ug/l | T | | | | | 3720000 | 2100000 |
| CYANIDE | ug/l | T | | | | | <4.0 UJ | <4.0 |
| FLUORIDE | ug/l | T | | | | | 1790 | 1710 |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | | | <30 | 170 |
| PHOSPHORUS | ug/l | T | | | | | 440 | 1180 J |
| SULFATE | ug/l | T | | | | | 3200000 | 1600000 |
| SULFIDE | ug/l | T | | | | | 720 J | <530 |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | | | 18900 | 360000 |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | CLEAR | | CLEAR | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | 630 | | 15710 | 160 |
| PH (FIELD) | STD UNITS | N | | | 6.52 | | 5.27 | 6.31 |
| REDOX (FIELD) | MV | N | | | -141 | | 54 | -62 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-26 | MW-26 | MW-26 | MW-27 | MW-28 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/15/2002 13:30 | 10/1/2002 11:40 | 10/1/2002 11:40 | 3/28/2001 9:30 | 3/26/2001 10:35 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 2 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | 766 | | 14.9 | 10.3 |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | 9.7 | | 117 | 430 |
| DEPTH TO WATER FROM TOC | Feet | N | | | 8.08 | | 8.6 | 8.04 |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | | | | NIR | NIR |
| OVACASING | NONE | N | | | | | NIR | NIR |
| TEMPERATURE (FIELD) | DEGREES C | N | | | 13.22 | | 12.6 | 12.6 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-8 | MW-9 | PRB-MW-11 | PRB-MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 10:00 | 10/1/2002 9:00 | 10/1/2002 9:55 | 10/2/2002 8:50 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | | |
| 2-HEXANONE | ug/l | T | | | | | | |
| ACETONE | ug/l | T | | | | | | |
| BENZENE | ug/l | T | | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | | |
| BROMOFORM | ug/l | T | | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | | |
| CHLOROFORM | ug/l | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | | |
| STYRENE | ug/l | T | | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | | |
| TOLUENE | ug/l | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | | |
| XYLENES | ug/l | T | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-8 | MW-9 | PRB-MW-11 | PRB-MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 10:00 | 10/1/2002 9:00 | 10/1/2002 9:55 | 10/2/2002 8:50 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | | |
| ANTHRACENE | ug/l | T | | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | | |
| CARBAZOLE | ug/l | T | | | | | | |
| CHRYSENE | ug/l | T | | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | | |
| FLUORANTHENE | ug/l | T | | | | | | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

| | | | Sample ID | MW-29 | MW-8 | MW-9 | PRB-MW-11 | PRB-MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 10:00 | 10/1/2002 9:00 | 10/1/2002 9:55 | 10/2/2002 8:50 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | | |
| ISOPHORONE | ug/l | T | | | | | | |
| NAPHTHALENE | ug/l | T | | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | | |
| NITROBENZENE | ug/l | T | | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | | |
| O-CRESOL | ug/l | T | | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | | |
| PHENANTHRENE | ug/l | T | | | | | | |
| PHENOL | ug/l | T | | | | | | |
| PYRENE | ug/l | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | | |
| DDT | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | | |
| ALUMINUM | ug/l | D | | 89.2 U | | | | |
| ALUMINUM | ug/l | T | | 3300 | | | | |
| ANTIMONY | ug/l | D | | <9.4 | | | | |
| ANTIMONY | ug/l | T | | <9.4 | | | | |
| ARSENIC | ug/l | D | | <5.0 | 20.1 | 61.9 | 52.7 | 1340 |
| ARSENIC | ug/l | T | | <5.0 | 22.9 | 110 | 79.6 | 1410 |
| BARIUM | ug/l | D | | 104 | | | | |
| BARIUM | ug/l | T | | 127 | | | | |
| CADMIUM | ug/l | D | | <.90 | <.94 U | 2.9 J | | |
| CADMIUM | ug/l | T | | <.90 | 1.4 J | 2.4 J | | |
| CALCIUM | ug/l | D | | 45400 | | | | |
| CALCIUM | ug/l | T | | 59100 | | | | |
| CHROMIUM | ug/l | D | | <1.6 | | | | |

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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-8 | MW-9 | PRB-MW-11 | PRB-MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 10:00 | 10/1/2002 9:00 | 10/1/2002 9:55 | 10/2/2002 8:50 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | 17.9 | | | | |
| COPPER | ug/l | D | | <1.9 | | | | |
| COPPER | ug/l | T | | 17.4 | | | | |
| IRON | ug/l | D | | 293 U | | | | |
| IRON | ug/l | T | | 5890 | | | | |
| LEAD | ug/l | D | | <9.8 | <8.9 U | <8.9 U | | |
| LEAD | ug/l | T | | 11.5 J | <8.9 U | <8.9 U | | |
| MAGNESIUM | ug/l | D | | 17200 | | | | |
| MAGNESIUM | ug/l | T | | 23800 | | | | |
| MANGANESE | ug/l | D | | 307 J | | | | |
| MANGANESE | ug/l | T | | 444 | | | | |
| MERCURY | ug/l | D | | <.12 | | | | |
| MERCURY | ug/l | T | | <.12 | | | | |
| NICKEL | ug/l | D | | <1.9 | | | | |
| NICKEL | ug/l | T | | <1.9 UJ | | | | |
| SELENIUM | ug/l | D | | <3.5 | | | | |
| SELENIUM | ug/l | T | | <3.5 | | | | |
| SODIUM | ug/l | D | | 94900 | | | | |
| SODIUM | ug/l | T | | 87700 | | | | |
| VANADIUM | ug/l | D | | <1.5 | | | | |
| VANADIUM | ug/l | T | | 6.3 | | | | |
| ZINC | ug/l | D | | 27.9 U | <4.9 U | 18.8 J | | |
| ZINC | ug/l | T | | 228 | <4.9 U | 1070 | | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | 199000 | | | | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | <410 | | | | |
| AMMONIA | ug/l | T | | 1200 J | | | | |
| BICARBONATE | MG/L AS CA | T | | 199 | | | | |
| BORON | ug/l | D | | 1390 | | | | |
| BORON | ug/l | T | | 1340 | | | | |
| CARBONATE | MG/L AS CA | T | | <0.41 | | | | |
| CHLORIDE | ug/l | T | | 121000 | | | | |
| CYANIDE | ug/l | T | | <4.0 | | | | |
| FLUORIDE | ug/l | T | | 1160 | | | | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | <30 | | | | |
| PHOSPHORUS | ug/l | T | | 490 U | | | | |
| SULFATE | ug/l | T | | 28200 | | | | |
| SULFIDE | ug/l | T | | <530 | | | | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | 1500 J | | | | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | | | |
| PH (FIELD) | STD UNITS | N | | 7.08 | | | | |
| REDOX (FIELD) | MV | N | | -168 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-29 | MW-8 | MW-9 | PRB-MW-11 | PRB-MW-21 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 3/26/2001 10:00 | 10/1/2002 9:00 | 10/1/2002 9:55 | 10/2/2002 8:50 | 10/2/2002 10:50 |
| | | | Top (ft) | | | | | |
| | | Total (T)/ | Bottom (ft) | | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | 0.643 | | | | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | 999 | | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | | | |
| HEXANE | ug/l | T | | | | | | |
| OVABZONE | NONE | N | | NIR | | | | |
| OVACASING | NONE | N | | NIR | | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | 13.7 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-21 | PRB-MW-22 | PRB-MW-24 | PRB-MW-25 |
|---|---|---|---|---|---|---|---|
| | | | Date | 10/2/2002 10:50 | 10/2/2002 9:35 | 10/1/2002 15:25 | 10/1/2002 14:40 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | ug/l | T | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ug/l | T | | | | | |
| 1,1,2-TRICHLOROETHANE | ug/l | T | | | | | |
| 1,1-DICHLOROETHANE | ug/l | T | | | | | |
| 1,1-DICHLOROETHENE | ug/l | T | | | | | |
| 1,2-DICHLOROETHANE | ug/l | T | | | | | |
| 1,2-DICHLOROPROPANE | ug/l | T | | | | | |
| 2-HEXANONE | ug/l | T | | | | | |
| ACETONE | ug/l | T | | | | | |
| BENZENE | ug/l | T | | | | | |
| BROMOCHLOROMETHANE | ug/l | T | | | | | |
| BROMODICHLOROMETHANE | ug/l | T | | | | | |
| BROMOFORM | ug/l | T | | | | | |
| CARBON DISULFIDE | ug/l | T | | | | | |
| CARBON TETRACHLORIDE | ug/l | T | | | | | |
| CHLOROBENZENE | ug/l | T | | | | | |
| CHLORODIBROMOMETHANE | ug/l | T | | | | | |
| CHLOROFORM | ug/l | T | | | | | |
| CIS-1,2 DICHLOROETHENE | ug/l | T | | | | | |
| CIS-1,3-DICHLOROPROPENE | ug/l | T | | | | | |
| DICHLORODIFLUOROMETHANE | ug/l | T | | | | | |
| ETHYL CHLORIDE | ug/l | T | | | | | |
| ETHYLBENZENE | ug/l | T | | | | | |
| METHYL BROMIDE | ug/l | T | | | | | |
| METHYL CHLORIDE | ug/l | T | | | | | |
| METHYL ETHYL KETONE | ug/l | T | | | | | |
| METHYL ISOBUTYL KETONE | ug/l | T | | | | | |
| METHYLENE CHLORIDE | ug/l | T | | | | | |
| STYRENE | ug/l | T | | | | | |
| TETRACHLOROETHYLENE | ug/l | T | | | | | |
| TOLUENE | ug/l | T | | | | | |
| TRANS-1,2-DICHLOROETHENE | ug/l | T | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ug/l | T | | | | | |
| TRICHLOROETHENE | ug/l | T | | | | | |
| TRICHLOROFLUOROMETHANE | ug/l | T | | | | | |
| VINYL CHLORIDE | ug/l | T | | | | | |
| XYLENES | ug/l | T | | | | | |
| 1,2,4-TRICHLOROBENZENE | ug/l | T | | | | | |
| 1,2-DICHLOROBENZENE | ug/l | T | | | | | |
| 1,3-DICHLOROBENZENE | ug/l | T | | | | | |
| 1,4-DICHLOROBENZENE | ug/l | T | | | | | |
| 2,4,5-TRICHLOROPHENOL | ug/l | T | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-21 | PRB-MW-22 | PRB-MW-24 | PRB-MW-25 |
|---|---|---|---|---|---|---|---|
| | | | Date | 10/2/2002 10:50 | 10/2/2002 9:35 | 10/1/2002 15:25 | 10/1/2002 14:40 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 |
| 2,4,6-TRICHLOROPHENOL | ug/l | T | | | | | |
| 2,4-DICHLOROPHENOL | ug/l | T | | | | | |
| 2,4-DIMETHYLPHENOL | ug/l | T | | | | | |
| 2,4-DINITROPHENOL | ug/l | T | | | | | |
| 2,4-DINITROTOLUENE | ug/l | T | | | | | |
| 2,6-DINITROTOLUENE | ug/l | T | | | | | |
| 2-CHLORONAPHTHALENE | ug/l | T | | | | | |
| 2-CHLOROPHENOL | ug/l | T | | | | | |
| 2-METHYLNAPHTHALENE | ug/l | T | | | | | |
| 2-NITROANILINE | ug/l | T | | | | | |
| 2-NITROPHENOL | ug/l | T | | | | | |
| 3,3'-DICHLOROBENZIDINE | ug/l | T | | | | | |
| 3-NITROANILINE | ug/l | T | | | | | |
| 4,6-DINITRO-2-METHYLPHENOL | ug/l | T | | | | | |
| 4-BROMOPHENYL PHENYL ETHER | ug/l | T | | | | | |
| 4-CHLORO-3-METHYLPHENOL | ug/l | T | | | | | |
| 4-CHLOROANILINE | ug/l | T | | | | | |
| 4-CHLOROPHENYL PHENYL ETHER | ug/l | T | | | | | |
| 4-METHYLPHENOL | ug/l | T | | | | | |
| 4-NITROANILINE | ug/l | T | | | | | |
| 4-NITROPHENOL | ug/l | T | | | | | |
| ACENAPHTHENE | ug/l | T | | | | | |
| ACENAPHTHYLENE | ug/l | T | | | | | |
| ANTHRACENE | ug/l | T | | | | | |
| BENZO(A)ANTHRACENE | ug/l | T | | | | | |
| BENZO(B)FLUORANTHENE | ug/l | T | | | | | |
| BENZO(G,H,I)PERYLENE | ug/l | T | | | | | |
| BENZO(K)FLUORANTHENE | ug/l | T | | | | | |
| BENZO[A]PYRENE | ug/l | T | | | | | |
| BIS(2-CHLORO-1-METHYLETHYL) ETHER | ug/l | T | | | | | |
| BIS(2-CHLOROETHOXY)METHANE | ug/l | T | | | | | |
| BIS(2-CHLOROETHYL)ETHER | ug/l | T | | | | | |
| BIS(2-ETHYLHEXYL)PHTHALATE | ug/l | T | | | | | |
| BUTYL BENZYL PHTHALATE | ug/l | T | | | | | |
| CARBAZOLE | ug/l | T | | | | | |
| CHRYSENE | ug/l | T | | | | | |
| DIBENZ(A,H)ANTHRACENE | ug/l | T | | | | | |
| DIBENZOFURAN | ug/l | T | | | | | |
| DIETHYL PHTHALATE | ug/l | T | | | | | |
| DIMETHYL PHTHALATE | ug/l | T | | | | | |
| DI-N-BUTYL PHTHALATE | ug/l | T | | | | | |
| FLUORANTHENE | ug/l | T | | | | | |

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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-21 | PRB-MW-22 | PRB-MW-24 | PRB-MW-25 |
|---|---|---|---|---|---|---|---|
| | | | Date | 10/2/2002 10:50 | 10/2/2002 9:35 | 10/1/2002 15:25 | 10/1/2002 14:40 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 |
| FLUORENE | ug/l | T | | | | | |
| HEXACHLOROBENZENE | ug/l | T | | | | | |
| HEXACHLOROBUTADIENE | ug/l | T | | | | | |
| HEXACHLOROCYCLOPENTADIENE | ug/l | T | | | | | |
| HEXACHLOROETHANE | ug/l | T | | | | | |
| INDENO (1,2,3-CD) PYRENE | ug/l | T | | | | | |
| ISOPHORONE | ug/l | T | | | | | |
| NAPHTHALENE | ug/l | T | | | | | |
| N-DIOCTYL PHTHALATE | ug/l | T | | | | | |
| NITROBENZENE | ug/l | T | | | | | |
| N-NITROSODI-N-PROPYLAMINE | ug/l | T | | | | | |
| N-NITROSODIPHENYLAMINE | ug/l | T | | | | | |
| O-CRESOL | ug/l | T | | | | | |
| PENTACHLOROPHENOL | ug/l | T | | | | | |
| PHENANTHRENE | ug/l | T | | | | | |
| PHENOL | ug/l | T | | | | | |
| PYRENE | ug/l | T | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | ug/l | T | | | | | |
| AROCLOR 1016 | ug/l | T | | | | | |
| AROCLOR 1221 | ug/l | T | | | | | |
| AROCLOR 1232 | ug/l | T | | | | | |
| AROCLOR 1242 | ug/l | T | | | | | |
| AROCLOR 1248 | ug/l | T | | | | | |
| AROCLOR 1254 | ug/l | T | | | | | |
| AROCLOR 1260 | ug/l | T | | | | | |
| DDT | ug/l | T | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | ug/l | T | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | ug/l | T | | | | | |
| METHOXYCHLOR | ug/l | T | | | | | |
| ALUMINUM | ug/l | D | | | | | |
| ALUMINUM | ug/l | T | | | | | |
| ANTIMONY | ug/l | D | | | | | |
| ANTIMONY | ug/l | T | | | | | |
| ARSENIC | ug/l | D | | | 324 | 254 | 138 |
| ARSENIC | ug/l | T | | 1470 | 430 | 261 | 141 |
| BARIUM | ug/l | D | | | | | |
| BARIUM | ug/l | T | | | | | |
| CADMIUM | ug/l | D | | | | | |
| CADMIUM | ug/l | T | | | | | |
| CALCIUM | ug/l | D | | | | | |
| CALCIUM | ug/l | T | | | | | |
| CHROMIUM | ug/l | D | | | | | |

< and ND = Non detect at stated reporting limit



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12/14/2004 6:20 PM

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-21 | PRB-MW-22 | PRB-MW-24 | PRB-MW-25 |
|---|---|---|---|---|---|---|---|
| | | | Date | 10/2/2002 10:50 | 10/2/2002 9:35 | 10/1/2002 15:25 | 10/1/2002 14:40 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 |
| CHROMIUM | ug/l | T | | | | | |
| COPPER | ug/l | D | | | | | |
| COPPER | ug/l | T | | | | | |
| IRON | ug/l | D | | | | | |
| IRON | ug/l | T | | | | | |
| LEAD | ug/l | D | | | | | |
| LEAD | ug/l | T | | | | | |
| MAGNESIUM | ug/l | D | | | | | |
| MAGNESIUM | ug/l | T | | | | | |
| MANGANESE | ug/l | D | | | | | |
| MANGANESE | ug/l | T | | | | | |
| MERCURY | ug/l | D | | | | | |
| MERCURY | ug/l | T | | | | | |
| NICKEL | ug/l | D | | | | | |
| NICKEL | ug/l | T | | | | | |
| SELENIUM | ug/l | D | | | | | |
| SELENIUM | ug/l | T | | | | | |
| SODIUM | ug/l | D | | | | | |
| SODIUM | ug/l | T | | | | | |
| VANADIUM | ug/l | D | | | | | |
| VANADIUM | ug/l | T | | | | | |
| ZINC | ug/l | D | | | | | |
| ZINC | ug/l | T | | | | | |
| ALKALINITY, BICARB. AS CACO3 AT PH 4.5 | ug/l | T | | | | | |
| ALKALINITY, CARB.AS CACO3 AT PH 8.3 | ug/l | T | | | | | |
| AMMONIA | ug/l | T | | | | | |
| BICARBONATE | MG/L AS CA | T | | | | | |
| BORON | ug/l | D | | | | | |
| BORON | ug/l | T | | | | | |
| CARBONATE | MG/L AS CA | T | | | | | |
| CHLORIDE | ug/l | T | | | | | |
| CYANIDE | ug/l | T | | | | | |
| FLUORIDE | ug/l | T | | | | | |
| NITRATE/NITRITE NITROGEN | ug/l | T | | | | | |
| PHOSPHORUS | ug/l | T | | | | | |
| SULFATE | ug/l | T | | | | | |
| SULFIDE | ug/l | T | | | | | |
| TOTAL KJELDAHL NITROGEN | ug/l | T | | | | | |
| COLOR QUALITATIVE (FIELD) | NONE | N | | | | | |
| DISSOLVED OXYGEN (FIELD) | ug/l | N | | | | | |
| PH (FIELD) | STD UNITS | N | | | | | |
| REDOX (FIELD) | MV | N | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-21 | PRB-MW-22 | PRB-MW-24 | PRB-MW-25 |
|---|---|---|---|---|---|---|---|
| | | | Date | 10/2/2002 10:50 | 10/2/2002 9:35 | 10/1/2002 15:25 | 10/1/2002 14:40 |
| | | | Top (ft) | | | | |
| | | Total (T)/ | Bottom (ft) | | | | |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 1 | 1 |
| SPECIFIC CONDUCTANCE (FIELD) | UMHOS/CM | N | | | | | |
| TURBIDITY QUANTITATIVE (FIELD) | NTU | N | | | | | |
| DEPTH TO WATER FROM TOC | Feet | N | | | | | |
| HEXANE | ug/l | T | | | | | |
| OVABZONE | NONE | N | | | | | |
| OVACASING | NONE | N | | | | | |
| TEMPERATURE (FIELD) | DEGREES C | N | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-10 | MW-12 | MW-13 | MW-15 | MW-18 | MW-2 | MW-23 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/18/2003 14:50 | 11/18/2003 13:00 | 11/18/2003 9:15 | 11/18/2003 11:00 | 11/19/2003 8:15 | 11/21/2003 10:10 | 11/18/2003 13:45 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | ug/l | D | | <8.5 U | <8.5 U | <8.5 U | <8.5 U | <8.5 U | <8.5 U | |
| ANTIMONY | ug/l | T | | <8.5 U | <8.5 U | 14.7 J | <8.5 U | <8.5 U | <8.5 U | <8.5 U |
| ARSENIC | ug/l | D | | 365 | <4.9 U | 138 | 418 | 7.3 J | 86 | |
| ARSENIC | ug/l | T | | 529 | 11.2 | 138 | 1060 | 9.5 J | 84.7 | 208 |
| BARIUM | ug/l | D | | 54.2 | 36.8 | 99.2 | 43.1 | 14.4 | 36.3 | |
| BARIUM | ug/l | T | | 67.5 | 41 | 115 | 64 | 14.2 | 34.2 | 47.9 |
| CADMIUM | ug/l | D | | <.87 U | <.87 U | 1.1 J | 8.1 | <.87 U | <.87 U | |
| CADMIUM | ug/l | T | | <.87 U | <.87 U | <.87 U | 12.6 | <.87 U | <.87 U | <.87 U |
| CHROMIUM | ug/l | D | | <2.2 U | <2.2 U | 13.1 | <2.2 U | <2.2 U | <2.2 U | |
| CHROMIUM | ug/l | T | | <2.2 U | <2.2 U | 14.2 | <2.2 U | <2.2 U | <2.2 U | <2.2 U |
| COPPER | ug/l | D | | <2.1 U | <2.1 U | 62 | <2.1 U | <2.1 U | <2.1 U | |
| COPPER | ug/l | T | | <2.1 U | <2.1 U | 63.1 | 6.8 J | <2.1 U | <2.1 U | <2.1 U |
| LEAD | ug/l | D | | <9.3 U | <9.3 U | 49.9 | <9.3 U | <9.3 U | <9.3 U | |
| LEAD | ug/l | T | | <9.3 U | <9.3 U | 46.4 | <9.3 U | <9.3 U | <9.3 U | 33.8 |
| NICKEL | ug/l | D | | <3.8 U | <3.8 U | 40.5 | 3.9 J | 176 | <3.8 U | |
| NICKEL | ug/l | T | | <3.8 U | <3.8 U | 34.7 | <3.8 U | 180 | <3.8 U | <3.8 U |
| SELENIUM | ug/l | D | | <4.7 U | <4.7 U | 13.1 | <4.7 U | <4.7 U | <4.7 U | |
| SELENIUM | ug/l | T | | <4.7 U | <4.7 U | 10 | <4.7 U | <4.7 U | <4.7 U | <4.7 U |
| VANADIUM | ug/l | D | | <1.7 U | <1.7 U | 97.6 | <1.7 U | <1.7 U | <1.7 U | |
| VANADIUM | ug/l | T | | <1.7 U | <1.7 U | 103 | <1.7 U | 2.1 J | 2.0 J | 2.8 J |
| ZINC | ug/l | D | | <4.1 U | 5.4 B | 26.1 B | 2140 | 4370 | <4.1 U | |
| ZINC | ug/l | T | | <4.1 U | 4.1 B | 89.8 | 2950 | 5000 | 14.8 B | 3180 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | MW-23 | MW-26 | MW-28 | MW-3 | MW-5 | MW-9 | PRB-MW-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/21/2003 13:45 | 11/18/2003 16:00 | 11/18/2003 10:00 | 11/18/2003 11:45 | 11/21/2003 11:45 | 11/21/2003 15:30 | 2/26/2003 9:40 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
| ANTIMONY | ug/l | D | | <8.5 U | <8.5 U | <8.5 U | <8.5 U | <8.5 U | <8.5 U | |
| ANTIMONY | ug/l | T | | | <8.5 U | <8.5 U | <8.5 U | <8.5 U | <170 U | |
| ARSENIC | ug/l | D | | 40 | 32.9 | 29.3 | 12900 | 80.1 | 15.7 | 79 |
| ARSENIC | ug/l | T | | | 149 | 75.5 | 18700 | 936 | 15300 | 220 |
| BARIUM | ug/l | D | | 18.6 | 25.1 | 37.3 | 80.1 | 18.9 | 43.2 | |
| BARIUM | ug/l | T | | | 23.1 | 33.5 | 97.8 | 28.1 | 1680 | |
| CADMIUM | ug/l | D | | <.87 U | <.87 U | <.87 U | <.87 U | <.87 U | 1.1 B | <.94 U |
| CADMIUM | ug/l | T | | | <.87 U | <.87 U | <.87 U | <.87 U | <17.4 U | <.94 U |
| CHROMIUM | ug/l | D | | <2.2 U | <2.2 U | <2.2 U | <2.2 U | <2.2 U | <2.2 U | |
| CHROMIUM | ug/l | T | | | <2.2 U | <2.2 U | <2.2 U | <2.2 U | <44.0 U | |
| COPPER | ug/l | D | | <2.1 U | <2.1 U | <2.1 U | <2.1 U | <2.1 U | <2.1 U | |
| COPPER | ug/l | T | | | <2.1 U | <2.1 U | <2.1 U | <2.1 U | 116 | |
| LEAD | ug/l | D | | <9.3 U | <9.3 U | <9.3 U | <9.3 U | <9.3 U | <9.3 U | <8.9 U |
| LEAD | ug/l | T | | | <9.3 U | 21.8 | <9.3 U | <9.3 U | <186 U | <8.9 U |
| NICKEL | ug/l | D | | <3.8 U | 4.4 J | 12.6 | <3.8 U | 4.2 J | <3.8 U | |
| NICKEL | ug/l | T | | | 7.4 J | 12.1 | <3.8 U | 4.8 J | <76.0 U | |
| SELENIUM | ug/l | D | | <4.7 U | <4.7 U | <4.7 U | <4.7 U | <4.7 U | <4.7 U | |
| SELENIUM | ug/l | T | | | <4.7 U | <4.7 U | <4.7 U | <4.7 U | 181 J | |
| VANADIUM | ug/l | D | | <1.7 U | <1.7 U | <1.7 U | <1.7 U | <1.7 U | <1.7 U | |
| VANADIUM | ug/l | T | | | <1.7 U | <1.7 U | 1.9 J | 2.8 J | 576 | |
| ZINC | ug/l | D | | 2530 | 65.7 B | 4100 | <4.1 U | 2620 | 369 | 12 J |
| ZINC | ug/l | T | | | 5430 | 4630 | 5.5 B | 2670 | 280000 | 12 J |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-10 | PRB-MW-10 | PRB-MW-11 | PRB-MW-11 | PRB-MW-11 | PRB-MW-11 | PRB-MW-2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 5/19/2003 16:38 | 8/20/2003 12:00 | 1/23/2003 8:30 | 4/22/2003 9:35 | 7/22/2003 13:48 | 10/23/2003 13:50 | 2/26/2003 15:05 |
| | | | Top (ft) | 0 | 0 | | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 0 | 0 | | 0 | 0 | 0 | 0 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | ug/l | D | | | | | | | | |
| ANTIMONY | ug/l | T | | | | | | | | |
| ARSENIC | ug/l | D | | 358 | 415 | 48.7 | 16.2 | 19.2 | 18.5 | 110 |
| ARSENIC | ug/l | T | | 439 | 362 | 105 | 13.5 | 32.6 | 25.6 | 110 |
| BARIUM | ug/l | D | | | | | | | | |
| BARIUM | ug/l | T | | | | | | | | |
| CADMIUM | ug/l | D | | <.87 U | <.87 U | | | | | <.94 U |
| CADMIUM | ug/l | T | | <.87 U | <.87 U | | | | | <.94 U |
| CHROMIUM | ug/l | D | | | | | | | | |
| CHROMIUM | ug/l | T | | | | | | | | |
| COPPER | ug/l | D | | | | | | | | |
| COPPER | ug/l | T | | | | | | | | |
| LEAD | ug/l | D | | <9.3 U | <9.3 U | | | | | <8.9 U |
| LEAD | ug/l | T | | <9.3 U | <9.3 U | | | | | <8.9 U |
| NICKEL | ug/l | D | | | | | | | | |
| NICKEL | ug/l | T | | | | | | | | |
| SELENIUM | ug/l | D | | | | | | | | |
| SELENIUM | ug/l | T | | | | | | | | |
| VANADIUM | ug/l | D | | | | | | | | |
| VANADIUM | ug/l | T | | | | | | | | |
| ZINC | ug/l | D | | <4.1 U | <4.1 U | | | | | <4.9 U |
| ZINC | ug/l | T | | <4.1 U | <4.1 U | | | | | 6.3 J |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-2 | PRB-MW-2 | PRB-MW-2 | PRB-MW-2 | PRB-MW-2 | PRB-MW-21 | PRB-MW-21 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 2/26/2003 15:05 | 5/19/2003 13:15 | 5/19/2003 13:18 | 8/20/2003 11:12 | 8/20/2003 11:14 | 1/23/2003 9:45 | 4/22/2003 12:30 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | | 0 |
| | | Total (T)/ | Bottom (ft) | 0 | 0 | 0 | 0 | 0 | | 0 |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 2 | 1 | 2 | 1 | 1 |
| ANTIMONY | ug/l | D | | | | | | | | |
| ANTIMONY | ug/l | T | | | | | | | | |
| ARSENIC | ug/l | D | | 72 | 116 | 113 | 93.3 | 99.1 | 867 | 950 |
| ARSENIC | ug/l | T | | 120 | 120 | 115 | 89.9 | 70.4 | 1350 | 896 |
| BARIUM | ug/l | D | | | | | | | | |
| BARIUM | ug/l | T | | | | | | | | |
| CADMIUM | ug/l | D | | <.94 U | <.87 U | <.87 U | <.87 U | <.87 U | | |
| CADMIUM | ug/l | T | | 1.0 J | <.87 U | <.87 U | 4.5 J | <.87 U | | |
| CHROMIUM | ug/l | D | | | | | | | | |
| CHROMIUM | ug/l | T | | | | | | | | |
| COPPER | ug/l | D | | | | | | | | |
| COPPER | ug/l | T | | | | | | | | |
| LEAD | ug/l | D | | <8.9 U | <9.3 U | <9.3 U | <9.3 U | <9.3 U | | |
| LEAD | ug/l | T | | <8.9 U | <9.3 U | <9.3 U | <9.3 U | <9.3 U | | |
| NICKEL | ug/l | D | | | | | | | | |
| NICKEL | ug/l | T | | | | | | | | |
| SELENIUM | ug/l | D | | | | | | | | |
| SELENIUM | ug/l | T | | | | | | | | |
| VANADIUM | ug/l | D | | | | | | | | |
| VANADIUM | ug/l | T | | | | | | | | |
| ZINC | ug/l | D | | <4.9 U | <4.1 U | <4.1 U | <4.1 U | <4.1 U | | |
| ZINC | ug/l | T | | 9.9 J | 5.2 B | 16.6 J | <4.1 U | <4.1 U | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-21 | PRB-MW-21 | PRB-MW-21 | PRB-MW-22 | PRB-MW-22 | PRB-MW-22 | PRB-MW-24 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 7/22/2003 15:05 | 10/23/2003 8:55 | 10/23/2003 8:55 | 4/22/2003 13:25 | 7/22/2003 16:03 | 10/23/2003 9:55 | 1/23/2003 11:00 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Total (T)/ | Bottom (ft) | 0 | 0 | 0 | 0 | 0 | 0 | |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| ANTIMONY | ug/l | D | | | | | | | | |
| ANTIMONY | ug/l | T | | | | | | | | |
| ARSENIC | ug/l | D | | 1230 | 1160 | 1120 | 141 | 1070 | 642 | 263 |
| ARSENIC | ug/l | T | | 1250 | 1150 | 1400 | 644 | 1710 | 588 | 282 |
| BARIUM | ug/l | D | | | | | | | | |
| BARIUM | ug/l | T | | | | | | | | |
| CADMIUM | ug/l | D | | | | | | | | |
| CADMIUM | ug/l | T | | | | | | | | |
| CHROMIUM | ug/l | D | | | | | | | | |
| CHROMIUM | ug/l | T | | | | | | | | |
| COPPER | ug/l | D | | | | | | | | |
| COPPER | ug/l | T | | | | | | | | |
| LEAD | ug/l | D | | | | | | | | |
| LEAD | ug/l | T | | | | | | | | |
| NICKEL | ug/l | D | | | | | | | | |
| NICKEL | ug/l | T | | | | | | | | |
| SELENIUM | ug/l | D | | | | | | | | |
| SELENIUM | ug/l | T | | | | | | | | |
| VANADIUM | ug/l | D | | | | | | | | |
| VANADIUM | ug/l | T | | | | | | | | |
| ZINC | ug/l | D | | | | | | | | |
| ZINC | ug/l | T | | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-24 | PRB-MW-24 | PRB-MW-24 | PRB-MW-25 | PRB-MW-25 | PRB-MW-25 | PRB-MW-25 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 4/22/2003 11:31 | 7/22/2003 17:00 | 10/22/2003 14:50 | 1/23/2003 12:10 | 4/22/2003 10:25 | 7/23/2003 9:25 | 10/22/2003 11:55 |
| | | | Top (ft) | 0 | 0 | 0 | | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 0 | 0 | 0 | | 0 | 0 | 0 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | ug/l | D | | | | | | | | |
| ANTIMONY | ug/l | T | | | | | | | | |
| ARSENIC | ug/l | D | | 283 | 284 | 276 | 173 | 170 | 165 | 165 |
| ARSENIC | ug/l | T | | 284 | 284 | 278 | 181 | 163 | 161 | 157 |
| BARIUM | ug/l | D | | | | | | | | |
| BARIUM | ug/l | T | | | | | | | | |
| CADMIUM | ug/l | D | | | | | | | | |
| CADMIUM | ug/l | T | | | | | | | | |
| CHROMIUM | ug/l | D | | | | | | | | |
| CHROMIUM | ug/l | T | | | | | | | | |
| COPPER | ug/l | D | | | | | | | | |
| COPPER | ug/l | T | | | | | | | | |
| LEAD | ug/l | D | | | | | | | | |
| LEAD | ug/l | T | | | | | | | | |
| NICKEL | ug/l | D | | | | | | | | |
| NICKEL | ug/l | T | | | | | | | | |
| SELENIUM | ug/l | D | | | | | | | | |
| SELENIUM | ug/l | T | | | | | | | | |
| VANADIUM | ug/l | D | | | | | | | | |
| VANADIUM | ug/l | T | | | | | | | | |
| ZINC | ug/l | D | | | | | | | | |
| ZINC | ug/l | T | | | | | | | | |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-8 | PRB-MW-8 | PRB-MW-8 | PRB-MW-8 | PRB-MW-9 | PRB-MW-9 | PRB-MW-9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 2/26/2003 14:00 | 5/19/2003 15:28 | 8/21/2003 12:00 | 11/20/2003 15:00 | 2/26/2003 12:00 | 5/19/2003 14:05 | 8/21/2003 11:15 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | ug/l | D | | | | | | | | |
| ANTIMONY | ug/l | T | | | | | | | | |
| ARSENIC | ug/l | D | | 27 | 18 | 34.4 | 21.2 | 23 | 190 | 135 |
| ARSENIC | ug/l | T | | 25 | 27.2 | 31.6 | 16 | 63 | 242 | 152 |
| BARIUM | ug/l | D | | | | | | | | |
| BARIUM | ug/l | T | | | | | | | | |
| CADMIUM | ug/l | D | | <.94 U | <.87 U | 1.0 J | <.87 U | 2.5 J | <.87 U | <.87 U |
| CADMIUM | ug/l | T | | <.94 U | <.87 U | <.87 U | <.87 U | <.94 U | <.87 U | <.87 U |
| CHROMIUM | ug/l | D | | | | | | | | |
| CHROMIUM | ug/l | T | | | | | | | | |
| COPPER | ug/l | D | | | | | | | | |
| COPPER | ug/l | T | | | | | | | | |
| LEAD | ug/l | D | | <8.9 U | <9.3 U | <9.3 U | <9.3 U | <8.9 U | <9.3 U | <9.3 U |
| LEAD | ug/l | T | | <8.9 U | <9.3 U | <9.3 U | <9.3 U | <8.9 U | <9.3 U | <9.3 U |
| NICKEL | ug/l | D | | | | | | | | |
| NICKEL | ug/l | T | | | | | | | | |
| SELENIUM | ug/l | D | | | | | | | | |
| SELENIUM | ug/l | T | | | | | | | | |
| VANADIUM | ug/l | D | | | | | | | | |
| VANADIUM | ug/l | T | | | | | | | | |
| ZINC | ug/l | D | | <4.9 U | <4.1 U | <4.1 U | <4.1 U | 6.4 J | 35900 | 6580 |
| ZINC | ug/l | T | | 10 J | <4.1 U | | <4.1 U | 2800 | 31200 | 6830 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Groundwater Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | PRB-MW-9 |
|---|---|---|---|---|
| | | | Date | 11/20/2003 15:30 |
| | | | Top (ft) | 0 |
| | | Total (T)/ | Bottom (ft) | 0 |
| Analyte | units | Diss. (D) | Duplicate # | 1 |
| ANTIMONY | ug/l | D | | |
| ANTIMONY | ug/l | T | | |
| ARSENIC | ug/l | D | | 18.8 |
| ARSENIC | ug/l | T | | 1670 |
| BARIUM | ug/l | D | | |
| BARIUM | ug/l | T | | |
| CADMIUM | ug/l | D | | 1.3 J |
| CADMIUM | ug/l | T | | <4.4 U |
| CHROMIUM | ug/l | D | | |
| CHROMIUM | ug/l | T | | |
| COPPER | ug/l | D | | |
| COPPER | ug/l | T | | |
| LEAD | ug/l | D | | <9.3 U |
| LEAD | ug/l | T | | <46.5 U |
| NICKEL | ug/l | D | | |
| NICKEL | ug/l | T | | |
| SELENIUM | ug/l | D | | |
| SELENIUM | ug/l | T | | |
| VANADIUM | ug/l | D | | |
| VANADIUM | ug/l | T | | |
| ZINC | ug/l | D | | 491 |
| ZINC | ug/l | T | | 58900 |

< and ND = Non detect at stated reporting limit



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Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A11-01S | A11-01S | A11-01U | A11-02S | A11-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 11:50 | 10/26/1999 11:50 | 10/26/1999 11:55 | 10/26/1999 11:30 | 10/26/1999 11:35 |
| | | | Top (ft) | 0 | 0 | 2 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 2 | 2 | 4 | 2 | 2.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | <0.006 UJ | <0.006 | <0.007 | <0.006 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| 2-HEXANONE | mg/kg | T | | <0.012 | <0.012 | <0.012 | <0.014 | <0.012 |
| ACETONE | mg/kg | T | | <0.023 | <0.024 | <0.024 | <0.028 | <0.024 |
| BENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 | <0.007 | <0.006 |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| BROMOFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| CARBON DISULFIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| CHLOROBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| CHLOROFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | <0.006 UJ |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| ETHYLBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| METHYL BROMIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | <0.006 UJ |
| METHYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | <0.006 UJ |
| METHYL ETHYL KETONE | mg/kg | T | | <0.012 | <0.012 | <0.012 | <0.014 | <0.012 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.012 | <0.012 | <0.012 | <0.014 | <0.012 |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| STYRENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| TOLUENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | <0.006 UJ |
| VINYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | <0.006 UJ |
| XYLENES | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A11-01S | A11-01S | A11-01U | A11-02S | A11-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 11:50 | 10/26/1999 11:50 | 10/26/1999 11:55 | 10/26/1999 11:30 | 10/26/1999 11:35 |
| | | | Top (ft) | 0 | 0 | 2 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 2 | 2 | 4 | 2 | 2.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | <1.0 | 1.5 | <1.1 | <1.5 | <1.2 |
| ARSENIC | mg/kg | T | | 1.9 J | 5.2 J | 2.3 | 2.8 | <1.2 |
| BARIUM | mg/kg | T | | 9.03 | 11.6 | 6.61 | 15.1 | 5.14 |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | 2.27 | 2.71 | 2.24 | 4.45 | 2.7 |
| COPPER | mg/kg | T | | 0.82 U | 9.88 J | 0.77 U | 3.00 U | <0.60 |
| LEAD | mg/kg | T | | 2.4 J | 30.7 J | 2.4 | 6.2 | 2.8 |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 305. J | 1150. J | 45.3 | 380 | 10.5 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 7.5 U | 7.9 U | 10.2 J | 12.9 U | 66.8 J |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | <1.0 | <1.1 | <1.1 | 19.4 | 4.5 |
| PERCENT MOISTURE | % BY WT. | T | | 4.55 | 6.51 | 5.92 | 32.6 | 17.7 |
| SULFATE | mg/kg | T | | 11. U | 17. U | 27. U | 360 | 403 |
| HEXANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 | <0.006 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A12-01U | A13-01S | A13-01S | A13-01U | A13-02S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/1999 13:00 | 10/29/1999 9:25 | 10/29/1999 9:25 | 10/15/1999 17:30 | 10/29/1999 9:15 |
| | | | Top (ft) | 2 | 0 | 0 | 1 | 0 |
| | | Total (T)/ | Bottom (ft) | 3 | 2 | 2 | 4 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | | | | |
| 2-HEXANONE | mg/kg | T | | <0.013 | | | | |
| ACETONE | mg/kg | T | | <0.025 | | | | |
| BENZENE | mg/kg | T | | <0.006 | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | | | | |
| BROMOFORM | mg/kg | T | | <0.006 | | | | |
| CARBON DISULFIDE | mg/kg | T | | <0.006 | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | | | | |
| CHLOROBENZENE | mg/kg | T | | <0.006 | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | | | | |
| CHLOROFORM | mg/kg | T | | <0.006 | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 | | | | |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | | | | |
| ETHYLBENZENE | mg/kg | T | | <0.006 | | | | |
| METHYL BROMIDE | mg/kg | T | | <0.006 | | | | |
| METHYL CHLORIDE | mg/kg | T | | <0.006 | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | <0.013 | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.013 | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | | | | |
| STYRENE | mg/kg | T | | <0.006 | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | | | | |
| TOLUENE | mg/kg | T | | <0.006 | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | | | | |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 | | | | |
| VINYL CHLORIDE | mg/kg | T | | <0.006 | | | | |
| XYLENES | mg/kg | T | | <0.006 | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A12-01U | A13-01S | A13-01S | A13-01U | A13-02S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/1999 13:00 | 10/29/1999 9:25 | 10/29/1999 9:25 | 10/15/1999 17:30 | 10/29/1999 9:15 |
| | | | Top (ft) | 2 | 0 | 0 | 1 | 0 |
| | | Total (T)/ | Bottom (ft) | 3 | 2 | 2 | 4 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | 70. J | 44.2 J | 7.3 | 6.6 J |
| ARSENIC | mg/kg | T | | | 473 | 380 | 114 | 69.7 |
| BARIUM | mg/kg | T | | | 2330. J | 489. J | 5070 | 1010. J |
| CADMIUM | mg/kg | T | | | 254. J | 123. J | 397 | 39.1 J |
| CHROMIUM | mg/kg | T | | | 20. J | 15.9 J | 4.62 | 22.3 J |
| COPPER | mg/kg | T | | | 1110. J | 790. J | 1040 | 301. J |
| LEAD | mg/kg | T | | | 24400. J | 14100. J | 9750. J | 3000. J |
| NICKEL | mg/kg | T | | | 27 | 34.7 | 5.28 | 66.3 |
| SELENIUM | mg/kg | T | | | <6.6 UJ | 5.9 | <1.5 UJ | <1.5 UJ |
| VANADIUM | mg/kg | T | | | 27 | 25.4 | 6.30 J | 49.3 |
| ZINC | mg/kg | T | | | 35000. J | 19800. J | 20100 | 7430 |
| BORON | mg/kg | T | | | <110. | 37.5 | <6. UJ | 118 |
| CHLORIDE | mg/kg | T | | <4.7 | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 15.1 | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 14.6 | 27.1 | 26.8 | 35.1 | 35.2 |
| SULFATE | mg/kg | T | | 187 | | | | |
| HEXANE | mg/kg | T | | <0.006 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A13-02U | A13-03S | A13-03U | A13-04S | A13-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/15/1999 17:15 | 10/29/1999 9:05 | 10/15/1999 17:00 | 10/29/1999 8:55 | 10/15/1999 17:59 |
| | | | Top (ft) | 4 | 0 | 6.5 | 0 | 3.5 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 8 | 2 | 8 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A13-02U | A13-03S | A13-03U | A13-04S | A13-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/15/1999 17:15 | 10/29/1999 9:05 | 10/15/1999 17:00 | 10/29/1999 8:55 | 10/15/1999 17:59 |
| | | | Top (ft) | 4 | 0 | 6.5 | 0 | 3.5 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 8 | 2 | 8 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 1.7 | 13.2 J | <1.2 | 10.6 J | <1.2 |
| ARSENIC | mg/kg | T | | 3.7 | 66.8 | 1.4 | 74.6 | 1.3 |
| BARIUM | mg/kg | T | | 7.55 | 198. J | 4.22 | 670. J | 12.7 |
| CADMIUM | mg/kg | T | | 4.71 | 13.8 J | 0.23 | 43.0 J | 4.51 |
| CHROMIUM | mg/kg | T | | 3.17 | 10.5 J | 2.77 | 16.2 J | 3.17 |
| COPPER | mg/kg | T | | 150 | 233. J | 1.67 | 471. J | 1.57 |
| LEAD | mg/kg | T | | 148. J | 6460. J | 2.7 J | 4300. J | 12.7 J |
| NICKEL | mg/kg | T | | 4.53 | 7.3 | 4 | 37.7 | 3.08 |
| SELENIUM | mg/kg | T | | <1.3 | 5.5 | <1.2 | <1.6 UJ | <1.2 |
| VANADIUM | mg/kg | T | | 4.48 | 11.1 | 3.93 | 33.1 | 4.15 |
| ZINC | mg/kg | T | | 1850 | 2110 | 2150 | 23300 | 503 |
| BORON | mg/kg | T | | <5. | 16 | 5 | 82.4 | <4.7 |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 22.3 | 38.9 | 20.3 | 39.4 | 16.5 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A14-01U | A1C-01U | A1C-02U | A1D-01U | A1D-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 10:50 | 10/17/1999 9:40 | 10/17/1999 10:25 | 10/18/1999 15:10 | 10/19/1999 15:30 |
| | | | Top (ft) | 4 | 5 | 5 | 2 | 2 |
| | | Total (T)/ | Bottom (ft) | 5 | 7 | 6 | 4 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | | | | |
| 2-HEXANONE | mg/kg | T | | <0.013 | | | | |
| ACETONE | mg/kg | T | | <0.025 | | | | |
| BENZENE | mg/kg | T | | <0.006 | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 UJ | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | | | | |
| BROMOFORM | mg/kg | T | | <0.006 | | | | |
| CARBON DISULFIDE | mg/kg | T | | <0.006 | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | | | | |
| CHLOROBENZENE | mg/kg | T | | <0.006 | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | | | | |
| CHLOROFORM | mg/kg | T | | <0.006 | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 | | | | |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | | | | |
| ETHYLBENZENE | mg/kg | T | | <0.006 | | | | |
| METHYL BROMIDE | mg/kg | T | | <0.006 | | | | |
| METHYL CHLORIDE | mg/kg | T | | <0.006 | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | <0.013 | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.013 | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | | | | |
| STYRENE | mg/kg | T | | <0.006 | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | | | | |
| TOLUENE | mg/kg | T | | <0.006 | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | | | | |
| TRICHLOROETHENE | mg/kg | T | | 0.009 | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 UJ | | | | |
| VINYL CHLORIDE | mg/kg | T | | <0.006 | | | | |
| XYLENES | mg/kg | T | | <0.006 | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A14-01U | A1C-01U | A1C-02U | A1D-01U | A1D-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 10:50 | 10/17/1999 9:40 | 10/17/1999 10:25 | 10/18/1999 15:10 | 10/19/1999 15:30 |
| | | | Top (ft) | 4 | 5 | 5 | 2 | 2 |
| | | Total (T)/ | Bottom (ft) | 5 | 7 | 6 | 4 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | 2.2 J | | | | |
| BARIUM | mg/kg | T | | 8.24 | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | 1.91 | | | | |
| LEAD | mg/kg | T | | 14.4 | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 436 | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | 63.2 J | 11.7 J | 12.3 J | 10.0 J |
| CYANIDE | mg/kg | T | | <0.54 | | | | |
| FLUORIDE | mg/kg | T | | | <12. | 1.3 J | <1.1 | 1.2 |
| PERCENT MOISTURE | % BY WT. | T | | 8.15 | 19.4 | 16.8 | 7.7 | 4.02 |
| SULFATE | mg/kg | T | | | 14000 | 429 | 15. U | 15. U |
| HEXANE | mg/kg | T | | <0.006 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A1E-01U | A1E-02U | A1F-01U | A1F-02U | A1F-03U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 8:00 | 10/19/1999 15:45 | 10/27/1999 12:10 | 10/27/1999 11:55 | 10/27/1999 11:35 |
| | | | Top (ft) | 2 | 2 | 2 | 2 | 2 |
| | | Total (T)/ | Bottom (ft) | 4 | 4 | 4 | 4 | 4 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A1E-01U | A1E-02U | A1F-01U | A1F-02U | A1F-03U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 8:00 | 10/19/1999 15:45 | 10/27/1999 12:10 | 10/27/1999 11:55 | 10/27/1999 11:35 |
| | | | Top (ft) | 2 | 2 | 2 | 2 | 2 |
| | | Total (T)/ | Bottom (ft) | 4 | 4 | 4 | 4 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 17.8 J | 10.3 J | <4.2 | 7 | <5.5 |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | <1.3 | <1.1 | <5.2 UJ | <690. UJ | <680. UJ |
| PERCENT MOISTURE | % BY WT. | T | | 24.6 | 5.53 | 4 | 28 | 26.7 |
| SULFATE | mg/kg | T | | 65. J | 34. J | 381 | 18600 | 18400 |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A1F-04U | A1G-01U | A1G-02U | A2A-01U | A2A-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 14:05 | 10/26/1999 9:25 | 10/25/1999 14:40 | 10/19/1999 13:25 | 10/25/1999 14:15 |
| | | | Top (ft) | 5 | 5 | 5 | 6 | 5 |
| | | Total (T)/ | Bottom (ft) | 7 | 7 | 7 | 8 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A1F-04U | A1G-01U | A1G-02U | A2A-01U | A2A-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 14:05 | 10/26/1999 9:25 | 10/25/1999 14:40 | 10/19/1999 13:25 | 10/25/1999 14:15 |
| | | | Top (ft) | 5 | 5 | 5 | 6 | 5 |
| | | Total (T)/ | Bottom (ft) | 7 | 7 | 7 | 8 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | <4.4 | 27.5 J | 86. J | 11.3 J | 7.7 J |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | <11. UJ | 5.4 | 5.1 | <1.3 | <1.1 |
| PERCENT MOISTURE | % BY WT. | T | | 8.84 | 29.6 | 25.3 | 20.8 | 5.02 |
| SULFATE | mg/kg | T | | 340 | 13800. J | 6200. J | 480. J | 51. J |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2A-03U | A2B-01U | A2C-01U | A2C-02U | A2C-03U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/25/1999 16:45 | 10/25/1999 17:44 | 10/19/1999 11:30 | 10/25/1999 17:25 | 10/25/1999 17:05 |
| | | | Top (ft) | 5 | 6 | 7 | 4 | 5 |
| | | Total (T)/ | Bottom (ft) | 7 | 8 | 8 | 6 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2A-03U | A2B-01U | A2C-01U | A2C-02U | A2C-03U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/25/1999 16:45 | 10/25/1999 17:44 | 10/19/1999 11:30 | 10/25/1999 17:25 | 10/25/1999 17:05 |
| | | | Top (ft) | 5 | 6 | 7 | 4 | 5 |
| | | Total (T)/ | Bottom (ft) | 7 | 8 | 8 | 6 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | 251 | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 61.2 J | 10 | 10.1 J | 9.0 J | 58.2 J |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | <1.0 | 1.6 U | 4.2 | 1.3 | <1.0 |
| PERCENT MOISTURE | % BY WT. | T | | 3.91 | 30.1 | 15.5 | 7.64 | 3.71 |
| SULFATE | mg/kg | T | | 152. J | 19600 | 379. J | 83. J | 102. J |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2D-01U | A2D-02U | A2E-01S | A2E-01S | A2E-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 9:40 | 10/19/1999 9:15 | 10/26/1999 15:20 | 10/26/1999 15:20 | 10/26/1999 15:20 |
| | | | Top (ft) | 5 | 5 | 0 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 6 | 7 | 2 | 2 | 4 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | <0.006 | <0.006 | <0.006 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | <0.019 | <0.018 | <0.018 |
| DDT | mg/kg | T | | | | 0.0641 J | 0.0372 J | 0.00657 J |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | <0.0037 | 0.00138 R | 0.00835 |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | 0.0235 J | 0.0159 J | 0.00752 |
| METHOXYCHLOR | mg/kg | T | | | | <0.018 | 0.0064 JN | 0.0085 JN |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2D-01U | A2D-02U | A2E-01S | A2E-01S | A2E-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 9:40 | 10/19/1999 9:15 | 10/26/1999 15:20 | 10/26/1999 15:20 | 10/26/1999 15:20 |
| | | | Top (ft) | 5 | 5 | 0 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 6 | 7 | 2 | 2 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | 44 | 57.7 | 7.5 |
| BARIUM | mg/kg | T | | | | 50 | 42 | 7.79 |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | 13.3 | 11.6 | 3.39 U |
| LEAD | mg/kg | T | | | | 111 | 94.1 | 26.3 |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | 83 | 69.7 | 36.6 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 12.8 J | 82.9 J | | | |
| CYANIDE | mg/kg | T | | | | <0.54 | <0.53 | <0.52 |
| FLUORIDE | mg/kg | T | | <1.1 | 4.3 | | | |
| PERCENT MOISTURE | % BY WT. | T | | 11 | 15 | 8.41 | 6.28 | 4.64 |
| SULFATE | mg/kg | T | | 133. J | 109. J | | | |
| HEXANE | mg/kg | T | | | | <0.006 UJ | <0.006 UJ | <0.006 UJ |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2E-02S | A2E-02U | A2E-03S | A2E-03U | A2F-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 12:00 | 10/26/1999 12:00 | 10/26/1999 11:35 | 10/26/1999 11:35 | 10/16/1999 14:20 |
| | | | Top (ft) | 0 | 2 | 0 | 2.75 | 5 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 4.75 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | <0.007 | <0.008 | <0.007 | <0.006 | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | <0.018 | <0.023 | <0.018 | <0.02 | |
| DDT | mg/kg | T | | 0.0323 | <0.018 UJ | 2.43 | <0.0081 UJ | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | 0.00327 R | <0.018 | 0.158 | <0.0081 | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | 0.0113 JN | <0.018 | 0.57 | <0.0081 | |
| METHOXYCHLOR | mg/kg | T | | 0.0046 J | 2.18 JN | 0.512 J | 0.06 JN | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2E-02S | A2E-02U | A2E-03S | A2E-03U | A2F-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 12:00 | 10/26/1999 12:00 | 10/26/1999 11:35 | 10/26/1999 11:35 | 10/16/1999 14:20 |
| | | | Top (ft) | 0 | 2 | 0 | 2.75 | 5 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 4.75 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | 37.7 | 270 | 6020 | 2820 | |
| BARIUM | mg/kg | T | | 60.2 | 224 | 533 | 115 | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | 7.85 | 38.4 | 223 | 66.9 | |
| LEAD | mg/kg | T | | 104 | 474 | 17300 | 362 | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 72 | 101 | 790 | 134 | 231 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | | | | 10.8 J |
| CYANIDE | mg/kg | T | | <0.53 | <0.66 | <0.53 | <0.58 | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 6.28 | 25.3 | 6.58 | 17 | 17.4 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | <0.007 UJ | <0.008 UJ | <0.007 UJ | <0.006 UJ | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2F-02U | A2F-03U | A3A2-01U | A3B-01U | A3C1-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/16/1999 15:00 | 10/16/1999 15:15 | 10/27/1999 14:30 | 10/28/1999 13:50 | 10/18/1999 16:45 |
| | | | Top (ft) | 5 | 4.5 | 2 | 2.75 | 4.75 |
| | | Total (T)/ | Bottom (ft) | 6 | 7 | 4 | 4.75 | 6.5 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | 0.015 | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | <0.007 UJ | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | <0.007 | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | <0.007 | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | <0.007 | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | <0.007 | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | <0.007 | |
| 2-HEXANONE | mg/kg | T | | | | | <0.014 | |
| ACETONE | mg/kg | T | | | | | <0.027 | |
| BENZENE | mg/kg | T | | | | | <0.007 | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | <0.007 UJ | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | <0.007 | |
| BROMOFORM | mg/kg | T | | | | | <0.007 | |
| CARBON DISULFIDE | mg/kg | T | | | | | <0.007 | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | <0.007 | |
| CHLOROBENZENE | mg/kg | T | | | | | <0.007 | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | <0.007 | |
| CHLOROFORM | mg/kg | T | | | | | <0.007 | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | <0.007 | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | <0.007 | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | <0.007 | |
| ETHYL CHLORIDE | mg/kg | T | | | | | <0.007 | |
| ETHYLBENZENE | mg/kg | T | | | | | <0.007 | |
| METHYL BROMIDE | mg/kg | T | | | | | <0.007 | |
| METHYL CHLORIDE | mg/kg | T | | | | | <0.007 | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | <0.014 | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | <0.014 | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | 0.009 | |
| STYRENE | mg/kg | T | | | | | <0.007 | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | <0.007 | |
| TOLUENE | mg/kg | T | | | | | <0.007 | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | <0.007 | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | <0.007 | |
| TRICHLOROETHENE | mg/kg | T | | | | | 0.097 | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | 0.25 J | |
| VINYL CHLORIDE | mg/kg | T | | | | | <0.007 | |
| XYLENES | mg/kg | T | | | | | <0.007 | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A2F-02U | A2F-03U | A3A2-01U | A3B-01U | A3C1-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/16/1999 15:00 | 10/16/1999 15:15 | 10/27/1999 14:30 | 10/28/1999 13:50 | 10/18/1999 16:45 |
| | | | Top (ft) | 5 | 4.5 | 2 | 2.75 | 4.75 |
| | | Total (T)/ | Bottom (ft) | 6 | 7 | 4 | 4.75 | 6.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 86.1 | 112 | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 68.9 J | 10.2 J | 12.3 | | 73.4 J |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | <790. UJ | | <1.2 |
| PERCENT MOISTURE | % BY WT. | T | | 17.1 | 17.9 | 36.6 | 21.7 | 18.6 |
| SULFATE | mg/kg | T | | | | 15900 | | 73. J |
| HEXANE | mg/kg | T | | | | | <0.007 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A3C2-01U | A3C2-02U | A3D-01U | A3E-01U | A3E-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 8:40 | 10/19/1999 8:20 | 10/19/1999 10:00 | 10/26/1999 8:30 | 10/26/1999 13:40 |
| | | | Top (ft) | 4 | 4 | 4 | 5.5 | 3 |
| | | Total (T)/ | Bottom (ft) | 6 | 6 | 6 | 7.5 | 5 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A3C2-01U | A3C2-02U | A3D-01U | A3E-01U | A3E-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 8:40 | 10/19/1999 8:20 | 10/19/1999 10:00 | 10/26/1999 8:30 | 10/26/1999 13:40 |
| | | | Top (ft) | 4 | 4 | 4 | 5.5 | 3 |
| | | Total (T)/ | Bottom (ft) | 6 | 6 | 6 | 7.5 | 5 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 10.0 J | 68.9 J | 12.8 J | 72. J | 9.0 J |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | <1.0 | 4 | 17.5 | 4.7 J | <1.1 UJ |
| PERCENT MOISTURE | % BY WT. | T | | 4.33 | 5.77 | 10.6 | 20.4 | 8.07 |
| SULFATE | mg/kg | T | | 18. U | 54. J | 23. U | 379 | 150 |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A3E-03U | A3E-04U | A3E-05U | A3H-01U | A3H-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 16:15 | 10/26/1999 16:00 | 10/26/1999 9:50 | 10/17/1999 11:20 | 10/17/1999 12:00 |
| | | | Top (ft) | 5 | 7 | 5 | 9 | 10 |
| | | Total (T)/ | Bottom (ft) | 7 | 8 | 7 | 11 | 12 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A3E-03U | A3E-04U | A3E-05U | A3H-01U | A3H-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 16:15 | 10/26/1999 16:00 | 10/26/1999 9:50 | 10/17/1999 11:20 | 10/17/1999 12:00 |
| | | | Top (ft) | 5 | 7 | 5 | 9 | 10 |
| | | Total (T)/ | Bottom (ft) | 7 | 8 | 7 | 11 | 12 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 60.7 J | 11.1 J | 71.6 J | 30. J | 66.4 J |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | <1.1 UJ | 4.2 | <2.2 | 7.6 J | 26. J |
| PERCENT MOISTURE | % BY WT. | T | | 5.44 | 18.5 | 10 | 21.8 | 18.8 |
| SULFATE | mg/kg | T | | 119 | 500. J | 1050. J | 18900 | 12500 |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A3I-01U | A3J-01S | A3J-01U | A5-01U | A5-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 7:50 | 10/26/1999 14:15 | 10/26/1999 14:15 | 10/18/1999 8:50 | 10/18/1999 8:00 |
| | | | Top (ft) | 5 | 0 | 2 | 6 | 9.5 |
| | | Total (T)/ | Bottom (ft) | 6.5 | 2 | 4 | 8 | 10.5 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | <0.007 | <0.006 | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A3I-01U | A3J-01S | A3J-01U | A5-01U | A5-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 7:50 | 10/26/1999 14:15 | 10/26/1999 14:15 | 10/18/1999 8:50 | 10/18/1999 8:00 |
| | | | Top (ft) | 5 | 0 | 2 | 6 | 9.5 |
| | | Total (T)/ | Bottom (ft) | 6.5 | 2 | 4 | 8 | 10.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 27.9 | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 72.4 J | | | 19.1 J | 77.0 J |
| CYANIDE | mg/kg | T | | | <0.54 | <0.60 | | |
| FLUORIDE | mg/kg | T | | | | | 2.7 J | <13. |
| PERCENT MOISTURE | % BY WT. | T | | 17.4 | 12.5 | 17.7 | 28.5 | 22.4 |
| SULFATE | mg/kg | T | | | | | 1530 | 19100 |
| HEXANE | mg/kg | T | | | <0.007 UJ | <0.006 UJ | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A6-01U | A6-02U | A6-03U | A6-03U | A6-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 8:00 | 10/17/1999 8:30 | 10/16/1999 15:50 | 10/16/1999 15:50 | 10/17/1999 9:10 |
| | | | Top (ft) | 5 | 9 | 2 | 2 | 4.75 |
| | | Total (T)/ | Bottom (ft) | 7 | 10 | 3 | 3 | 6.75 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A6-01U | A6-02U | A6-03U | A6-03U | A6-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 8:00 | 10/17/1999 8:30 | 10/16/1999 15:50 | 10/16/1999 15:50 | 10/17/1999 9:10 |
| | | | Top (ft) | 5 | 9 | 2 | 2 | 4.75 |
| | | Total (T)/ | Bottom (ft) | 7 | 10 | 3 | 3 | 6.75 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | 19 | 3.38 | 158. J | 19.3 J | 37.3 |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | 5.11 | 2.45 | 8.36 J | 3.81 J | 2.85 |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 431 | 818 | 7490 | 7010 | 577 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 11.7 J | 97.5 J | 25.1 J | 10.1 J | 70.4 J |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 16.7 | 19 | 8.6 | 9.03 | 17.9 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A6-05U | A8-01U |
|---|---|---|---|---|---|
| | | | Date | 10/17/1999 16:20 | 10/17/1999 9:35 |
| | | | Top (ft) | 6.5 | 6 |
| | | Total (T)/ | Bottom (ft) | 8 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | |
| 2-HEXANONE | mg/kg | T | | | |
| ACETONE | mg/kg | T | | | |
| BENZENE | mg/kg | T | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | |
| BROMOFORM | mg/kg | T | | | |
| CARBON DISULFIDE | mg/kg | T | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | |
| CHLOROBENZENE | mg/kg | T | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | |
| CHLOROFORM | mg/kg | T | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | |
| ETHYL CHLORIDE | mg/kg | T | | | |
| ETHYLBENZENE | mg/kg | T | | | |
| METHYL BROMIDE | mg/kg | T | | | |
| METHYL CHLORIDE | mg/kg | T | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | |
| STYRENE | mg/kg | T | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | |
| TOLUENE | mg/kg | T | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | |
| TRICHLOROETHENE | mg/kg | T | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | |
| VINYL CHLORIDE | mg/kg | T | | | |
| XYLENES | mg/kg | T | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | |
| DDT | mg/kg | T | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | |
| METHOXYCHLOR | mg/kg | T | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | A6-05U | A8-01U |
|---|---|---|---|---|---|
| | | | Date | 10/17/1999 16:20 | 10/17/1999 9:35 |
| | | | Top (ft) | 6.5 | 6 |
| | | Total (T)/ | Bottom (ft) | 8 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 |
| ANTIMONY | mg/kg | T | | | <1.2 |
| ARSENIC | mg/kg | T | | | 7 |
| BARIUM | mg/kg | T | | 1.92 | 14.9 |
| CADMIUM | mg/kg | T | | | 0.22 |
| CHROMIUM | mg/kg | T | | 1.82 | 2.09 |
| COPPER | mg/kg | T | | | 5.63 |
| LEAD | mg/kg | T | | | 55.6 J |
| NICKEL | mg/kg | T | | | <0.72 |
| SELENIUM | mg/kg | T | | | <1.2 |
| VANADIUM | mg/kg | T | | | 7.56 |
| ZINC | mg/kg | T | | 1940 | 38.1 |
| BORON | mg/kg | T | | | <4.8 |
| CHLORIDE | mg/kg | T | | 71.4 J | 76.4 J |
| CYANIDE | mg/kg | T | | | |
| FLUORIDE | mg/kg | T | | | 1.9 |
| PERCENT MOISTURE | % BY WT. | T | | 18.3 | 17.2 |
| SULFATE | mg/kg | T | | | 67. J |
| HEXANE | mg/kg | T | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S10A-01S | S10A-01U | S10A-02U | S10A-03U | S10B-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 16:15 | 10/28/1999 14:15 | 10/28/1999 14:35 | 10/28/1999 15:35 | 10/27/1999 15:00 |
| | | | Top (ft) | 0 | 2 | 4 | 3 | 4 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 6 | 5 | 6 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.007 | <0.007 UJ | <0.006 | <0.006 | <0.006 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| 2-HEXANONE | mg/kg | T | | <0.015 UJ | <0.014 UJ | <0.012 UJ | <0.012 UJ | <0.012 |
| ACETONE | mg/kg | T | | <0.029 UJ | <0.027 UJ | <0.025 UJ | <0.023 UJ | <0.024 |
| BENZENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.007 UJ | <0.007 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| BROMOFORM | mg/kg | T | | <0.007 | <0.007 UJ | <0.006 UJ | <0.006 UJ | <0.006 |
| CARBON DISULFIDE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.007 | 0.011 | <0.006 | <0.006 | <0.006 |
| CHLOROBENZENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| CHLOROFORM | mg/kg | T | | <0.007 | 0.022 | <0.006 | <0.006 | <0.006 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 UJ |
| ETHYL CHLORIDE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| ETHYLBENZENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| METHYL BROMIDE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 UJ |
| METHYL CHLORIDE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 UJ |
| METHYL ETHYL KETONE | mg/kg | T | | <0.015 UJ | <0.014 UJ | <0.012 UJ | <0.012 UJ | <0.012 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.015 UJ | <0.014 UJ | <0.012 UJ | <0.012 UJ | <0.012 |
| METHYLENE CHLORIDE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| STYRENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.007 | 0.092 | <0.006 | <0.006 | <0.006 |
| TOLUENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| TRICHLOROETHENE | mg/kg | T | | <0.007 | 0.01 | <0.006 | <0.006 | <0.006 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.007 UJ | 0.011 J | 0.007 J | <0.006 UJ | <0.006 |
| VINYL CHLORIDE | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| XYLENES | mg/kg | T | | <0.007 | <0.007 | <0.006 | <0.006 | <0.006 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S10A-01S | S10A-01U | S10A-02U | S10A-03U | S10B-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 16:15 | 10/28/1999 14:15 | 10/28/1999 14:35 | 10/28/1999 15:35 | 10/27/1999 15:00 |
| | | | Top (ft) | 0 | 2 | 4 | 3 | 4 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 6 | 5 | 6 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | 22.1 | 2.1 | <1.1 | 101 | 1.4 U |
| ARSENIC | mg/kg | T | | | 5.5 | 27.4 | 38 | 1.3 U |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 6.9 | <4.3 | 12.9 | <4.3 | <4.2 |
| CYANIDE | mg/kg | T | | | | | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 30.8 J | 4.9 J | 2.7 J | 27.1 J | <2.1 |
| PERCENT MOISTURE | % BY WT. | T | | 25.1 | 7.26 | 8.66 | 6.41 | 5.88 |
| SULFATE | mg/kg | T | | 115. J | 116 | 106 | 61. J | 73 |
| HEXANE | mg/kg | T | | <0.007 UJ | <0.007 | <0.006 | <0.006 | <0.006 UJ |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S10B-02U | S10C-01S | S10C-01U | S10C-01U | S10C-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 15:30 | 10/27/1999 15:55 | 10/27/1999 15:55 | 10/27/1999 15:55 | 10/27/1999 16:20 |
| | | | Top (ft) | 3 | 0.5 | 0.5 | 0.5 | 0.25 |
| | | Total (T)/ | Bottom (ft) | 5 | 1.5 | 1.5 | 1.5 | 1.75 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 2-HEXANONE | mg/kg | T | | <0.013 | <0.013 | <0.011 | <0.011 | <0.013 |
| ACETONE | mg/kg | T | | <0.025 | <0.026 | <0.022 | <0.022 | <0.026 |
| BENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| BROMOFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CARBON DISULFIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CHLOROBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CHLOROFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| ETHYLBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| METHYL BROMIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ |
| METHYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| METHYL ETHYL KETONE | mg/kg | T | | <0.013 | <0.013 | <0.011 | <0.011 | <0.013 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.013 | <0.013 | <0.011 | <0.011 | <0.013 |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| STYRENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | 0.021 |
| TOLUENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.006 UJ | 0.007 J |
| VINYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| XYLENES | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S10B-02U | S10C-01S | S10C-01U | S10C-01U | S10C-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 15:30 | 10/27/1999 15:55 | 10/27/1999 15:55 | 10/27/1999 15:55 | 10/27/1999 16:20 |
| | | | Top (ft) | 3 | 0.5 | 0.5 | 0.5 | 0.25 |
| | | Total (T)/ | Bottom (ft) | 5 | 1.5 | 1.5 | 1.5 | 1.75 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | 1.8 U | 4.2 U | 10.6 J | 3.4 U | 8.6 |
| ARSENIC | mg/kg | T | | 5.4 | 10.9 | 17.3 J | 6.1 J | 7.7 |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | <4.2 | 6.5 | 5.5 | 5.8 | 102 |
| CYANIDE | mg/kg | T | | | | | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 3.3 J | 23.0 J | 46.8 J | 23.4 J | 150. J |
| PERCENT MOISTURE | % BY WT. | T | | 4.9 | 9.93 | 9.33 | 6.58 | 13.4 |
| SULFATE | mg/kg | T | | 156 | 40 | 56 | 22. U | 626 |
| HEXANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S10D-01S | S10D-01U | S10D-02U | S10D-02U | S11-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 16:05 | 10/28/1999 14:55 | 10/28/1999 15:15 | 10/28/1999 15:15 | 10/19/1999 10:25 |
| | | | Top (ft) | 0 | 2 | 0 | 0 | 5.5 |
| | | Total (T)/ | Bottom (ft) | 2 | 3.5 | 2 | 2 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | 0.11 J | <0.006 | <0.008 | <0.008 | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| 2-HEXANONE | mg/kg | T | | <0.011 UJ | <0.012 UJ | <0.016 UJ | <0.016 | |
| ACETONE | mg/kg | T | | <0.022 UJ | <0.025 UJ | <0.032 UJ | <0.032 | |
| BENZENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.008 UJ | <0.008 UJ | |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| BROMOFORM | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.008 UJ | <0.008 | |
| CARBON DISULFIDE | mg/kg | T | | 0.01 J | <0.006 | <0.008 | <0.008 | |
| CARBON TETRACHLORIDE | mg/kg | T | | 0.008 J | <0.006 | <0.008 | <0.008 | |
| CHLOROBENZENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| CHLOROFORM | mg/kg | T | | 0.01 J | <0.006 | <0.008 | <0.008 | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| ETHYLBENZENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| METHYL BROMIDE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| METHYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| METHYL ETHYL KETONE | mg/kg | T | | <0.011 UJ | <0.012 UJ | <0.016 UJ | <0.016 | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.011 UJ | <0.012 UJ | <0.016 UJ | <0.016 | |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| STYRENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| TETRACHLOROETHYLENE | mg/kg | T | | 1.8 J | <0.006 | <0.008 | <0.008 | |
| TOLUENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| TRICHLOROETHENE | mg/kg | T | | 0.021 J | 0.009 | <0.008 | <0.008 | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | 0.009 J | 0.006 J | <0.008 UJ | <0.008 UJ | |
| VINYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| XYLENES | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S10D-01S | S10D-01U | S10D-02U | S10D-02U | S11-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 16:05 | 10/28/1999 14:55 | 10/28/1999 15:15 | 10/28/1999 15:15 | 10/19/1999 10:25 |
| | | | Top (ft) | 0 | 2 | 0 | 0 | 5.5 |
| | | Total (T)/ | Bottom (ft) | 2 | 3.5 | 2 | 2 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | 7360 | 9.4 | 36.6 | 41 | |
| ARSENIC | mg/kg | T | | | 3.4 | 19.7 J | 45.9 J | 8.3 J |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 110 | <4.6 | 5.5 | <4.5 | 12.6 J |
| CYANIDE | mg/kg | T | | | | | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 179. J | 41.7 J | 103. J | 36.1 J | 1.4 |
| PERCENT MOISTURE | % BY WT. | T | | 22.1 | 12.9 | 20.3 | 11.4 | 11.8 |
| SULFATE | mg/kg | T | | 1430 | 162 | 239. J | 158. J | 37. J |
| HEXANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.008 | <0.008 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S11-01U | S12A-01U | S12B-01U | S14-01U | S14-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 10:25 | 10/28/1999 11:40 | 10/27/1999 11:15 | 10/26/1999 15:30 | 10/26/1999 14:45 |
| | | | Top (ft) | 5.5 | 2 | 2 | 2 | 1 |
| | | Total (T)/ | Bottom (ft) | 7 | 4 | 4 | 4 | 3 |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | <0.005 | <0.007 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | <0.005 UJ | <0.007 UJ |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | <0.005 | <0.007 |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | <0.005 | <0.007 |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | <0.005 | <0.007 |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | <0.005 | <0.007 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | <0.005 | <0.007 |
| 2-HEXANONE | mg/kg | T | | | | | <0.011 | <0.013 |
| ACETONE | mg/kg | T | | | | | <0.022 | <0.027 |
| BENZENE | mg/kg | T | | | | | <0.005 | 0.007 |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | <0.005 | <0.007 UJ |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | <0.005 | <0.007 |
| BROMOFORM | mg/kg | T | | | | | <0.005 | <0.007 |
| CARBON DISULFIDE | mg/kg | T | | | | | <0.005 | <0.007 |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | <0.005 | <0.007 |
| CHLOROBENZENE | mg/kg | T | | | | | <0.005 | <0.007 |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | <0.005 | <0.007 |
| CHLOROFORM | mg/kg | T | | | | | <0.005 | <0.007 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | <0.005 | <0.007 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | <0.005 | <0.007 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | <0.005 UJ | <0.007 UJ |
| ETHYL CHLORIDE | mg/kg | T | | | | | <0.005 | <0.007 |
| ETHYLBENZENE | mg/kg | T | | | | | <0.005 | <0.007 |
| METHYL BROMIDE | mg/kg | T | | | | | <0.005 UJ | <0.007 UJ |
| METHYL CHLORIDE | mg/kg | T | | | | | <0.005 UJ | <0.007 UJ |
| METHYL ETHYL KETONE | mg/kg | T | | | | | <0.011 | <0.013 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | <0.011 | <0.013 |
| METHYLENE CHLORIDE | mg/kg | T | | | | | <0.005 | <0.007 |
| STYRENE | mg/kg | T | | | | | <0.005 | <0.007 |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | <0.005 | <0.007 |
| TOLUENE | mg/kg | T | | | | | <0.005 | <0.007 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | <0.005 | <0.007 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | <0.005 | <0.007 |
| TRICHLOROETHENE | mg/kg | T | | | | | <0.005 | <0.007 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | <0.005 UJ | <0.007 |
| VINYL CHLORIDE | mg/kg | T | | | | | <0.005 UJ | <0.007 UJ |
| XYLENES | mg/kg | T | | | | | <0.005 | <0.007 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S11-01U | S12A-01U | S12B-01U | S14-01U | S14-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/19/1999 10:25 | 10/28/1999 11:40 | 10/27/1999 11:15 | 10/26/1999 15:30 | 10/26/1999 14:45 |
| | | | Top (ft) | 5.5 | 2 | 2 | 2 | 1 |
| | | Total (T)/ | Bottom (ft) | 7 | 4 | 4 | 4 | 3 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | | 78.6 J | 27.2 | 2.3 J | 4.0 J |
| ARSENIC | mg/kg | T | | 2.6 J | 28.3 | 185 | 175 | 49 |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | 4.02 | 27.9 |
| CHROMIUM | mg/kg | T | | | | | 78.4 | 12.6 |
| COPPER | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | 759 | 2940 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 10.8 J | <4.9 | 5.9 | 23.2 J | 77.9 J |
| CYANIDE | mg/kg | T | | | | | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 1.5 | | 19.0 J | 4.1 | 7.3 |
| PERCENT MOISTURE | % BY WT. | T | | | 17.8 | 27.3 | 8.95 | 16.4 |
| SULFATE | mg/kg | T | | 48. J | | 18400 | 4130 | 16800 |
| HEXANE | mg/kg | T | | | | | <0.005 | <0.007 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S14-03U | S14-04U | S15-01U | S1A-01U | S1A-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 14:00 | 10/26/1999 16:10 | 10/27/1999 9:50 | 10/16/1999 9:00 | 10/16/1999 10:05 |
| | | | Top (ft) | 0 | 2 | 6 | 4 | 6 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 8 | 6.75 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.007 | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| 2-HEXANONE | mg/kg | T | | <0.013 | <0.012 | <0.015 | | |
| ACETONE | mg/kg | T | | 0.026 | <0.024 | <0.03 | | |
| BENZENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.007 UJ | | |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| BROMOFORM | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| CARBON DISULFIDE | mg/kg | T | | 0.042 | <0.006 | <0.007 | | |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| CHLOROBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| CHLOROFORM | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.007 | | |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| ETHYLBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| METHYL BROMIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.007 | | |
| METHYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.007 | | |
| METHYL ETHYL KETONE | mg/kg | T | | <0.013 | <0.012 | <0.015 | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.013 | <0.012 | <0.015 | | |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| STYRENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| TOLUENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.007 UJ | | |
| VINYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.007 | | |
| XYLENES | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S14-03U | S14-04U | S15-01U | S1A-01U | S1A-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 14:00 | 10/26/1999 16:10 | 10/27/1999 9:50 | 10/16/1999 9:00 | 10/16/1999 10:05 |
| | | | Top (ft) | 0 | 2 | 6 | 4 | 6 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 8 | 6.75 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | 4.5 | <1.1 | 5.3 J | <1.1 | <1.5 |
| ARSENIC | mg/kg | T | | 64.2 | 33.5 | 13.6 | 2 | 3.7 |
| BARIUM | mg/kg | T | | | | 152 | 11.0 J | 137. J |
| CADMIUM | mg/kg | T | | 42.2 | 0.42 | | 25 | 93.6 |
| CHROMIUM | mg/kg | T | | 4.35 | 5.45 | | 4.14 J | 14.6 J |
| COPPER | mg/kg | T | | | | 55.3 J | 119 | 33.3 |
| LEAD | mg/kg | T | | | | 191. J | 7.7 J | 118. J |
| NICKEL | mg/kg | T | | | | | 8.31 | 42.2 |
| SELENIUM | mg/kg | T | | | | | <1.1 UJ | <1.5 UJ |
| VANADIUM | mg/kg | T | | | | | 5.37 | 22.2 |
| ZINC | mg/kg | T | | 10100 | 32.5 | 1960 | 7360 | 5720 |
| BORON | mg/kg | T | | | | | <4.3 UJ | 67.9 |
| CHLORIDE | mg/kg | T | | 53. J | 63.8 J | <4.9 | | |
| CYANIDE | mg/kg | T | | | | 0.86 | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | <13. | 2 | | | |
| PERCENT MOISTURE | % BY WT. | T | | 22.5 | 11.1 | 17.7 | 6.18 | 31.6 |
| SULFATE | mg/kg | T | | 21200 | 97 | | | |
| HEXANE | mg/kg | T | | <0.006 | <0.006 | <0.007 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1A-03U | S1A-04U | S1A-05U | S1A-05U | S1A-06U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/16/1999 10:40 | 10/16/1999 11:05 | 10/16/1999 13:20 | 10/16/1999 13:20 | 10/16/1999 13:50 |
| | | | Top (ft) | 6 | 5 | 4 | 4 | 6 |
| | | Total (T)/ | Bottom (ft) | 7 | 7 | 6 | 6 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1A-03U | S1A-04U | S1A-05U | S1A-05U | S1A-06U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/16/1999 10:40 | 10/16/1999 11:05 | 10/16/1999 13:20 | 10/16/1999 13:20 | 10/16/1999 13:50 |
| | | | Top (ft) | 6 | 5 | 4 | 4 | 6 |
| | | Total (T)/ | Bottom (ft) | 7 | 7 | 6 | 6 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | <1.2 | <1.2 | 6.9 J | 33.8 J | <1.2 UJ |
| ARSENIC | mg/kg | T | | 88.7 | 97.2 | 22.2 J | 76.7 J | 3.4 |
| BARIUM | mg/kg | T | | 4.12 J | 6.15 J | 61.4 J | 584. J | 5.20 J |
| CADMIUM | mg/kg | T | | 11.8 | 0.76 | 32.4 J | 269. J | 0.42 |
| CHROMIUM | mg/kg | T | | 4.38 J | 2.13 U | 3.89 J | 17.0 J | 3.47 J |
| COPPER | mg/kg | T | | 1.24 J | 16 | 55.3 J | 281. J | 0.93 J |
| LEAD | mg/kg | T | | 3.3 J | 7.4 J | 173. J | 2720. J | 3.4 J |
| NICKEL | mg/kg | T | | 3.49 | 0.82 | 8.01 J | 20.3 J | 2.78 |
| SELENIUM | mg/kg | T | | <1.2 UJ | <1.2 | <1.5 UJ | 1.9 U | <1.2 |
| VANADIUM | mg/kg | T | | 4.85 | 2.37 | 4.77 J | 14.4 J | 5.33 |
| ZINC | mg/kg | T | | 4210 | 97.5 | 3380. J | 36600. J | 244 |
| BORON | mg/kg | T | | <4.7 UJ | <5. | <6. UJ | 7.4 J | <4.9 |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 14.9 | 19.8 | 33.8 | 36.1 | 18.1 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1B-01U | S1B-02U | S1B-03U | S1B-04U | S1C-01S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 16:55 | 10/27/1999 7:45 | 10/27/1999 9:50 | 10/27/1999 14:40 | 10/27/1999 15:40 |
| | | | Top (ft) | 7 | 4 | 0 | 5.5 | 0 |
| | | Total (T)/ | Bottom (ft) | 8 | 6 | 1 | 7.5 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | <0.007 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | <0.007 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | <0.007 |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | <0.007 |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | <0.007 |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | <0.007 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | <0.007 |
| 2-HEXANONE | mg/kg | T | | | | | | <0.014 |
| ACETONE | mg/kg | T | | | | | | <0.028 |
| BENZENE | mg/kg | T | | | | | | <0.007 |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | <0.007 UJ |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | <0.007 |
| BROMOFORM | mg/kg | T | | | | | | <0.007 |
| CARBON DISULFIDE | mg/kg | T | | | | | | <0.007 |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | <0.007 |
| CHLOROBENZENE | mg/kg | T | | | | | | <0.007 |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | <0.007 |
| CHLOROFORM | mg/kg | T | | | | | | <0.007 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | <0.007 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | <0.007 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | <0.007 UJ |
| ETHYL CHLORIDE | mg/kg | T | | | | | | <0.007 |
| ETHYLBENZENE | mg/kg | T | | | | | | <0.007 |
| METHYL BROMIDE | mg/kg | T | | | | | | <0.007 |
| METHYL CHLORIDE | mg/kg | T | | | | | | <0.007 |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | <0.014 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | <0.014 |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | <0.007 |
| STYRENE | mg/kg | T | | | | | | <0.007 |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | <0.007 |
| TOLUENE | mg/kg | T | | | | | | <0.007 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | <0.007 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | <0.007 |
| TRICHLOROETHENE | mg/kg | T | | | | | | <0.007 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | <0.007 |
| VINYL CHLORIDE | mg/kg | T | | | | | | <0.007 |
| XYLENES | mg/kg | T | | | | | | <0.007 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1B-01U | S1B-02U | S1B-03U | S1B-04U | S1C-01S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 16:55 | 10/27/1999 7:45 | 10/27/1999 9:50 | 10/27/1999 14:40 | 10/27/1999 15:40 |
| | | | Top (ft) | 7 | 4 | 0 | 5.5 | 0 |
| | | Total (T)/ | Bottom (ft) | 8 | 6 | 1 | 7.5 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | 2.5 U | <1.3 UJ | <1.6 | <1.2 | <1.3 UJ |
| ARSENIC | mg/kg | T | | 13 | <1.3 UJ | 2.6 | 1.9 | <1.3 UJ |
| BARIUM | mg/kg | T | | 9.34 | 6.65 | 47.8 | 6.48 | 30 |
| CADMIUM | mg/kg | T | | <0.13 | <0.13 | 1.46 J | 0.44 J | 0.96 J |
| CHROMIUM | mg/kg | T | | 5.09 J | 3.19 | 4.31 J | 3.68 J | 2.73 |
| COPPER | mg/kg | T | | 2.51 J | 1.65 J | 9.86 J | 1.82 J | 1.89 J |
| LEAD | mg/kg | T | | 3.5 J | 2.8 J | 63.3 J | 3.5 J | 50 |
| NICKEL | mg/kg | T | | 4.35 J | 2.32 | 1.1 J | 2.27 J | <0.80 |
| SELENIUM | mg/kg | T | | <1.3 | <1.3 UJ | <1.6 UJ | <1.2 UJ | <1.3 UJ |
| VANADIUM | mg/kg | T | | 7.03 J | 5.24 | 2.74 J | 6.92 J | 0.48 J |
| ZINC | mg/kg | T | | 420 | 12.0 J | 145 | 81.3 | 5.8 U |
| BORON | mg/kg | T | | 7.3 U | <5.3 | 9.9 U | 9.3 U | 51.5 |
| CHLORIDE | mg/kg | T | | | | | | <5.4 |
| CYANIDE | mg/kg | T | | | | | | <0.67 |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | 67.2 J |
| PERCENT MOISTURE | % BY WT. | T | | 26.9 | 26.4 | 40.2 | 17.6 | 26.2 |
| SULFATE | mg/kg | T | | | | | | 20400 |
| HEXANE | mg/kg | T | | | | | | <0.007 UJ |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1C-01U | S1C-02S | S1C-02S | S1C-02U | S1C-03S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 16:00 | 10/27/1999 9:40 | 10/27/1999 9:40 | 10/27/1999 9:40 | 10/27/1999 10:05 |
| | | | Top (ft) | 7 | 0 | 0 | 2 | 0 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 2 | 3 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 UJ | <0.006 | <0.006 UJ |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| 2-HEXANONE | mg/kg | T | | <0.009 | <0.017 UJ | <0.015 | <0.012 | <0.011 |
| ACETONE | mg/kg | T | | 0.034 | 0.036 J | 0.042 J | <0.023 | <0.022 |
| BENZENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.005 UJ | <0.009 UJ | <0.008 UJ | <0.006 UJ | <0.006 UJ |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| BROMOFORM | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| CARBON DISULFIDE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| CHLOROBENZENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| CHLOROFORM | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.005 UJ | <0.009 UJ | <0.008 UJ | <0.006 UJ | <0.006 UJ |
| ETHYL CHLORIDE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| ETHYLBENZENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | 0.006 | <0.006 |
| METHYL BROMIDE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 UJ | <0.006 UJ | <0.006 |
| METHYL CHLORIDE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| METHYL ETHYL KETONE | mg/kg | T | | <0.009 | <0.017 UJ | <0.015 | <0.012 | <0.011 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.009 | <0.017 UJ | <0.015 | <0.012 | <0.011 |
| METHYLENE CHLORIDE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| STYRENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| TOLUENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | 0.016 | <0.006 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| TRICHLOROETHENE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.005 | <0.009 UJ | 0.009 J | <0.006 UJ | <0.006 |
| VINYL CHLORIDE | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | <0.006 | <0.006 |
| XYLENES | mg/kg | T | | <0.005 | <0.009 UJ | <0.008 | 0.01 | <0.006 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | <0.027 | <0.025 | <0.021 | |
| AROCLOR 1221 | mg/kg | T | | | <0.027 | <0.025 | <0.021 | |
| AROCLOR 1232 | mg/kg | T | | | <0.027 | <0.025 | <0.021 | |
| AROCLOR 1242 | mg/kg | T | | | <0.027 | <0.025 | <0.021 | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1C-01U | S1C-02S | S1C-02S | S1C-02U | S1C-03S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 16:00 | 10/27/1999 9:40 | 10/27/1999 9:40 | 10/27/1999 9:40 | 10/27/1999 10:05 |
| | | | Top (ft) | 7 | 0 | 0 | 2 | 0 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 2 | 3 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | <0.027 UJ | <0.025 UJ | <0.021 UJ | |
| AROCLOR 1254 | mg/kg | T | | | <0.027 UJ | <0.025 UJ | <0.021 UJ | |
| AROCLOR 1260 | mg/kg | T | | | <0.027 UJ | <0.025 UJ | <0.021 UJ | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | 2.1 | 10.0 J | 2.6 U | <1.2 | 9.9 |
| ARSENIC | mg/kg | T | | 6.6 | 7.9 J | 4.3 J | <1.2 UJ | 268 |
| BARIUM | mg/kg | T | | 17.6 | 79.5 | 81.7 | 7.48 | 1010 |
| CADMIUM | mg/kg | T | | 0.16 | 39.7 J | 10.8 J | 1.73 | 15.6 |
| CHROMIUM | mg/kg | T | | 5.09 | 8.84 | 6.16 | 18.1 | 31.4 |
| COPPER | mg/kg | T | | 2.06 | 38.5 J | 17.3 J | 1.17 J | 205 |
| LEAD | mg/kg | T | | 5 | 149 | 112 | 688 | 3390 |
| NICKEL | mg/kg | T | | 6.6 | 8.8 J | 3.37 J | 11.8 | 13.3 |
| SELENIUM | mg/kg | T | | <1.3 UJ | 2.1 J | <1.5 UJ | <1.2 UJ | 2.2 J |
| VANADIUM | mg/kg | T | | 8.06 | 10.1 J | 5.83 J | 6.02 | 24.7 |
| ZINC | mg/kg | T | | 396 | 3550. J | 1380. J | 356 | 5410 |
| BORON | mg/kg | T | | 11.9 | 16.5 U | 11.1 U | 5.5 U | 9.6 |
| CHLORIDE | mg/kg | T | | <5.3 | 36 | 23.5 | 21 | 4.9 |
| CYANIDE | mg/kg | T | | <0.66 | <0.79 | <0.74 | <0.62 | 0.97 |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 71. J | 92. J | 49.2 J | 28.7 J | 5.9 J |
| PERCENT MOISTURE | % BY WT. | T | | 24.8 | 38.1 | 33 | 19.4 | 13.1 |
| SULFATE | mg/kg | T | | 2500 | 22600 | 21000 | 1620 | 12500 |
| HEXANE | mg/kg | T | | 0.01 J | <0.009 UJ | 0.011 J | 0.033 | <0.006 UJ |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1C-03U | S1C-04S | S1C-04U | S1I-01U | S1J-01S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 10:50 | 10/27/1999 11:20 | 10/27/1999 11:50 | 10/16/1999 7:50 | 10/29/1999 8:15 |
| | | | Top (ft) | 6 | 0 | 9 | 4 | 0 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 10 | 6 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | 0.024 | <0.007 | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | <0.01 UJ | <0.007 UJ | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| 2-HEXANONE | mg/kg | T | | <0.011 | <0.02 | <0.015 | | |
| ACETONE | mg/kg | T | | <0.022 | 0.064 | 0.03 | | |
| BENZENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 UJ | <0.01 UJ | <0.007 UJ | | |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| BROMOFORM | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| CARBON DISULFIDE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| CHLOROBENZENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| CHLOROFORM | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.01 UJ | <0.007 UJ | | |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| ETHYLBENZENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| METHYL BROMIDE | mg/kg | T | | <0.006 | <0.01 UJ | <0.007 | | |
| METHYL CHLORIDE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| METHYL ETHYL KETONE | mg/kg | T | | <0.011 | <0.02 | <0.015 | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.011 | <0.02 | <0.015 | | |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| STYRENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| TOLUENE | mg/kg | T | | 0.011 | <0.01 | <0.007 | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 | <0.01 UJ | <0.007 | | |
| VINYL CHLORIDE | mg/kg | T | | <0.006 | <0.01 | <0.007 | | |
| XYLENES | mg/kg | T | | 0.006 | <0.01 | <0.007 | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | <0.019 |
| AROCLOR 1016 | mg/kg | T | | | <0.019 | <0.024 | | |
| AROCLOR 1221 | mg/kg | T | | | <0.019 | <0.024 | | |
| AROCLOR 1232 | mg/kg | T | | | <0.019 | <0.024 | | |
| AROCLOR 1242 | mg/kg | T | | | <0.019 | <0.024 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1C-03U | S1C-04S | S1C-04U | S1I-01U | S1J-01S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 10:50 | 10/27/1999 11:20 | 10/27/1999 11:50 | 10/16/1999 7:50 | 10/29/1999 8:15 |
| | | | Top (ft) | 6 | 0 | 9 | 4 | 0 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 10 | 6 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | <0.019 | <0.024 UJ | | |
| AROCLOR 1254 | mg/kg | T | | | 0.095 J | <0.024 UJ | | |
| AROCLOR 1260 | mg/kg | T | | | 0.165 J | <0.024 UJ | | |
| DDT | mg/kg | T | | | | | | 0.00102 J |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | <0.00076 |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | 0.00148 |
| METHOXYCHLOR | mg/kg | T | | | | | | <0.0037 |
| ANTIMONY | mg/kg | T | | 1.9 | 7.8 J | 8.0 J | <1.1 | 3.0 J |
| ARSENIC | mg/kg | T | | 2.8 J | 107 | 2.3 J | 39.4 | 21 |
| BARIUM | mg/kg | T | | 13.7 | 323 | 7.38 | 5.07 J | 70.8 J |
| CADMIUM | mg/kg | T | | 2.7 | 8.88 | 0.38 J | 7.92 | 10.7 J |
| CHROMIUM | mg/kg | T | | 5.49 | 83 | 5.77 | 3.55 J | 4.96 J |
| COPPER | mg/kg | T | | 4.29 | 138 | 2.10 J | 2.76 | 59.7 J |
| LEAD | mg/kg | T | | 10.3 | 1190 | 817 | 4.2 J | 2140. J |
| NICKEL | mg/kg | T | | 2.83 | 18.9 | 15.9 | 3.09 | 41.7 |
| SELENIUM | mg/kg | T | | <1. UJ | <1.1 UJ | <1.4 UJ | <1.1 UJ | 4.6 |
| VANADIUM | mg/kg | T | | 9.6 | 14.5 | 6.47 | 5.85 | 10.1 |
| ZINC | mg/kg | T | | 473 | 2190 | 409 | 476 | 120000 |
| BORON | mg/kg | T | | 7.9 U | 14.8 U | 11.7 U | <4.3 UJ | 5.5 |
| CHLORIDE | mg/kg | T | | <4.3 | <4.5 | 14.2 | | |
| CYANIDE | mg/kg | T | | <0.54 | <0.54 | <0.68 | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 43.5 J | 2.1 J | 68.7 J | | |
| PERCENT MOISTURE | % BY WT. | T | | 7.3 | 10.4 | 29.2 | 7.28 | 11.5 |
| SULFATE | mg/kg | T | | 249 | 413 | 1890 | | |
| HEXANE | mg/kg | T | | 0.027 J | <0.01 | <0.007 UJ | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1J-01U | S1J-02S | S1J-02U | S1J-03S | S1J-03S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/15/1999 14:49 | 10/29/1999 8:00 | 10/15/1999 15:04 | 10/29/1999 8:35 | 10/29/1999 8:35 |
| | | | Top (ft) | 6.5 | 0 | 5.75 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 8.5 | 2 | 7.75 | 2 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | <0.02 | | <0.019 | <0.019 |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1J-01U | S1J-02S | S1J-02U | S1J-03S | S1J-03S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/15/1999 14:49 | 10/29/1999 8:00 | 10/15/1999 15:04 | 10/29/1999 8:35 | 10/29/1999 8:35 |
| | | | Top (ft) | 6.5 | 0 | 5.75 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 8.5 | 2 | 7.75 | 2 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 2 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | 0.00957 J | | <0.0076 | <0.015 |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | <0.00077 UJ | | <0.0076 | 0.025 J |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | 0.0141 | | <0.0076 | <0.015 |
| METHOXYCHLOR | mg/kg | T | | | 0.0116 R | | 0.272 JN | 1.87 JN |
| ANTIMONY | mg/kg | T | | <1.2 | 27.4 J | <1.3 | 8.4 J | 14.6 J |
| ARSENIC | mg/kg | T | | 6 | 56.6 | <1.3 | 38.9 | 48.4 |
| BARIUM | mg/kg | T | | 3.7 | 230. J | 4.01 | 92.3 J | 193. J |
| CADMIUM | mg/kg | T | | 0.13 | 78.2 J | 2.07 | 11.3 J | 14.1 J |
| CHROMIUM | mg/kg | T | | 2.81 | 11.3 J | 2.64 | 9.37 J | 8.71 J |
| COPPER | mg/kg | T | | 1.66 | 245. J | <0.64 UJ | 186. J | 265. J |
| LEAD | mg/kg | T | | 2.8 J | 9010. J | 3.0 J | 7120. J | 12500. J |
| NICKEL | mg/kg | T | | 2.91 | 35.2 | 2.02 | 33.6 | 32.8 |
| SELENIUM | mg/kg | T | | <1.2 | 6.7 | <1.3 | <11. | 3.8 |
| VANADIUM | mg/kg | T | | 3.16 | 17.4 | 3.24 | 23.9 J | 13.5 J |
| ZINC | mg/kg | T | | 144 | 80100 | 199 | 60300 | 53600 |
| BORON | mg/kg | T | | <4.8 | 9.9 | <5.1 | 10.2 | 7.9 |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| DIESEL FUEL | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 18.6 | 13.5 | 23.7 | 11.7 | 9.82 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1J-03U | S1J-04S | S1J-04U | S1K-01S | S1K-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/15/1999 15:20 | 10/29/1999 8:25 | 10/15/1999 14:21 | 10/29/1999 7:55 | 10/15/1999 15:43 |
| | | | Top (ft) | 3.5 | 0 | 6.5 | 0 | 4.5 |
| | | Total (T)/ | Bottom (ft) | 4.5 | 2 | 8 | 2 | 6.5 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | <0.009 | <0.006 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | <0.009 UJ | <0.006 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | <0.009 | <0.006 |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | <0.009 | <0.006 |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | <0.009 | <0.006 |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | <0.009 | <0.006 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | <0.009 | <0.006 |
| 2-HEXANONE | mg/kg | T | | | | | <0.018 | <0.012 |
| ACETONE | mg/kg | T | | | | | <0.035 | 0.041 |
| BENZENE | mg/kg | T | | | | | <0.009 | <0.006 |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | <0.009 UJ | <0.007 |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | <0.009 | <0.006 |
| BROMOFORM | mg/kg | T | | | | | <0.009 | <0.006 |
| CARBON DISULFIDE | mg/kg | T | | | | | <0.009 | 0.053 |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | <0.009 | <0.006 |
| CHLOROBENZENE | mg/kg | T | | | | | <0.009 | <0.006 |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | <0.009 | <0.006 |
| CHLOROFORM | mg/kg | T | | | | | <0.009 | <0.006 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | <0.009 | <0.006 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | <0.009 | <0.006 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | <0.009 | <0.006 UJ |
| ETHYL CHLORIDE | mg/kg | T | | | | | <0.009 | <0.006 |
| ETHYLBENZENE | mg/kg | T | | | | | <0.009 | <0.006 |
| METHYL BROMIDE | mg/kg | T | | | | | <0.009 | <0.006 |
| METHYL CHLORIDE | mg/kg | T | | | | | <0.009 | <0.006 |
| METHYL ETHYL KETONE | mg/kg | T | | | | | <0.018 | <0.012 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | <0.018 | <0.012 |
| METHYLENE CHLORIDE | mg/kg | T | | | | | <0.009 | <0.006 |
| STYRENE | mg/kg | T | | | | | <0.009 | <0.006 |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | <0.009 | <0.006 |
| TOLUENE | mg/kg | T | | | | | <0.009 | 0.01 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | <0.009 | <0.006 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | <0.009 | <0.006 |
| TRICHLOROETHENE | mg/kg | T | | | | | <0.009 | <0.006 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | <0.009 UJ | <0.006 |
| VINYL CHLORIDE | mg/kg | T | | | | | <0.009 | <0.006 |
| XYLENES | mg/kg | T | | | | | <0.009 | 0.007 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | <0.019 | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S1J-03U | S1J-04S | S1J-04U | S1K-01S | S1K-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/15/1999 15:20 | 10/29/1999 8:25 | 10/15/1999 14:21 | 10/29/1999 7:55 | 10/15/1999 15:43 |
| | | | Top (ft) | 3.5 | 0 | 6.5 | 0 | 4.5 |
| | | Total (T)/ | Bottom (ft) | 4.5 | 2 | 8 | 2 | 6.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | <0.015 | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | <0.015 | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | <0.015 | | | |
| METHOXYCHLOR | mg/kg | T | | | <0.073 | | | |
| ANTIMONY | mg/kg | T | | <1.1 | 5.3 J | <1.3 | | <1.3 |
| ARSENIC | mg/kg | T | | 2.4 | 28.7 | <1.3 | | 3.4 |
| BARIUM | mg/kg | T | | 4.28 | 260. J | 4.15 | | 3.53 |
| CADMIUM | mg/kg | T | | 14 | 40.5 J | <0.13 | | 1.56 |
| CHROMIUM | mg/kg | T | | 2.91 | 9.19 J | 3.04 | | 2.35 |
| COPPER | mg/kg | T | | 1.45 | 470. J | 2.16 | | 1.57 |
| LEAD | mg/kg | T | | 4.8 J | 15500. J | 4.3 J | | 3.0 J |
| NICKEL | mg/kg | T | | 4.31 | 42.8 | 5.84 | | 2.52 |
| SELENIUM | mg/kg | T | | <1.1 | 19.6 | <1.3 | | <1.3 |
| VANADIUM | mg/kg | T | | 3.91 | 14.6 | 3.65 | | 2.86 |
| ZINC | mg/kg | T | | 1330 | 68800 | 209 | | 360 |
| BORON | mg/kg | T | | <4.4 | 10.2 | <5.1 | | <5.2 |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| DIESEL FUEL | mg/kg | T | | | | | <46. | 202 |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 10.9 | 9.39 | 23.3 | 13.9 | 23.2 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | <0.009 | 0.024 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-01S | S20-01U | S20-02S | S20-02U | S20-03S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 10:10 | 10/26/1999 10:15 | 10/26/1999 10:30 | 10/26/1999 10:35 | 10/26/1999 9:50 |
| | | | Top (ft) | 0 | 2 | 0 | 2 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 4 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 2-HEXANONE | mg/kg | T | | | | <0.012 | <0.018 | <0.011 |
| ACETONE | mg/kg | T | | | | 0.024 | <0.036 | <0.023 |
| BENZENE | mg/kg | T | | | | 0.008 | <0.009 | <0.006 |
| BROMOCHLOROMETHANE | mg/kg | T | | | | <0.006 | <0.009 UJ | <0.006 |
| BROMODICHLOROMETHANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| BROMOFORM | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| CARBON DISULFIDE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| CARBON TETRACHLORIDE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| CHLOROBENZENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| CHLOROFORM | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | <0.006 UJ | <0.009 UJ | <0.006 UJ |
| ETHYL CHLORIDE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| ETHYLBENZENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| METHYL BROMIDE | mg/kg | T | | | | <0.006 UJ | <0.009 UJ | <0.006 UJ |
| METHYL CHLORIDE | mg/kg | T | | | | <0.006 UJ | <0.009 | <0.006 UJ |
| METHYL ETHYL KETONE | mg/kg | T | | | | <0.012 | <0.018 | <0.011 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | <0.012 | <0.018 | <0.011 |
| METHYLENE CHLORIDE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| STYRENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| TETRACHLOROETHYLENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| TOLUENE | mg/kg | T | | | | 0.006 | <0.009 | <0.006 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| TRICHLOROETHENE | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | <0.006 UJ | <0.009 UJ | <0.006 UJ |
| VINYL CHLORIDE | mg/kg | T | | | | <0.006 UJ | <0.009 | <0.006 UJ |
| XYLENES | mg/kg | T | | | | <0.006 | <0.009 | <0.006 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-01S | S20-01U | S20-02S | S20-02U | S20-03S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 10:10 | 10/26/1999 10:15 | 10/26/1999 10:30 | 10/26/1999 10:35 | 10/26/1999 9:50 |
| | | | Top (ft) | 0 | 2 | 0 | 2 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 4 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | | | | | <1.0 |
| ARSENIC | mg/kg | T | | 1.5 | 1.9 | 3 | 7 | 6.8 J |
| BARIUM | mg/kg | T | | | | | | 9.48 |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | 3.63 | 3.41 | 9.46 | 25.3 | 8.86 |
| COPPER | mg/kg | T | | 3.24 U | 1.50 U | 10.3 | 20.1 | 10.6 |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 5.6 | 7.1 | 26.8 | 58.6 | 50.7 J |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | 84.5 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 9.6 J | | 10.6 J | | 8.3 J |
| CYANIDE | mg/kg | T | | <0.52 | <0.50 | <0.52 | 0.66 | <0.53 |
| FLUORIDE | mg/kg | T | | <1.0 UJ | | <1.1 | | <1.1 UJ |
| PERCENT MOISTURE | % BY WT. | T | | 4.7 | 2.04 | 4.84 | 17.7 | 5.22 |
| SULFATE | mg/kg | T | | 16. U | | 38 | | 23. U |
| HEXANE | mg/kg | T | | | | 0.013 | 0.012 J | <0.006 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-03S | S20-03U | S20-04S | S20-04U | S20-05S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 9:50 | 10/26/1999 9:55 | 10/26/1999 10:50 | 10/26/1999 10:55 | 10/26/1999 9:30 |
| | | | Top (ft) | 0 | 2 | 0 | 2 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 4 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 2-HEXANONE | mg/kg | T | | <0.011 | <0.012 | <0.012 | <0.015 UJ | |
| ACETONE | mg/kg | T | | <0.022 | <0.024 | <0.024 | <0.03 UJ | |
| BENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 UJ | <0.006 UJ | <0.007 UJ | |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| BROMOFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| CARBON DISULFIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| CHLOROBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| CHLOROFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| ETHYLBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| METHYL BROMIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | |
| METHYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | |
| METHYL ETHYL KETONE | mg/kg | T | | <0.011 | <0.012 | <0.012 | <0.015 UJ | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.011 | <0.012 | <0.012 | <0.015 UJ | |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| STYRENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| TOLUENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | |
| VINYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.007 UJ | |
| XYLENES | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.007 UJ | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-03S | S20-03U | S20-04S | S20-04U | S20-05S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 9:50 | 10/26/1999 9:55 | 10/26/1999 10:50 | 10/26/1999 10:55 | 10/26/1999 9:30 |
| | | | Top (ft) | 0 | 2 | 0 | 2 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 4 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | <1.1 | <1.0 | | | |
| ARSENIC | mg/kg | T | | 4.0 J | 1.2 | 2.1 | 2.3 | 2.1 |
| BARIUM | mg/kg | T | | 14.1 | 6.71 | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | 10.4 | 2.31 | 4.42 | 8.67 | 4.09 |
| COPPER | mg/kg | T | | 8.64 | 1.18 U | 3.91 U | 4.33 U | 3.55 U |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 28.4 J | 2.7 | 7.9 | 12.2 | 6.6 |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 99.7 | 16.1 | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 8.7 J | 7.9 J | 61.1 J | | 61.8 J |
| CYANIDE | mg/kg | T | | <0.53 | <0.52 | <0.52 | <0.51 | <0.53 |
| FLUORIDE | mg/kg | T | | <1.1 UJ | <1.0 UJ | <1.0 | | <1.1 UJ |
| PERCENT MOISTURE | % BY WT. | T | | 5.93 | 3.69 | 4.09 | 4.84 | 5.97 |
| SULFATE | mg/kg | T | | 19. U | 10. U | 71 | | 61 |
| HEXANE | mg/kg | T | | <0.006 | <0.006 | 0.007 | <0.007 UJ | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-05U | S20-06S | S20-06U | S20-07S | S20-07U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 9:35 | 10/26/1999 11:10 | 10/26/1999 11:15 | 10/26/1999 9:05 | 10/26/1999 9:15 |
| | | | Top (ft) | 2 | 0 | 2 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 4 | 2 | 4 | 2 | 4 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 1,1-DICHLOROETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 1,1-DICHLOROETHENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 1,2-DICHLOROETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 2-HEXANONE | mg/kg | T | | | <0.011 | <0.013 | <0.013 | <0.016 |
| ACETONE | mg/kg | T | | | <0.023 | 0.043 | <0.025 | <0.032 |
| BENZENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| BROMOCHLOROMETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 UJ |
| BROMODICHLOROMETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| BROMOFORM | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| CARBON DISULFIDE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| CARBON TETRACHLORIDE | mg/kg | T | | | <0.006 | <0.006 UJ | <0.006 | <0.008 |
| CHLOROBENZENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| CHLORODIBROMOMETHANE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| CHLOROFORM | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.008 UJ |
| ETHYL CHLORIDE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| ETHYLBENZENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| METHYL BROMIDE | mg/kg | T | | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.008 UJ |
| METHYL CHLORIDE | mg/kg | T | | | <0.006 UJ | <0.006 | <0.006 UJ | <0.008 UJ |
| METHYL ETHYL KETONE | mg/kg | T | | | <0.011 | <0.013 | <0.013 | <0.016 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | <0.011 | <0.013 | <0.013 | <0.016 |
| METHYLENE CHLORIDE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| STYRENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| TETRACHLOROETHYLENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| TOLUENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| TRICHLOROETHENE | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | <0.006 UJ | <0.006 UJ | <0.006 UJ | <0.008 UJ |
| VINYL CHLORIDE | mg/kg | T | | | <0.006 UJ | <0.006 | <0.006 UJ | <0.008 UJ |
| XYLENES | mg/kg | T | | | <0.006 | <0.006 | <0.006 | <0.008 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-05U | S20-06S | S20-06U | S20-07S | S20-07U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 9:35 | 10/26/1999 11:10 | 10/26/1999 11:15 | 10/26/1999 9:05 | 10/26/1999 9:15 |
| | | | Top (ft) | 2 | 0 | 2 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 4 | 2 | 4 | 2 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | | | | <1.1 | <1.3 |
| ARSENIC | mg/kg | T | | <1.1 | 1.7 | 5.5 J | 1.3 | <1.3 |
| BARIUM | mg/kg | T | | | | | 5.01 | 5.92 |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | 2.09 | 4.89 | 21.7 | 2.65 | 2.84 |
| COPPER | mg/kg | T | | 0.82 U | 4.12 U | 15.8 | 3.41 U | 1.82 U |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 2.8 | 9.4 | 47.6 | 5.8 | 10.6 |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | 23.3 | 20.3 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | 9.2 J | | 64.8 J | 72. J |
| CYANIDE | mg/kg | T | | <0.56 | <0.52 | 0.68 | <0.50 | <0.63 |
| FLUORIDE | mg/kg | T | | | <1.1 | | <1.1 UJ | <1.3 UJ |
| PERCENT MOISTURE | % BY WT. | T | | 11.9 | 6.61 | 8.04 | 5.15 | 22.3 |
| SULFATE | mg/kg | T | | | 15. U | | 54 | 65 |
| HEXANE | mg/kg | T | | | <0.006 | 0.014 J | <0.006 | 0.009 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-08S | S20-08U | S21-01S | S21-01U | S21-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 8:30 | 10/26/1999 8:40 | 10/17/1999 15:25 | 10/17/1999 14:20 | 10/17/1999 15:25 |
| | | | Top (ft) | 0 | 2 | 0 | 11 | 11 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 12 | 12 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.009 | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | <0.009 | | | |
| 2-HEXANONE | mg/kg | T | | <0.013 | <0.017 | | | |
| ACETONE | mg/kg | T | | <0.026 | <0.034 | | | |
| BENZENE | mg/kg | T | | <0.006 | <0.009 | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| BROMOFORM | mg/kg | T | | <0.006 | <0.009 | | | |
| CARBON DISULFIDE | mg/kg | T | | <0.006 | <0.009 | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | <0.009 UJ | | | |
| CHLOROBENZENE | mg/kg | T | | <0.006 | <0.009 | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | <0.009 | | | |
| CHLOROFORM | mg/kg | T | | <0.006 | <0.009 | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | <0.009 | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.009 | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.009 UJ | | | |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | <0.009 | | | |
| ETHYLBENZENE | mg/kg | T | | <0.006 | <0.009 | | | |
| METHYL BROMIDE | mg/kg | T | | <0.006 UJ | <0.009 UJ | | | |
| METHYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.009 | | | |
| METHYL ETHYL KETONE | mg/kg | T | | <0.013 | <0.017 | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.013 | <0.017 | | | |
| METHYLENE CHLORIDE | mg/kg | T | | <0.006 | <0.009 | | | |
| STYRENE | mg/kg | T | | <0.006 | <0.009 | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | <0.009 | | | |
| TOLUENE | mg/kg | T | | <0.006 | <0.009 | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.009 | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.009 | | | |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | <0.009 | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.009 UJ | | | |
| VINYL CHLORIDE | mg/kg | T | | <0.006 UJ | <0.009 | | | |
| XYLENES | mg/kg | T | | <0.006 | <0.009 | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S20-08S | S20-08U | S21-01S | S21-01U | S21-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 8:30 | 10/26/1999 8:40 | 10/17/1999 15:25 | 10/17/1999 14:20 | 10/17/1999 15:25 |
| | | | Top (ft) | 0 | 2 | 0 | 11 | 11 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 12 | 12 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 2 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | 1.6 | 4.9 J | 185 | 3.0 J | 2.7 U |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | 4.63 | 13.9 | | | |
| COPPER | mg/kg | T | | 2.40 U | 10.9 | | | |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 7 | 23.8 | 995 | 4.2 | 3.1 |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | 78.6 J | | | | |
| CYANIDE | mg/kg | T | | <0.54 | <0.74 | | | |
| FLUORIDE | mg/kg | T | | 1.1 | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 6.95 | 33.2 | 26.8 | 21 | 18.4 |
| SULFATE | mg/kg | T | | 121 | | | | |
| HEXANE | mg/kg | T | | 0.007 | 0.022 J | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S21-02S | S21-02U | S21-03S | S21-03U | S21-04S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 15:00 | 10/17/1999 15:10 | 10/17/1999 14:15 | 10/17/1999 14:15 | 10/17/1999 16:15 |
| | | | Top (ft) | 0 | 9 | 0 | 9 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 10 | 2 | 11 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S21-02S | S21-02U | S21-03S | S21-03U | S21-04S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 15:00 | 10/17/1999 15:10 | 10/17/1999 14:15 | 10/17/1999 14:15 | 10/17/1999 16:15 |
| | | | Top (ft) | 0 | 9 | 0 | 9 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 10 | 2 | 11 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | 11.8 | 99.7 | 221 | 2.5 U | 5.0 J |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | | | | | |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 546 | 10.1 | 758 | 5 | 1080. J |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 22.2 | 20.2 | 29.5 | 21.2 | 34.3 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S21-04S | S21-04U | S2C-01U | S2C-02U | S2C-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 16:15 | 10/17/1999 16:15 | 10/25/1999 16:25 | 10/25/1999 15:30 | 10/25/1999 15:30 |
| | | | Top (ft) | 0 | 10 | 2 | 6 | 6 |
| | | Total (T)/ | Bottom (ft) | 2 | 11 | 4 | 8 | 8 |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S21-04S | S21-04U | S2C-01U | S2C-02U | S2C-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/17/1999 16:15 | 10/17/1999 16:15 | 10/25/1999 16:25 | 10/25/1999 15:30 | 10/25/1999 15:30 |
| | | | Top (ft) | 0 | 10 | 2 | 6 | 6 |
| | | Total (T)/ | Bottom (ft) | 2 | 11 | 4 | 8 | 8 |
| Analyte | units | Diss. (D) | Duplicate # | 2 | 1 | 1 | 1 | 2 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | | | 2.1 U | 2.3 U | 2.3 U |
| ARSENIC | mg/kg | T | | 23.2 J | 1.8 U | 9.9 | 63.4 | 80.1 |
| BARIUM | mg/kg | T | | | | 205 | 143 | 128 |
| CADMIUM | mg/kg | T | | | | 3.46 J | 1.31 J | 1.45 J |
| CHROMIUM | mg/kg | T | | | | 42.9 J | 32.2 J | 25.3 J |
| COPPER | mg/kg | T | | | | 40.6 J | 83.6 J | 79.3 J |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 430. J | 4.1 | 120. J | 153. J | 158. J |
| NICKEL | mg/kg | T | | | | 39.2 J | 47.6 J | 33.8 J |
| SELENIUM | mg/kg | T | | | | 2.1 J | 5.6 | 5.2 |
| VANADIUM | mg/kg | T | | | | 72.6 J | 77.4 J | 70.5 J |
| ZINC | mg/kg | T | | | | 1170 | 415 | 348 |
| BORON | mg/kg | T | | | | 77.8 J | 49.1 J | 39.9 J |
| CHLORIDE | mg/kg | T | | 126. J | 57.6 J | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | 12.6 J | 1.3 J | | | |
| PERCENT MOISTURE | % BY WT. | T | | 49.2 | 20.7 | 25.6 | 35.4 | 33.3 |
| SULFATE | mg/kg | T | | 30000 | 625 | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S2D-01U | S2D-02U | S2D-03U | S3-01S | S3-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 16:35 | 10/27/1999 8:30 | 10/27/1999 8:05 | 10/27/1999 9:30 | 10/27/1999 9:30 |
| | | | Top (ft) | 5 | 2 | 5 | 0 | 5 |
| | | Total (T)/ | Bottom (ft) | 7 | 4 | 7 | 2 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S2D-01U | S2D-02U | S2D-03U | S3-01S | S3-01U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 16:35 | 10/27/1999 8:30 | 10/27/1999 8:05 | 10/27/1999 9:30 | 10/27/1999 9:30 |
| | | | Top (ft) | 5 | 2 | 5 | 0 | 5 |
| | | Total (T)/ | Bottom (ft) | 7 | 4 | 7 | 2 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | <2.0 | 4.8 U | <1.7 | 3.8 J | 1.1 U |
| ARSENIC | mg/kg | T | | 4.7 | 22.4 | 7 | 35 | 8 |
| BARIUM | mg/kg | T | | 156 | 179 | 36.3 | 247 | 20.9 |
| CADMIUM | mg/kg | T | | 0.40 J | 17.6 J | 0.23 J | 10.7 J | 65.0 J |
| CHROMIUM | mg/kg | T | | 22.7 J | 22.5 J | 10.4 J | 173. J | 8.81 J |
| COPPER | mg/kg | T | | 25.0 J | 43.6 J | 10.3 J | 86.3 J | 321. J |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 15.0 J | 194. J | 7.7 J | 876. J | 221. J |
| NICKEL | mg/kg | T | | 27.9 J | 28.7 J | 12.6 J | 13.5 J | 2.82 J |
| SELENIUM | mg/kg | T | | <2.0 UJ | <2.6 | <1.7 | 1.5 U | 2.6 |
| VANADIUM | mg/kg | T | | 31.2 J | 28.3 J | 11.9 J | 18.0 J | 4.02 J |
| ZINC | mg/kg | T | | 71.3 | 2360 | 41.3 | 1690 | 11500 |
| BORON | mg/kg | T | | 23.5 J | 28. J | 14.3 U | 7.0 U | <4.2 |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 50 | 61.9 | 42.7 | 11.6 | 7.61 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S3-02S | S3-02U | S3-03S | S3-03U | S3-04S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 8:25 | 10/27/1999 8:25 | 10/27/1999 8:55 | 10/27/1999 8:55 | 10/27/1999 8:00 |
| | | | Top (ft) | 0 | 4 | 0 | 4 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 6 | 2 | 6 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S3-02S | S3-02U | S3-03S | S3-03U | S3-04S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 8:25 | 10/27/1999 8:25 | 10/27/1999 8:55 | 10/27/1999 8:55 | 10/27/1999 8:00 |
| | | | Top (ft) | 0 | 4 | 0 | 4 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 6 | 2 | 6 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | 2.6 U | 11.1 | 3.9 J | 5.5 J | 6.9 J |
| ARSENIC | mg/kg | T | | 59.1 | 191 | 120 | 47.6 | 76.9 |
| BARIUM | mg/kg | T | | 210 | 181 | 342 | 223 | 885 |
| CADMIUM | mg/kg | T | | 7.75 J | 594. J | 36.5 J | 93.1 J | 78.4 J |
| CHROMIUM | mg/kg | T | | 15.2 J | 57.7 J | 24.7 J | 27.0 J | 45.9 J |
| COPPER | mg/kg | T | | 142. J | 2080. J | 149. J | 321. J | 570. J |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 870. J | 4740. J | 1630. J | 1980. J | 4550. J |
| NICKEL | mg/kg | T | | 14.6 J | 50.5 J | 35.4 J | 18.3 J | 19.9 J |
| SELENIUM | mg/kg | T | | 1.2 U | 26.9 J | 2.7 J | 2.8 J | 4.5 |
| VANADIUM | mg/kg | T | | 19.0 J | 53.7 J | 43.3 J | 33.5 J | 54.7 J |
| ZINC | mg/kg | T | | 1620 | 70400 | 5090 | 21300 | 14500 |
| BORON | mg/kg | T | | 7.6 U | 22.8 U | 69.3 J | 23.8 U | 50.7 J |
| CHLORIDE | mg/kg | T | | | 38.5 | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | <620. UJ | | | |
| PERCENT MOISTURE | % BY WT. | T | | 13.7 | 19.6 | 16.3 | 15.5 | 13.5 |
| SULFATE | mg/kg | T | | | 18100 | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S3-04U | S4-01S | S4-01U | S4-02S | S4-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 8:00 | 10/26/1999 10:50 | 10/26/1999 10:50 | 10/26/1999 11:10 | 10/26/1999 11:10 |
| | | | Top (ft) | 5.5 | 0 | 5 | 0 | 3 |
| | | Total (T)/ | Bottom (ft) | 7.5 | 2 | 6 | 2 | 5 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | <0.02 | <0.02 | <0.023 | <0.02 |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S3-04U | S4-01S | S4-01U | S4-02S | S4-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/27/1999 8:00 | 10/26/1999 10:50 | 10/26/1999 10:50 | 10/26/1999 11:10 | 10/26/1999 11:10 |
| | | | Top (ft) | 5.5 | 0 | 5 | 0 | 3 |
| | | Total (T)/ | Bottom (ft) | 7.5 | 2 | 6 | 2 | 5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | 0.178 J | <0.0008 UJ | 0.85 | 0.00169 J |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | <0.016 | <0.0008 | 0.051 | <0.00079 |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | 0.046 J | <0.0008 | 0.128 | <0.00079 |
| METHOXYCHLOR | mg/kg | T | | | 3.32 R | <0.0039 UJ | <0.09 UJ | <0.0039 UJ |
| ANTIMONY | mg/kg | T | | 1.6 U | | | | |
| ARSENIC | mg/kg | T | | 2.4 | 309 | 349 | 99400 | 434 |
| BARIUM | mg/kg | T | | 71.9 | 200 | 5.4 | 13800 | 293 |
| CADMIUM | mg/kg | T | | 15.6 J | | | | |
| CHROMIUM | mg/kg | T | | 1.81 J | | | | |
| COPPER | mg/kg | T | | 327. J | 72.2 | 7.39 J | 1010 | 30.3 |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 1380. J | 1520 | 13 | 89300 | 10.8 |
| NICKEL | mg/kg | T | | 1.34 J | | | | |
| SELENIUM | mg/kg | T | | 3.6 | | | | |
| VANADIUM | mg/kg | T | | 0.91 J | | | | |
| ZINC | mg/kg | T | | 4320 | 739. J | 19.5 J | 2710. J | 47.7 J |
| BORON | mg/kg | T | | <4.3 | | | | |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 7.56 | 15.1 | 16.3 | 26.5 | 15 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S4-03S | S4-03S | S4-03U | S4-04S | S4-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 10:10 | 10/26/1999 10:10 | 10/26/1999 10:10 | 10/26/1999 11:20 | 10/26/1999 11:20 |
| | | | Top (ft) | 0 | 0 | 2 | 0 | 5 |
| | | Total (T)/ | Bottom (ft) | 2 | 2 | 4 | 2 | 6.5 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 2 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | <0.022 | <0.022 | <0.018 | <0.021 | <0.018 UJ |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S4-03S | S4-03S | S4-03U | S4-04S | S4-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/26/1999 10:10 | 10/26/1999 10:10 | 10/26/1999 10:10 | 10/26/1999 11:20 | 10/26/1999 11:20 |
| | | | Top (ft) | 0 | 0 | 2 | 0 | 5 |
| | | Total (T)/ | Bottom (ft) | 2 | 2 | 4 | 2 | 6.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | 0.355 J | <0.00087 UJ | <0.0007 UJ | 0.142 | <0.00072 UJ |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | 0.0171 J | <0.00087 | <0.0007 | <0.016 | <0.00072 |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | 0.14 J | <0.00087 | <0.0007 | 0.036 J | <0.00072 |
| METHOXYCHLOR | mg/kg | T | | 0.0256 JN | <0.0043 UJ | <0.0034 UJ | 0.082 | <0.0035 UJ |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | 900 | 623 | 173 | 278 | 2.6 J |
| BARIUM | mg/kg | T | | 2690. J | 1110. J | 98.6 | 216 | 3.65 |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | 3070 | 2980 | 140 | 59.1 | 3.33 U |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 47000 | 45300 | 847 | 1020 | 2 |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 71200. J | 113000. J | 1970. J | 306. J | 14.3 J |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 23.2 | 23.4 | 4.18 | 17.2 | 6.59 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
*East Chicago, Indiana*

| | | | Sample ID | S5-01U | S6A-01U | S6E-01U | S6E-02U | S6E-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 10:25 | 10/26/1999 14:45 | 10/28/1999 9:35 | 10/28/1999 8:45 | 10/28/1999 8:45 |
| | | | Top (ft) | 4 | 2 | 3 | 4 | 4 |
| | | Total (T)/ | Bottom (ft) | 5 | 4 | 5 | 6 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 2 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | | | |
| 2-HEXANONE | mg/kg | T | | | | | | |
| ACETONE | mg/kg | T | | | | | | |
| BENZENE | mg/kg | T | | | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | | | |
| BROMOFORM | mg/kg | T | | | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | | | |
| CHLOROBENZENE | mg/kg | T | | | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | | | |
| CHLOROFORM | mg/kg | T | | | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | | | |
| ETHYLBENZENE | mg/kg | T | | | | | | |
| METHYL BROMIDE | mg/kg | T | | | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | | | |
| STYRENE | mg/kg | T | | | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | | | |
| TOLUENE | mg/kg | T | | | <0.007 | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | | | |
| XYLENES | mg/kg | T | | | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | | | |
| AROCLOR 1016 | mg/kg | T | | <0.02 | | | | |
| AROCLOR 1221 | mg/kg | T | | <0.02 | | | | |
| AROCLOR 1232 | mg/kg | T | | <0.02 | | | | |
| AROCLOR 1242 | mg/kg | T | | <0.02 | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S5-01U | S6A-01U | S6E-01U | S6E-02U | S6E-02U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 10:25 | 10/26/1999 14:45 | 10/28/1999 9:35 | 10/28/1999 8:45 | 10/28/1999 8:45 |
| | | | Top (ft) | 4 | 2 | 3 | 4 | 4 |
| | | Total (T)/ | Bottom (ft) | 5 | 4 | 5 | 6 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 2 |
| AROCLOR 1248 | mg/kg | T | | <0.02 | | | | |
| AROCLOR 1254 | mg/kg | T | | <0.02 | | | | |
| AROCLOR 1260 | mg/kg | T | | <0.02 | | | | |
| DDT | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | | | |
| METHOXYCHLOR | mg/kg | T | | | | | | |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | | | | |
| BARIUM | mg/kg | T | | | | | | |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | 14.9 | 1.86 J | 3.18 J |
| COPPER | mg/kg | T | | | | | | |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | <1.2 | <1.1 | <1.1 |
| LEAD | mg/kg | T | | | | | | |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | | | | |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | <0.69 | | | |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 16 | 27.7 | 17.5 | 6.69 | 7.18 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | <0.007 UJ | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S6E-03U | S7-01S | S7-01S | S7-01U | S7-02S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 7:50 | 10/18/1999 10:50 | 10/18/1999 10:50 | 10/18/1999 10:50 | 10/18/1999 9:55 |
| | | | Top (ft) | 3 | 0 | 0 | 6 | 0 |
| | | Total (T)/ | Bottom (ft) | 5 | 2 | 2 | 8 | 2 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 2 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | <0.007 UJ | <0.006 UJ | <0.006 | <0.008 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| 1,1-DICHLOROETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| 1,1-DICHLOROETHENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| 1,2-DICHLOROETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| 2-HEXANONE | mg/kg | T | | | <0.014 | <0.013 | <0.012 | <0.016 |
| ACETONE | mg/kg | T | | | 0.05 J | <0.025 | <0.024 | <0.033 |
| BENZENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| BROMOCHLOROMETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| BROMODICHLOROMETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| BROMOFORM | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| CARBON DISULFIDE | mg/kg | T | | | <0.007 | <0.006 | 0.019 | <0.008 |
| CARBON TETRACHLORIDE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| CHLOROBENZENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| CHLORODIBROMOMETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| CHLOROFORM | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | <0.007 UJ | <0.006 UJ | <0.006 UJ | <0.008 UJ |
| ETHYL CHLORIDE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| ETHYLBENZENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| METHYL BROMIDE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| METHYL CHLORIDE | mg/kg | T | | | <0.007 | <0.006 | <0.006 UJ | <0.008 |
| METHYL ETHYL KETONE | mg/kg | T | | | <0.014 | <0.013 | <0.012 | <0.016 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | <0.014 | <0.013 | <0.012 | <0.016 |
| METHYLENE CHLORIDE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| STYRENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| TETRACHLOROETHYLENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| TOLUENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| TRICHLOROETHENE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| VINYL CHLORIDE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| XYLENES | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | <0.025 | <0.023 | <0.021 | <0.028 |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S6E-03U | S7-01S | S7-01S | S7-01U | S7-02S |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/28/1999 7:50 | 10/18/1999 10:50 | 10/18/1999 10:50 | 10/18/1999 10:50 | 10/18/1999 9:55 |
| | | | Top (ft) | 3 | 0 | 0 | 6 | 0 |
| | | Total (T)/ | Bottom (ft) | 5 | 2 | 2 | 8 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | | 0.0335 J | 0.185 J | <0.00082 | 0.0183 |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | <0.0097 R | 0.0136 | <0.00082 | <0.0054 |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | <0.0097 | 0.049 J | <0.00082 | <0.0054 |
| METHOXYCHLOR | mg/kg | T | | | 0.058 J | 0.151 JN | <0.004 | <0.027 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | | 789. J | 363. J | <1.2 | 584 |
| BARIUM | mg/kg | T | | | 1690. J | 11200. J | 8.25 J | 1770. J |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | 7.82 | | | | |
| COPPER | mg/kg | T | | | 1980. J | 731. J | 1.69 | 1570 |
| HEXAVALENT CHROMIUM | mg/kg | T | | <1.1 | | | | |
| LEAD | mg/kg | T | | | 41600. J | 20000. J | 25.7 J | 81500. J |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | | 73800. J | 130000. J | 411 | 100000 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | | 58. J | 49. J | <0.58 | 4.80 J |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 11.6 | 30.7 | 25.9 | 18.4 | 38.5 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | | <0.007 | <0.006 | <0.006 | <0.008 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S7-02U | S7-03S | S7-03U | S7-04S | S7-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/18/1999 9:55 | 10/18/1999 11:10 | 10/18/1999 11:10 | 10/18/1999 9:20 | 10/18/1999 9:20 |
| | | | Top (ft) | 6 | 0 | 4.5 | 0 | 5 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 6.5 | 2 | 7 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | <0.006 | <0.006 UJ | <0.006 | <0.006 UJ | <0.006 |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,1-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,2-DICHLOROETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 1,2-DICHLOROPROPANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 2-HEXANONE | mg/kg | T | | <0.013 | <0.013 | <0.012 | <0.012 | <0.011 |
| ACETONE | mg/kg | T | | <0.026 | 0.047 | <0.024 | 0.041 | <0.022 |
| BENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| BROMOCHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| BROMODICHLOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| BROMOFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CARBON DISULFIDE | mg/kg | T | | 0.18 | <0.006 | <0.006 | <0.006 | <0.006 |
| CARBON TETRACHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CHLOROBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CHLORODIBROMOMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CHLOROFORM | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | <0.006 UJ | <0.006 | <0.006 UJ | <0.006 UJ | <0.006 UJ |
| ETHYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| ETHYLBENZENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| METHYL BROMIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 UJ | <0.006 |
| METHYL CHLORIDE | mg/kg | T | | <0.006 UJ | 0.007 | <0.006 UJ | <0.006 UJ | <0.006 UJ |
| METHYL ETHYL KETONE | mg/kg | T | | <0.013 | <0.013 | <0.012 | <0.012 | <0.011 |
| METHYL ISOBUTYL KETONE | mg/kg | T | | <0.013 | <0.013 | <0.012 | <0.012 | <0.011 |
| METHYLENE CHLORIDE | mg/kg | T | | 0.007 | <0.006 | <0.006 | <0.006 | <0.006 |
| STYRENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TETRACHLOROETHYLENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TOLUENE | mg/kg | T | | <0.006 | <0.006 | 0.008 | <0.006 | <0.006 |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TRICHLOROETHENE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 UJ |
| VINYL CHLORIDE | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| XYLENES | mg/kg | T | | <0.006 | <0.006 | <0.006 | <0.006 | <0.006 |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | <0.021 | <0.022 | <0.021 | <0.02 | <0.021 |
| AROCLOR 1016 | mg/kg | T | | | | | | |
| AROCLOR 1221 | mg/kg | T | | | | | | |
| AROCLOR 1232 | mg/kg | T | | | | | | |
| AROCLOR 1242 | mg/kg | T | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S7-02U | S7-03S | S7-03U | S7-04S | S7-04U |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 10/18/1999 9:55 | 10/18/1999 11:10 | 10/18/1999 11:10 | 10/18/1999 9:20 | 10/18/1999 9:20 |
| | | | Top (ft) | 6 | 0 | 4.5 | 0 | 5 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 6.5 | 2 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | | | |
| AROCLOR 1254 | mg/kg | T | | | | | | |
| AROCLOR 1260 | mg/kg | T | | | | | | |
| DDT | mg/kg | T | | <0.00084 | 0.175 J | <0.00081 | 0.168 J | <0.00083 |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | <0.00084 | <0.086 | <0.00081 | <0.0079 | <0.00083 |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | <0.00084 | <0.086 | <0.00081 | 0.0393 | <0.00083 |
| METHOXYCHLOR | mg/kg | T | | <0.0041 | <0.42 | <0.004 | 0.089 J | <0.0041 |
| ANTIMONY | mg/kg | T | | | | | | |
| ARSENIC | mg/kg | T | | 1.5 | 2060 | 4 | 204 | <1.2 |
| BARIUM | mg/kg | T | | 5.77 J | 989. J | 8.11 J | 1570. J | 14.9 J |
| CADMIUM | mg/kg | T | | | | | | |
| CHROMIUM | mg/kg | T | | | | | | |
| COPPER | mg/kg | T | | 2.53 | 1590 | 1.22 | 1120 | 3.47 |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | | | |
| LEAD | mg/kg | T | | 55.3 J | 49700. J | 4.3 J | 57800. J | 59.8 J |
| NICKEL | mg/kg | T | | | | | | |
| SELENIUM | mg/kg | T | | | | | | |
| VANADIUM | mg/kg | T | | | | | | |
| ZINC | mg/kg | T | | 1030 | 42500 | 407 | 88100 | 1110 |
| BORON | mg/kg | T | | | | | | |
| CHLORIDE | mg/kg | T | | | | | | |
| CYANIDE | mg/kg | T | | <0.62 | 28.1 J | <0.58 | 21.7 J | <0.62 |
| FLUORIDE | mg/kg | T | | | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 20.3 | 22 | 17.5 | 15 | 19.3 |
| SULFATE | mg/kg | T | | | | | | |
| HEXANE | mg/kg | T | | <0.006 | <0.006 | 0.014 | <0.006 | 0.012 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S8-01U | S8-01U | S8-02U |
|---|---|---|---|---|---|---|
| | | | Date | 10/25/1999 15:20 | 10/25/1999 15:20 | 10/25/1999 15:00 |
| | | | Top (ft) | 6 | 6 | 6 |
| | | Total (T)/ | Bottom (ft) | 8 | 8 | 8 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 |
| 1,1,1-TRICHLOROETHANE | mg/kg | T | | | | |
| 1,1,2,2-TETRACHLOROETHANE | mg/kg | T | | | | |
| 1,1,2-TRICHLOROETHANE | mg/kg | T | | | | |
| 1,1-DICHLOROETHANE | mg/kg | T | | | | |
| 1,1-DICHLOROETHENE | mg/kg | T | | | | |
| 1,2-DICHLOROETHANE | mg/kg | T | | | | |
| 1,2-DICHLOROPROPANE | mg/kg | T | | | | |
| 2-HEXANONE | mg/kg | T | | | | |
| ACETONE | mg/kg | T | | | | |
| BENZENE | mg/kg | T | | | | |
| BROMOCHLOROMETHANE | mg/kg | T | | | | |
| BROMODICHLOROMETHANE | mg/kg | T | | | | |
| BROMOFORM | mg/kg | T | | | | |
| CARBON DISULFIDE | mg/kg | T | | | | |
| CARBON TETRACHLORIDE | mg/kg | T | | | | |
| CHLOROBENZENE | mg/kg | T | | | | |
| CHLORODIBROMOMETHANE | mg/kg | T | | | | |
| CHLOROFORM | mg/kg | T | | | | |
| CIS-1,2 DICHLOROETHENE | mg/kg | T | | | | |
| CIS-1,3-DICHLOROPROPENE | mg/kg | T | | | | |
| DICHLORODIFLUOROMETHANE | mg/kg | T | | | | |
| ETHYL CHLORIDE | mg/kg | T | | | | |
| ETHYLBENZENE | mg/kg | T | | | | |
| METHYL BROMIDE | mg/kg | T | | | | |
| METHYL CHLORIDE | mg/kg | T | | | | |
| METHYL ETHYL KETONE | mg/kg | T | | | | |
| METHYL ISOBUTYL KETONE | mg/kg | T | | | | |
| METHYLENE CHLORIDE | mg/kg | T | | | | |
| STYRENE | mg/kg | T | | | | |
| TETRACHLOROETHYLENE | mg/kg | T | | | | |
| TOLUENE | mg/kg | T | | | | |
| TRANS-1,2-DICHLOROETHENE | mg/kg | T | | | | |
| TRANS-1,3-DICHLOROPROPENE | mg/kg | T | | | | |
| TRICHLOROETHENE | mg/kg | T | | | | |
| TRICHLOROFLUOROMETHANE | mg/kg | T | | | | |
| VINYL CHLORIDE | mg/kg | T | | | | |
| XYLENES | mg/kg | T | | | | |
| 2,4-DICHLOROPHENOXYACETIC ACID | mg/kg | T | | | | |
| AROCLOR 1016 | mg/kg | T | | | | |
| AROCLOR 1221 | mg/kg | T | | | | |
| AROCLOR 1232 | mg/kg | T | | | | |
| AROCLOR 1242 | mg/kg | T | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | S8-01U | S8-01U | S8-02U |
|---|---|---|---|---|---|---|
| | | | Date | 10/25/1999 15:20 | 10/25/1999 15:20 | 10/25/1999 15:00 |
| | | | Top (ft) | 6 | 6 | 6 |
| | | Total (T)/ | Bottom (ft) | 8 | 8 | 8 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 |
| AROCLOR 1248 | mg/kg | T | | | | |
| AROCLOR 1254 | mg/kg | T | | | | |
| AROCLOR 1260 | mg/kg | T | | | | |
| DDT | mg/kg | T | | | | |
| DICHLORODIPHENYLDICHLOROETHANE | mg/kg | T | | | | |
| DICHLORODIPHENYLDICHLOROETHYLENE | mg/kg | T | | | | |
| METHOXYCHLOR | mg/kg | T | | | | |
| ANTIMONY | mg/kg | T | | <1.1 | <1.1 | <1.1 |
| ARSENIC | mg/kg | T | | 4.7 | 3.3 J | 3.7 |
| BARIUM | mg/kg | T | | | | |
| CADMIUM | mg/kg | T | | 2.15 | 2.52 | 1.68 |
| CHROMIUM | mg/kg | T | | | | |
| COPPER | mg/kg | T | | | | |
| HEXAVALENT CHROMIUM | mg/kg | T | | | | |
| LEAD | mg/kg | T | | | | |
| NICKEL | mg/kg | T | | | | |
| SELENIUM | mg/kg | T | | | | |
| VANADIUM | mg/kg | T | | | | |
| ZINC | mg/kg | T | | 917. J | 634. J | 415. J |
| BORON | mg/kg | T | | | | |
| CHLORIDE | mg/kg | T | | | | |
| CYANIDE | mg/kg | T | | | | |
| FLUORIDE | mg/kg | T | | | | |
| PERCENT MOISTURE | % BY WT. | T | | 6.12 | 7.91 | 7.59 |
| SULFATE | mg/kg | T | | | | |
| HEXANE | mg/kg | T | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RF12-S10A-1 | RF12-S10A-2 | RF12-S10A-3 | RF12-S10A-4 | RFI2-S10A-1 | RFI2-S10A-2 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 13:10 | 11/4/2003 13:20 | 11/4/2003 13:45 | 11/4/2003 13:33 | 11/4/2003 13:10 | 11/4/2003 13:20 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 1.5 | 1 | 1 | 2 | 1.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | | | | | 263 | 143 |
| ARSENIC | mg/kg | T | | | | | | 91.1 | 933 |
| BARIUM | mg/kg | T | | | | | | 95.6 | 179 |
| CADMIUM | mg/kg | T | | | | | | 5.28 | 5.02 |
| CHROMIUM | mg/kg | T | | | | | | 74 | 895 |
| COPPER | mg/kg | T | | | | | | 42.7 | 45.1 |
| LEAD | mg/kg | T | | | | | | 288 | 331 |
| NICKEL | mg/kg | T | | | | | | 3.87 | 7 |
| SELENIUM | mg/kg | T | | | | | | 1.42 | 1.8 |
| VANADIUM | mg/kg | T | | | | | | 7.05 | 20.2 |
| ZINC | mg/kg | T | | | | | | 655 | 675 |
| PERCENT MOISTURE | % | T | | | | | | 8.9 | 21.6 |
| PH | STD UNITS | T | | 8.1 | 7.9 | 7.5 | 2.4 | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S10A-3 | RFI2-S10A-4 | RFI2-S10D-1 | RFI2-S10D-1 | RFI2-S10D-2 | RFI2-S10D-3 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 13:45 | 11/4/2003 13:33 | 11/4/2003 14:35 | 11/4/2003 14:35 | 11/4/2003 14:20 | 11/4/2003 14:15 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 1 | 1 | 1 | 1 | 1 | 1 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 2 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 470 | 88.3 | 18 | 19.3 | 26.5 | 22.9 |
| ARSENIC | mg/kg | T | | 39.3 | 7.69 | 49 | 63.8 | 56.3 | 16.3 |
| BARIUM | mg/kg | T | | 68.6 | 84.1 | 670 | 619 | 209 | 38.9 |
| CADMIUM | mg/kg | T | | 17.3 | 0.0769 J | 46.8 | 26.5 | 54.8 | 69.5 |
| CHROMIUM | mg/kg | T | | 17.4 | 2.8 | 29.2 | 24.4 | 13.1 | 7.98 |
| COPPER | mg/kg | T | | 51.5 | 2.4 | 288 | 179 | 133 | 143 |
| LEAD | mg/kg | T | | 2160 | 90.6 | 3270 | 3040 | 2050 | 2480 |
| NICKEL | mg/kg | T | | 2.72 | 0.343 J | 16.8 | 28.6 | 9.92 | 4.48 |
| SELENIUM | mg/kg | T | | 3.53 | 0.649 J | 2.09 | 1.85 | 2.27 | 6.29 |
| VANADIUM | mg/kg | T | | 4.63 | 1.98 | 17.4 | 12.3 | 9.5 | 6.32 |
| ZINC | mg/kg | T | | 696 | 11.3 | 4490 | 3630 | 3120 | 2900 |
| PERCENT MOISTURE | % | T | | 15.5 | 9.1 | 15.7 | 19 | 18.9 | 10.3 |
| PH | STD UNITS | T | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S10D-4 | RFI2-S12A-1 | RFI2-S12A-2 | RFI2-S12B-1 | RFI2-S12B-2 | RFI2-S12C-2 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 14:00 | 11/4/2003 15:00 | 11/4/2003 15:15 | 11/4/2003 12:45 | 11/4/2003 12:35 | 11/4/2003 17:10 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 2 | 1.75 | 1 | 1.25 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 332 | 14 | 7.71 | 6.88 | 30.8 | 1.03 J |
| ARSENIC | mg/kg | T | | 374 | 1870 | 26.5 | 11.5 | 33.9 | 11.8 |
| BARIUM | mg/kg | T | | 369 | 147 | 87.7 | 369 | 297 | 160 |
| CADMIUM | mg/kg | T | | 5930 | 17.2 | 1.3 | 7.36 | 5.37 | 13.6 |
| CHROMIUM | mg/kg | T | | 25.6 | 2060 | 11.5 | 15.8 | 174 | 22.2 |
| COPPER | mg/kg | T | | 5100 | 156 | 21.3 | 40.5 | 1180 | 54.2 |
| LEAD | mg/kg | T | | 144000 | 669 | 397 | 216 | 335 | 437 |
| NICKEL | mg/kg | T | | 14.5 | 35.4 | 10.4 | 4.6 | 31.4 | 19.7 |
| SELENIUM | mg/kg | T | | 239 | 4.07 | 0.732 J | 1.31 | 1.99 | 1.73 |
| VANADIUM | mg/kg | T | | 7.63 | 26.4 | 11.6 | 7.41 | 8.02 | 18.5 |
| ZINC | mg/kg | T | | 120000 | 4020 | 457 | 965 | 1630 | 1700 |
| PERCENT MOISTURE | % | T | | 27.6 | 69.2 | 12.7 | 11.4 | 14.4 | 25.9 |
| PH | STD UNITS | T | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S12C-3 | RFI2-S12C-4 | RFI2-S1A-1 | RFI2-S1A-2 | RFI2-S1A-2 | RFI2-S1A-3 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 17:40 | 11/4/2003 17:25 | 11/4/2003 9:30 | 11/4/2003 10:05 | 11/4/2003 10:05 | 11/4/2003 10:20 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 1 | 0 |
| | | Total (T)/ | Bottom (ft) | 1.5 | 1.5 | 1 | 1.5 | 1.5 | 1 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 2 | 1 |
| ANTIMONY | mg/kg | T | | 0.936 J | 1.84 J | 16.8 | 12 | 16 | 19.6 |
| ARSENIC | mg/kg | T | | 25.8 | 20.2 | 637 | 1050 | 927 | 1060 |
| BARIUM | mg/kg | T | | 380 | 362 | 1380 | 1340 | 1750 | 2480 |
| CADMIUM | mg/kg | T | | 28.1 | 16.8 | 78.9 | 18.4 | 26.1 | 138 |
| CHROMIUM | mg/kg | T | | 27.8 | 56.6 | 21.2 | 17.7 | 22.4 | 102 |
| COPPER | mg/kg | T | | 117 | 98.9 | 303 | 934 | 814 | 472 |
| LEAD | mg/kg | T | | 1310 | 462 | 5040 | 20200 | 18000 | 8350 |
| NICKEL | mg/kg | T | | 30.5 | 65 | 42.9 | 144 | 132 | 30.9 |
| SELENIUM | mg/kg | T | | 2.96 | 1.82 | 3.3 | 9.48 | 9.64 | 2.09 |
| VANADIUM | mg/kg | T | | 38.7 | 56.2 | 22.3 | 35.9 | 30.2 | 289 |
| ZINC | mg/kg | T | | 3290 | 2750 | 9590 | 69800 | 34600 | 19300 |
| PERCENT MOISTURE | % | T | | 28.3 | 40.7 | 30.5 | 39.4 | 38.9 | 22.3 |
| PH | STD UNITS | T | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S1A-4 | RFI2-S1A-5 | RFI2-S1A-6 | RFI2-S1A-7 | RFI2-S1A-8 | RFI2-S1B-1 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 11:30 | 11/4/2003 11:55 | 11/4/2003 11:40 | 11/4/2003 9:55 | 11/4/2003 9:44 | 11/4/2003 14:00 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 1 | 1.5 | 1 | 2 | 1.5 | 1.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 23.2 | 12.9 | 4.27 | 4.83 | 16.4 | <1.10 U |
| ARSENIC | mg/kg | T | | 658 | 62.3 | 109 | 18.4 | 4620 | <0.834 U |
| BARIUM | mg/kg | T | | 1050 | 849 | 253 | 240 | 803 | 39.6 |
| CADMIUM | mg/kg | T | | 63 | 18.9 | 16.1 | 5.45 | 95.8 | 0.610 J |
| CHROMIUM | mg/kg | T | | 27.5 | 7.5 | 61 | 31 | 27.5 | 4.15 |
| COPPER | mg/kg | T | | 1650 | 756 | 150 | 52 | 198 | 4.32 |
| LEAD | mg/kg | T | | 23200 | 5080 | 1560 | 132 | 12100 | 45.8 |
| NICKEL | mg/kg | T | | 132 | 72 | 24 | 83.8 | 87.9 | 0.400 J |
| SELENIUM | mg/kg | T | | 3.43 | <0.690 U | 0.902 J | 2.01 | 2.7 | 0.809 J |
| VANADIUM | mg/kg | T | | 33.2 | 19.7 | 64.2 | 92.7 | 78.4 | 0.97 |
| ZINC | mg/kg | T | | 52100 | 37200 | 60800 | 1060 | 8410 | 20.1 |
| PERCENT MOISTURE | % | T | | 25.6 | 32.6 | 13.7 | 37.9 | 25.6 | 41.2 |
| PH | STD UNITS | T | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S1B-2 | RFI2-S1B-3 | RFI2-S1B-4 | RFI2-S1B-5 | RFI2-S1B-6 | RFI2-S1B-7 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 11:00 | 11/4/2003 11:20 | 11/4/2003 13:00 | 11/4/2003 13:15 | 11/4/2003 12:00 | 11/4/2003 11:30 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 1.5 | 1 | 1.5 | 1 | 1 | 1.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | <0.779 U | <1.05 U | <1.15 U | <0.970 U | 10.5 | <0.954 U |
| ARSENIC | mg/kg | T | | 7.52 | <0.792 U | 1.64 J | <0.735 U | 6.76 | 9.04 |
| BARIUM | mg/kg | T | | 31 | 42 | 34.8 | 43.4 | 433 | 148 |
| CADMIUM | mg/kg | T | | <0.0637 U | 0.383 J | 1.05 | 0.650 J | 1.19 | <0.0780 U |
| CHROMIUM | mg/kg | T | | 11.9 | 1.85 | 3.47 | 2.73 | 7.82 | 30.2 |
| COPPER | mg/kg | T | | 15.7 | 1.27 J | 5.47 | 1.18 J | 13.1 | 26.6 |
| LEAD | mg/kg | T | | 13.4 | 75.7 | 91.9 | 84.4 | 349 | 128 |
| NICKEL | mg/kg | T | | 14.7 | <0.317 U | 0.569 J | <0.294 U | 2.39 | 29.3 |
| SELENIUM | mg/kg | T | | <0.554 U | 0.789 J | <0.821 U | <0.691 U | <0.782 U | 0.766 J |
| VANADIUM | mg/kg | T | | 17.3 | 0.412 J | 1.39 | 0.360 J | 4.61 | 35.6 |
| ZINC | mg/kg | T | | 56.5 | 7.88 | 70.8 | 8.06 | 174 | 206 |
| PERCENT MOISTURE | % | T | | 17.7 | 38.7 | 44.4 | 33.3 | 41.1 | 34.1 |
| PH | STD UNITS | T | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S1B-8 | RFI2-S1I-1 | RFI2-S1I-2 | RFI2-S1I-3 | RFI2-S1I-4 | RFI2-S2B-1 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 13:30 | 11/4/2003 10:45 | 11/4/2003 10:55 | 11/4/2003 11:02 | 11/4/2003 11:20 | 11/4/2003 16:40 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 1.75 | 1.25 | 1.5 | 1.5 | 1 | 1.25 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 21.3 | 6.11 | 12.2 | 8.65 | 3.37 | 2.26 J |
| ARSENIC | mg/kg | T | | 34.5 | 410 | 300 | 961 | 84.7 | 34.4 |
| BARIUM | mg/kg | T | | 226 | 7720 | 1680 | 3510 | 975 | 286 |
| CADMIUM | mg/kg | T | | 6.61 | 203 | 1020 | 267 | 62.5 | 10.5 |
| CHROMIUM | mg/kg | T | | 21 | 82 | 9.8 | 28.8 | 234 | 24.6 |
| COPPER | mg/kg | T | | 104 | 516 | 1990 | 801 | 249 | 106 |
| LEAD | mg/kg | T | | 785 | 10700 | 36200 | 11400 | 3120 | 697 |
| NICKEL | mg/kg | T | | 9.62 | 33.1 | 7.74 | 20.5 | 12 | 21.6 |
| SELENIUM | mg/kg | T | | 2.55 | 2.95 | 5.2 | 1.8 | <0.617 U | 1.49 |
| VANADIUM | mg/kg | T | | 18.1 | 113 | 10.4 | 35.9 | 223 | 18.9 |
| ZINC | mg/kg | T | | 708 | 33100 | 690 | 24600 | 6750 | 1280 |
| PERCENT MOISTURE | % | T | | 44.9 | 40.2 | 25.6 | 30 | 27.5 | 31.5 |
| PH | STD UNITS | T | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S2B-2 | RFI2-S2B-3 | RFI2-S2B-4 | RFI2-S2C-1 | RFI2-S8-1 | RFI2-S8-2 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/4/2003 16:30 | 11/4/2003 16:15 | 11/4/2003 15:55 | 11/4/2003 16:55 | 11/4/2003 16:20 | 11/4/2003 16:15 |
| | | | Top (ft) | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 1.25 | 1.5 | 2 | 1.5 | 1.25 | 1 |
| Analyte | units | Diss. (D) | Duplicate # | 1 | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 2.04 J | 1.61 J | <0.951 U | 1.20 J | <0.877 U | 1.74 J |
| ARSENIC | mg/kg | T | | 42.2 | 51.5 | 12.1 | 9.05 | 13.5 | 22.6 |
| BARIUM | mg/kg | T | | 384 | 228 | 224 | 162 | 1080 | 95 |
| CADMIUM | mg/kg | T | | 113 | 10.9 | 7.07 | 3.09 | 1.43 | 23.8 |
| CHROMIUM | mg/kg | T | | 35.8 | 16.5 | 9.32 | 12.8 | 39.2 | 45.4 |
| COPPER | mg/kg | T | | 1050 | 105 | 56.1 | 23.2 | 35 | 228 |
| LEAD | mg/kg | T | | 1410 | 1280 | 1410 | 176 | 47.7 | 306 |
| NICKEL | mg/kg | T | | 22.3 | 11.1 | 3.66 | 22.5 | 22.8 | 26.5 |
| SELENIUM | mg/kg | T | | 4.62 | 2.6 | 3.21 | 4.18 | 2.04 | 4.14 |
| VANADIUM | mg/kg | T | | 21.3 | 16.1 | 13.1 | 18.6 | 49.1 | 13.8 |
| ZINC | mg/kg | T | | 46600 | 2540 | 1950 | 327 | 248 | 7170 |
| PERCENT MOISTURE | % | T | | 24.8 | 25.4 | 33.9 | 38.8 | 25.5 | 19.8 |
| PH | STD UNITS | T | | | | | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S8-3 | RFI2-S8-4 |
|---|---|---|---|---|---|
| | | | Date | 11/4/2003 16:00 | 11/4/2003 15:50 |
| | | | Top (ft) | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 1 | 1.5 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 |
| ANTIMONY | mg/kg | T | | 1.61 J | 1.77 J |
| ARSENIC | mg/kg | T | | 46 | 38.3 |
| BARIUM | mg/kg | T | | 209 | 223 |
| CADMIUM | mg/kg | T | | 38.6 | 97.6 |
| CHROMIUM | mg/kg | T | | 16.2 | 20.9 |
| COPPER | mg/kg | T | | 272 | 1040 |
| LEAD | mg/kg | T | | 972 | 1290 |
| NICKEL | mg/kg | T | | 10.3 | 13.8 |
| SELENIUM | mg/kg | T | | 1.92 | 4.19 |
| VANADIUM | mg/kg | T | | 12.5 | 18.3 |
| ZINC | mg/kg | T | | 9550 | 24900 |
| PERCENT MOISTURE | % | T | | 24 | 33.4 |
| PH | STD UNITS | T | | | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-A13-1 | RFI2-A13-1 | RFI2-A13-1 | RFI2-A13-2 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/12/2003 11:00 | 11/12/2003 11:00 | 11/12/2003 11:00 | 11/12/2003 11:30 |
| | | | Top (ft) | 0 | 2 | 4 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 5 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 5.27 | 1.70 J | 491 | 884 |
| ARSENIC | mg/kg | T | | 246 | 4.53 | 669 | 1840 |
| BARIUM | mg/kg | T | | 785 | 41.3 | 2850 | 1170 |
| CADMIUM | mg/kg | T | | 39.5 | 7.77 | 279 | 519 |
| CHROMIUM | mg/kg | T | | 15.9 | 1.43 | 8.16 | 21.6 |
| COPPER | mg/kg | T | | 140 | 76.3 | 1160 | 4470 |
| IRON | mg/kg | T | | 56900 | 1930 | 57200 | 137000 |
| LEAD | mg/kg | T | | 3160 | 171 | 30300 | 54800 |
| MANGANESE | mg/kg | T | | 253 | 20.3 | 1210 | 1370 |
| NICKEL | mg/kg | T | | 74.6 | 7.89 | 13.5 | 18.8 |
| SELENIUM | mg/kg | T | | 3.38 | 2.69 | 18 | 18.3 |
| VANADIUM | mg/kg | T | | 31.4 | 4.15 | 18.9 | 57.1 |
| ZINC | mg/kg | T | | 7090 | 595 | 23300 | 75600 |
| PERCENT MOISTURE | % | T | | 27.1 | 38.9 | 31.7 | 31.7 |
| PH | STD UNITS | T | | 5.9 | 4.8 | 5.7 | 5.9 |
| SULFIDE | mg/kg | T | | <11.5 U | <13.7 U | <12.3 U | <12.3 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-A13-2 | RFI2-A13-2 | RFI2-A13-3 | RFI2-A13-3 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/12/2003 11:30 | 11/12/2003 11:30 | 11/12/2003 11:40 | 11/12/2003 11:40 |
| | | | Top (ft) | 0 | 2 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 3 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 161 | 56.6 | 7.08 | 27.2 |
| ARSENIC | mg/kg | T | | 632 | 400 | 31.5 | 47.4 |
| BARIUM | mg/kg | T | | 1760 | 1480 | 212 | 217 |
| CADMIUM | mg/kg | T | | 645 | 568 | 4.66 | 8.15 |
| CHROMIUM | mg/kg | T | | 18.6 | 8.83 | 127 | 25.1 |
| COPPER | mg/kg | T | | 4020 | 2750 | 47 | 76.4 |
| IRON | mg/kg | T | | 198000 | 165000 | 30800 | 43000 |
| LEAD | mg/kg | T | | 65600 | 36600 | 456 | 614 |
| MANGANESE | mg/kg | T | | 5100 | 4230 | 4250 | 398 |
| NICKEL | mg/kg | T | | 9.21 | 8.24 | 17.8 | 16.9 |
| SELENIUM | mg/kg | T | | 13.1 | 8.54 | 1.47 | 2.27 |
| VANADIUM | mg/kg | T | | 39.6 | 26 | 58.4 | 18.1 |
| ZINC | mg/kg | T | | 88800 | 54900 | 875 | 2220 |
| PERCENT MOISTURE | % | T | | 30.7 | 24.9 | 15.8 | 27.1 |
| PH | STD UNITS | T | | 5.9 | 6 | 7.9 | 6.9 |
| SULFIDE | mg/kg | T | | <12.1 U | <11.2 U | 134 | 18.4 J |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-A13-4 | RFI2-A2E-1 | RFI2-A2E-1 | RFI2-A2E-1 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/12/2003 10:30 | 11/11/2003 8:00 | 11/11/2003 8:00 | 11/11/2003 8:00 |
| | | | Top (ft) | 0 | 0 | 2 | 4 |
| | | Total (T)/ | Bottom (ft) | 2 | 2 | 4 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 151 | <0.725 U | 9.77 | 5.09 |
| ARSENIC | mg/kg | T | | 380 | 116 | 966 | 651 |
| BARIUM | mg/kg | T | | 4420 | 142 | 922 | 162 |
| CADMIUM | mg/kg | T | | 45.3 | 1.56 | 2.74 | 0.976 |
| CHROMIUM | mg/kg | T | | 16.9 | 484 J | 112 J | 165 J |
| COPPER | mg/kg | T | | 856 | 37.8 J | 289 J | 147 J |
| IRON | mg/kg | T | | 58800 | 51100 J | 72400 J | 32300 J |
| LEAD | mg/kg | T | | 25100 | 277 | 2910 | 714 |
| MANGANESE | mg/kg | T | | 119 | 14800 J | 616 J | 104 J |
| NICKEL | mg/kg | T | | 27.6 | 24.4 J | 45.9 J | 19.6 J |
| SELENIUM | mg/kg | T | | 6.57 | 4.9 | 6.59 | 2.93 |
| VANADIUM | mg/kg | T | | 16.8 | 152 J | 59.3 J | 34.5 J |
| ZINC | mg/kg | T | | 11300 | 266 | 451 | 151 |
| PERCENT MOISTURE | % | T | | 27.7 | 9.9 | 19.3 | 25.1 |
| PH | STD UNITS | T | | 6 | 8 | 7.3 | 7.3 |
| SULFIDE | mg/kg | T | | <11.6 U | 74.9 J | 202 J | 28.0 J |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-A2E-2 | RFI2-A2E-2 | RFI2-A2E-2 | RFI2-A2E-3 | RFI2-A2E-3 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 8:45 | 11/11/2003 8:45 | 11/11/2003 8:45 | 11/11/2003 9:10 | 11/11/2003 9:10 |
| | | | Top (ft) | 0 | 2 | 2 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 4 | 2 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 2 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 1.91 J | 5.84 | | 9.02 | 10.8 |
| ARSENIC | mg/kg | T | | 47.3 | 72.5 | | 3520 | 2410 |
| BARIUM | mg/kg | T | | 2510 | 54.8 | | 47.9 | 4.54 |
| CADMIUM | mg/kg | T | | 5.39 | 0.659 | | 1.68 | 1.31 |
| CHROMIUM | mg/kg | T | | 58.8 J | 4.54 J | | 3.71 J | 1.66 J |
| COPPER | mg/kg | T | | 57.7 J | 64.7 J | | 78.7 J | 152 J |
| IRON | mg/kg | T | | 21700 J | 26500 J | | 6550 J | 1320 J |
| LEAD | mg/kg | T | | 425 | 367 | | 5670 | 268 |
| MANGANESE | mg/kg | T | | 793 J | 43.7 J | | 400 J | 32.0 J |
| NICKEL | mg/kg | T | | 13.3 J | 6.34 J | | 2.02 J | <0.268 U |
| SELENIUM | mg/kg | T | | 0.928 J | 1.54 | | 1.16 J | <0.631 U |
| VANADIUM | mg/kg | T | | 12.3 J | 7.88 J | | 4.47 J | 0.989 J |
| ZINC | mg/kg | T | | 603 | 145 | | 160 | 48.7 |
| PERCENT MOISTURE | % | T | | 10.1 | 20 | | 20.2 | 25.5 |
| PH | STD UNITS | T | | 8.5 | 7.9 | | 7.6 | 7.5 |
| SULFIDE | mg/kg | T | | 339 J | <10.5 U | | 32.5 J | 88.1 J |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-AE2-2 | RFI2-S1J-1 | RFI2-S1J-1 | RFI2-S1J-1 | RFI2-S1J-1 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 8:45 | 11/12/2003 8:10 | 11/12/2003 8:10 | 11/12/2003 8:10 | 11/12/2003 8:10 |
| | | | Top (ft) | 0 | 0 | 2 | 4 | 6 |
| | | Total (T)/ | Bottom (ft) | 4 | 2 | 4 | 6 | 7 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | <0.829 U | 92.9 J | 20.5 J | 13.7 J | |
| ARSENIC | mg/kg | T | | 21.8 | 9530 | 861 | 81.5 | |
| BARIUM | mg/kg | T | | 142 | 2410 J | 796 J | 132 J | |
| CADMIUM | mg/kg | T | | 0.112 J | 213 J | 91.0 J | 16.7 J | |
| CHROMIUM | mg/kg | T | | 3.56 J | 29.9 J | 30.5 J | 5.82 J | |
| COPPER | mg/kg | T | | 13.6 J | 1210 J | 663 J | 336 J | |
| IRON | mg/kg | T | | 11200 J | 37900 | 27000 | 18000 | |
| LEAD | mg/kg | T | | 30.5 | 58300 J | 22600 J | 4980 J | |
| MANGANESE | mg/kg | T | | 12.2 J | 264 | 336 | 1100 | |
| NICKEL | mg/kg | T | | 1.21 J | 34.7 J | 47.1 J | 49.5 J | |
| SELENIUM | mg/kg | T | | <0.590 U | 5.58 | 4.83 | 6.72 | |
| VANADIUM | mg/kg | T | | 7.96 J | 26.8 J | 42.7 J | 12.8 J | |
| ZINC | mg/kg | T | | 31.5 | 20800 | 45800 | 60700 | |
| PERCENT MOISTURE | % | T | | 22.7 | 22.9 | 20.7 | 13.1 | |
| PH | STD UNITS | T | | 6.7 | 6.5 | 6.8 | 6.9 | |
| SULFIDE | mg/kg | T | | <10.9 U | <10.9 U | <10.6 U | <9.7 U | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S1J-1 | RFI2-S1J-2 | RFI2-S1J-2 | RFI2-S1J-2 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/12/2003 8:10 | 11/11/2003 15:15 | 11/11/2003 15:15 | 11/11/2003 15:15 |
| | | | Top (ft) | 6 | 0 | 2 | 4 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 4 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 4.11 J | 37.4 J | 26.3 J | 28.1 J |
| ARSENIC | mg/kg | T | | 38.7 | 783 | 825 | 629 |
| BARIUM | mg/kg | T | | 112 J | 887 J | 520 J | 586 J |
| CADMIUM | mg/kg | T | | 14.0 J | 142 J | 107 J | 50.0 J |
| CHROMIUM | mg/kg | T | | 5.63 J | 31.9 J | 38.2 J | 22.2 J |
| COPPER | mg/kg | T | | 185 J | 336 J | 580 J | 777 J |
| IRON | mg/kg | T | | 18000 | 53100 | 53000 | 28200 |
| LEAD | mg/kg | T | | 2490 J | 13000 J | 21500 J | 8240 J |
| MANGANESE | mg/kg | T | | 1130 | 559 | 650 | 358 |
| NICKEL | mg/kg | T | | 41.1 J | 35.4 J | 44.8 J | 46.0 J |
| SELENIUM | mg/kg | T | | 5.47 | 5.55 | 4.54 | 4.53 |
| VANADIUM | mg/kg | T | | 11.3 J | 36.0 J | 38.3 J | 24.2 J |
| ZINC | mg/kg | T | | 54800 | 19500 | 23600 | 29100 |
| PERCENT MOISTURE | % | T | | 17.3 | 26.4 | 23.4 | 23 |
| PH | STD UNITS | T | | 6.8 | 6.7 | 6.6 | 6.5 |
| SULFIDE | mg/kg | T | | <10.2 U | <11.4 U | <11.0 U | <10.9 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S1J-2 | RFI2-S1J-3 | RFI2-S1J-3 | RFI2-S1J-3 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 15:15 | 11/11/2003 15:45 | 11/11/2003 15:45 | 11/11/2003 15:45 |
| | | | Top (ft) | 6 | 0 | 2 | 4 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 4 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 6.61 J | 12.8 J | 23.9 J | 17.8 J |
| ARSENIC | mg/kg | T | | 48.7 | 985 | 3190 | 3970 |
| BARIUM | mg/kg | T | | 261 J | 1650 J | 510 J | 1490 J |
| CADMIUM | mg/kg | T | | 17.1 J | 38.1 J | 46.6 J | 26.5 J |
| CHROMIUM | mg/kg | T | | 10.3 J | 17.9 J | 21.3 J | 162 J |
| COPPER | mg/kg | T | | 263 J | 131 J | 223 J | 213 J |
| IRON | mg/kg | T | | 24300 | 26400 | 28300 | 44200 |
| LEAD | mg/kg | T | | 9540 J | 5240 J | 14600 J | 10200 J |
| MANGANESE | mg/kg | T | | 1120 | 244 | 438 | 3620 |
| NICKEL | mg/kg | T | | 42.9 J | 22.9 J | 28.3 J | 32.1 J |
| SELENIUM | mg/kg | T | | 15.3 | 4.39 | 9.08 | 7.17 |
| VANADIUM | mg/kg | T | | 15.7 J | 27.3 J | 25.2 J | 184 J |
| ZINC | mg/kg | T | | 118000 | 8790 | 28200 | 23700 |
| PERCENT MOISTURE | % | T | | 12.6 | 23.3 | 24 | 16.8 |
| PH | STD UNITS | T | | 6.6 | 6.8 | 6.1 | 7 |
| SULFIDE | mg/kg | T | | <9.6 U | <11.0 U | <11.1 U | <10.1 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S1J-3 | RFI2-S1J-4 | RFI2-S1J-4 | RFI2-S1J-4 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 15:45 | 11/11/2003 16:30 | 11/11/2003 16:30 | 11/12/2003 8:30 |
| | | | Top (ft) | 6 | 0 | 2 | 2 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 4 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 |
| ANTIMONY | mg/kg | T | | 27.4 J | 26 | 2.16 J | 909 |
| ARSENIC | mg/kg | T | | 31.8 | 62000 | 145 | 1380 |
| BARIUM | mg/kg | T | | 69.6 J | 954 | 309 | 5710 |
| CADMIUM | mg/kg | T | | 6.23 J | 97.6 | 23.7 | 81.5 |
| CHROMIUM | mg/kg | T | | 3.69 J | 22.1 | 15.2 | 82.3 |
| COPPER | mg/kg | T | | 349 J | 377 | 233 | 3270 |
| IRON | mg/kg | T | | 13000 | 22000 | 27300 | 44800 |
| LEAD | mg/kg | T | | 75300 J | 13300 | 6010 | 50200 |
| MANGANESE | mg/kg | T | | 1090 | 307 | 1700 | 103 |
| NICKEL | mg/kg | T | | 32.2 J | 30.7 | 49.8 | 40.7 |
| SELENIUM | mg/kg | T | | 15.5 | 5.33 | 6.47 | 34.1 |
| VANADIUM | mg/kg | T | | 12.1 J | 23 | 19 | 104 |
| ZINC | mg/kg | T | | 88700 | 40700 | 132000 | 51400 |
| PERCENT MOISTURE | % | T | | 12.2 | 20.9 | 15.8 | 36.7 |
| PH | STD UNITS | T | | 7.3 | 6 | 6.7 | 5.9 |
| SULFIDE | mg/kg | T | | <9.6 U | <10.6 U | <10 U | <13.3 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S1J-4 | RFI2-S21-1 | RFI2-S21-1 | RFI2-S21-1 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 16:30 | 11/11/2003 13:00 | 11/11/2003 13:00 | 11/11/2003 13:00 |
| | | | Top (ft) | 4 | 0 | 2 | 4 |
| | | Total (T)/ | Bottom (ft) | 6 | 2 | 4 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 2.94 | 5.97 | 3.07 | 4.63 |
| ARSENIC | mg/kg | T | | 30.7 | 8 | 2.36 | 14.8 |
| BARIUM | mg/kg | T | | 100 | 10.2 | 17.8 | 6.93 |
| CADMIUM | mg/kg | T | | 15.6 | 5.68 | 6.94 | 2.3 |
| CHROMIUM | mg/kg | T | | 4.93 | 5.14 | 2.66 | 10 |
| COPPER | mg/kg | T | | 218 | 293 | 291 | 200 |
| IRON | mg/kg | T | | 12100 | 505 | 754 | 1160 |
| LEAD | mg/kg | T | | 2280 | 156 | 218 | 331 |
| MANGANESE | mg/kg | T | | 592 | 5.79 | 4.33 | 3.85 |
| NICKEL | mg/kg | T | | 17.6 | 0.694 J | 1.18 J | 1.48 J |
| SELENIUM | mg/kg | T | | 1.26 | 1.69 | 1.63 | 1.82 |
| VANADIUM | mg/kg | T | | 10.3 | 0.524 J | 0.913 | 1.07 |
| ZINC | mg/kg | T | | 42000 | 47.3 | 18.4 | 70.5 |
| PERCENT MOISTURE | % | T | | 14.8 | 34.4 | 33.7 | 36.8 |
| PH | STD UNITS | T | | 6.3 | 4.6 | 3.7 | 3.4 |
| SULFIDE | mg/kg | T | | <9.9 U | <12.8 U | <12.7 U | <13.3 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S21-1 | RFI2-S21-2 | RFI2-S21-2 | RFI2-S21-2 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 13:00 | 11/11/2003 13:30 | 11/11/2003 13:30 | 11/11/2003 13:30 |
| | | | Top (ft) | 6 | 0 | 2 | 4 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 4 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 4.65 | 92.2 | 15.8 | 11.6 |
| ARSENIC | mg/kg | T | | 102 | 138 | 243 | 223 |
| BARIUM | mg/kg | T | | 47.4 | 470 | 169 | 65.8 |
| CADMIUM | mg/kg | T | | 26 | 21.9 | 40.1 | 57.3 |
| CHROMIUM | mg/kg | T | | 29.8 | 22.1 | 6.3 | 8.71 |
| COPPER | mg/kg | T | | 1090 | 414 | 2540 | 2940 |
| IRON | mg/kg | T | | 1840 | 179000 | 334000 | 350000 |
| LEAD | mg/kg | T | | 496 | 4500 | 2760 | 2770 |
| MANGANESE | mg/kg | T | | 3.96 | 158 | 289 | 207 |
| NICKEL | mg/kg | T | | 5.49 | 122 | 194 | 243 |
| SELENIUM | mg/kg | T | | 2.25 | 2.28 | 0.701 J | 1.61 |
| VANADIUM | mg/kg | T | | 6.39 | 16 | <0.198 U | <0.216 U |
| ZINC | mg/kg | T | | 1540 | 7520 | 27400 | 27100 |
| PERCENT MOISTURE | % | T | | 40.4 | 29.8 | 20.6 | 27.5 |
| PH | STD UNITS | T | | 3.6 | 4.9 | 5.3 | 5.4 |
| SULFIDE | mg/kg | T | | 301 | <12.0 U | <10.6 U | <11.6 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S21-2 | RFI2-S21-2 | RFI2-S21-2 | RFI2-S21-3 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 13:30 | 11/11/2003 13:30 | 11/11/2003 13:30 | 11/11/2003 14:00 |
| | | | Top (ft) | 6 | 6 | 8 | 0 |
| | | Total (T)/ | Bottom (ft) | 8 | 8 | 9 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 2 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 12.9 | 5.41 J | 13.4 | 11.3 |
| ARSENIC | mg/kg | T | | 259 | 226 | 162 | 237 |
| BARIUM | mg/kg | T | | 44.6 | 33 | 49.2 | 539 |
| CADMIUM | mg/kg | T | | 81.4 | 77.7 | 65.5 | 3.47 |
| CHROMIUM | mg/kg | T | | 2.02 | 3.83 J | 5.66 | 14.2 |
| COPPER | mg/kg | T | | 1380 | 1040 J | 1950 | 239 |
| IRON | mg/kg | T | | 353000 | 348000 J | 368000 | 211000 |
| LEAD | mg/kg | T | | 2000 | 1800 | 1460 | 2630 |
| MANGANESE | mg/kg | T | | 151 | 147 J | 120 | 37.7 |
| NICKEL | mg/kg | T | | 349 | 240 J | 243 | 98.5 |
| SELENIUM | mg/kg | T | | <0.627 U | 21.4 | <0.663 U | 14.9 |
| VANADIUM | mg/kg | T | | <0.213 U | 34.3 J | <0.226 U | 39.3 |
| ZINC | mg/kg | T | | 17600 | 21800 | 22600 | 811 |
| PERCENT MOISTURE | % | T | | 25.8 | 28.9 | 29.8 | 23.1 |
| PH | STD UNITS | T | | 5 | 5.1 | 5.2 | 4.4 |
| SULFIDE | mg/kg | T | | <11.3 U | 14.9 J | 30.9 J | <10.9 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S21-3 | RFI2-S21-3 | RFI2-S21-3 | RFI2-S21-4 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 14:00 | 11/11/2003 14:00 | 11/11/2003 14:00 | 11/11/2003 14:30 |
| | | | Top (ft) | 2 | 4 | 6 | 0 |
| | | Total (T)/ | Bottom (ft) | 4 | 6 | 8 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 5.98 | 11.9 | 50.6 | 11.7 |
| ARSENIC | mg/kg | T | | 2910 | 460 | 709 | 88.2 |
| BARIUM | mg/kg | T | | 471 | 320 | 579 | 360 |
| CADMIUM | mg/kg | T | | 4.61 | 13.6 | 57.9 | 2.97 |
| CHROMIUM | mg/kg | T | | 114 | 59.1 | 7.45 | 5.30 J |
| COPPER | mg/kg | T | | 718 | 624 | 1000 | 14.8 J |
| IRON | mg/kg | T | | 191000 | 157000 | 330000 | 157000 J |
| LEAD | mg/kg | T | | 7000 | 1490 | 2390 | 1330 |
| MANGANESE | mg/kg | T | | 86.1 | 64.5 | 76.2 | 25.0 J |
| NICKEL | mg/kg | T | | 52.3 | 52.3 | 95.1 | 6.66 J |
| SELENIUM | mg/kg | T | | 7.98 | 5.55 | 20.8 | 18.8 |
| VANADIUM | mg/kg | T | | 99.7 | 45.1 | 8.3 | 31.7 J |
| ZINC | mg/kg | T | | 1050 | 5090 | 21700 | 118 |
| PERCENT MOISTURE | % | T | | 37.8 | 37.4 | 32.5 | 24.8 |
| PH | STD UNITS | T | | 3.5 | 3.4 | 3.8 | 3.2 |
| SULFIDE | mg/kg | T | | <13.5 U | <13.4 U | <12.4 U | <11.2 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S21-4 | RFI2-S21-4 | RFI2-S21-4 | RFI2-S21-4 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 14:30 | 11/11/2003 14:30 | 11/11/2003 14:30 | 11/11/2003 14:30 |
| | | | Top (ft) | 2 | 4 | 6 | 8 |
| | | Total (T)/ | Bottom (ft) | 4 | 6 | 8 | 9 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | <1.02 U | 1.59 J | <1.51 U | <1.70 U |
| ARSENIC | mg/kg | T | | 43.9 | 11.6 | 70 | 27.5 |
| BARIUM | mg/kg | T | | 258 | 542 | 244 | 221 |
| CADMIUM | mg/kg | T | | 204 | 212 | 72.2 | 23.1 |
| CHROMIUM | mg/kg | T | | 86.8 J | 34.6 J | 47.9 J | 28.1 J |
| COPPER | mg/kg | T | | 248 J | 95.3 J | 98.1 J | 308 J |
| IRON | mg/kg | T | | 21000 J | 18100 J | 5600 J | 2930 J |
| LEAD | mg/kg | T | | 483 | 1320 | 968 | 353 |
| MANGANESE | mg/kg | T | | 32.3 J | 46.7 J | 16.0 J | 8.43 J |
| NICKEL | mg/kg | T | | 22.1 J | 73.0 J | 21.4 J | 31.1 J |
| SELENIUM | mg/kg | T | | 1.32 J | 1.11 J | <1.08 U | 2.97 |
| VANADIUM | mg/kg | T | | 59.4 J | 34.6 J | 16.9 J | 8.89 J |
| ZINC | mg/kg | T | | 1940 | 4640 | 676 | 106 |
| PERCENT MOISTURE | % | T | | 35.2 | 45.7 | 56.4 | 61.5 |
| PH | STD UNITS | T | | 3.8 | 4.5 | 3.9 | 2.6 |
| SULFIDE | mg/kg | T | | 66.3 | 1100 J | 33.8 J | <21.8 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S3-1 | RFI2-S3-1 | RFI2-S3-1 | RFI2-S3-2 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/2003 14:30 | 11/10/2003 14:35 | 11/10/2003 14:37 | 11/10/2003 15:15 |
| | | | Top (ft) | 0 | 2 | 4 | 0 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 6 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 3.69 | 6.51 | 3.27 | <1.04 U |
| ARSENIC | mg/kg | T | | 48.9 | 67.8 | 37.6 | 23.7 |
| BARIUM | mg/kg | T | | 776 | 125 | 188 | 362 |
| CADMIUM | mg/kg | T | | 7.26 | 38.5 | 19.1 | 20.3 |
| CHROMIUM | mg/kg | T | | 43.3 J | 51.7 J | 24.5 J | 39.0 J |
| COPPER | mg/kg | T | | 243 | 468 | 292 | 85.5 |
| IRON | mg/kg | T | | 59200 | 63300 | 37200 | 64800 |
| LEAD | mg/kg | T | | 5000 | 28500 | 9890 | 1050 |
| MANGANESE | mg/kg | T | | 345 | 149 | 141 | 359 |
| NICKEL | mg/kg | T | | 15.3 | 17.5 | 13.5 | 45.4 |
| SELENIUM | mg/kg | T | | 9.9 | 3.72 | 2.52 | 2.54 |
| VANADIUM | mg/kg | T | | 48.3 J | 33.1 J | 28.2 J | 69.7 J |
| ZINC | mg/kg | T | | 1710 | 3090 | 2820 | 2500 |
| PERCENT MOISTURE | % | T | | 21.7 | 22.5 | 16.5 | 38.3 |
| PH | STD UNITS | T | | 3.5 | 3.6 | 4.2 | 7 |
| SULFIDE | mg/kg | T | | <10.7 U | <10.8 U | <10.1 U | <13.6 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S3-2 | RFI2-S3-2 | RFI2-S3-3 | RFI2-S-3-3 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/2003 15:15 | 11/10/2003 15:15 | 11/10/2003 16:45 | 11/10/2003 16:45 |
| | | | Top (ft) | 2 | 4 | 0 | 0 |
| | | Total (T)/ | Bottom (ft) | 4 | 6 | 2 | 2 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 2 |
| ANTIMONY | mg/kg | T | | 2.34 | 2.69 | 21.2 | |
| ARSENIC | mg/kg | T | | 160 | 75 | 29.3 | |
| BARIUM | mg/kg | T | | 221 | 74.1 | 145 | |
| CADMIUM | mg/kg | T | | 1.98 | 7.23 | 5.67 | |
| CHROMIUM | mg/kg | T | | 24.1 J | 12.1 J | 8.76 J | |
| COPPER | mg/kg | T | | 71 | 73.2 | 350 | |
| IRON | mg/kg | T | | 28000 | 9870 | 17300 | |
| LEAD | mg/kg | T | | 217 | 1590 | 389 | |
| MANGANESE | mg/kg | T | | 65.3 | 193 | 679 | |
| NICKEL | mg/kg | T | | 6.73 | 8.28 | 8.59 | |
| SELENIUM | mg/kg | T | | 3.75 | 1.41 | 0.939 J | |
| VANADIUM | mg/kg | T | | 15.6 J | 34.4 J | 11.9 J | |
| ZINC | mg/kg | T | | 814 | 938 | 1210 | |
| PERCENT MOISTURE | % | T | | 10.1 | 20.2 | 12.2 | |
| PH | STD UNITS | T | | 6.6 | 5.3 | 7.1 | |
| SULFIDE | mg/kg | T | | <9.3 U | <10.5 U | 27.1 J | |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S3-3 | RFI2-S3-3 | RFI2-S3-3 | RFI2-S3-3 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/2003 16:45 | 11/10/2003 16:50 | 11/10/2003 16:52 | 11/10/2003 16:58 |
| | | | Top (ft) | 0 | 2 | 4 | 6 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 6 | 8 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 2 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 14.7 | 4.13 | 2.95 | <0.704 U |
| ARSENIC | mg/kg | T | | 28.3 | 140 | 165 | 17.8 |
| BARIUM | mg/kg | T | | 187 | 344 | 150 | 28.4 |
| CADMIUM | mg/kg | T | | 5.42 | 17.6 | 687 | 326 |
| CHROMIUM | mg/kg | T | | 8.96 J | 51.5 J | 68.3 J | 8.26 J |
| COPPER | mg/kg | T | | 302 J | 168 | 2840 | 639 |
| IRON | mg/kg | T | | 17500 J | 64000 | 62900 | 10900 |
| LEAD | mg/kg | T | | 411 | 1480 | 3730 | 973 |
| MANGANESE | mg/kg | T | | 1000 J | 237 | 380 | 247 |
| NICKEL | mg/kg | T | | 9.73 J | 24 | 30.4 | 3.96 |
| SELENIUM | mg/kg | T | | 1.58 | 5.2 | 33.6 | 3.86 |
| VANADIUM | mg/kg | T | | 12.5 J | 43.8 J | 30.1 J | 4.49 J |
| ZINC | mg/kg | T | | 1120 | 2340 | 96700 | 26100 |
| PERCENT MOISTURE | % | T | | 11.9 | 17.4 | 18.6 | 9 |
| PH | STD UNITS | T | | 7.8 | 5.6 | 5.1 | 6.1 |
| SULFIDE | mg/kg | T | | 111 | <10.2 U | 1750 | 3410 |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S3-3 | RFI2-S3-4 | RFI2-S3-4 | RFI2-S3-4 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/2003 17:00 | 11/10/2003 15:30 | 11/10/2003 15:35 | 11/10/2003 15:40 |
| | | | Top (ft) | 8 | 0 | 2 | 4 |
| | | Total (T)/ | Bottom (ft) | 10 | 2 | 4 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | <0.784 U | 6.43 | 2.78 | 1.16 J |
| ARSENIC | mg/kg | T | | 45.2 | 160 | 92.7 | 105 |
| BARIUM | mg/kg | T | | 131 | 2650 | 303 | 129 |
| CADMIUM | mg/kg | T | | 302 | 246 | 21 | 172 |
| CHROMIUM | mg/kg | T | | 13.3 J | 28.7 J | 13.0 J | 24.4 J |
| COPPER | mg/kg | T | | 1550 | 1080 | 114 | 1210 |
| IRON | mg/kg | T | | 21400 | 114000 | 37400 | 56200 |
| LEAD | mg/kg | T | | 1590 | 13700 | 1390 | 2940 |
| MANGANESE | mg/kg | T | | 573 | 1920 | 239 | 596 |
| NICKEL | mg/kg | T | | 9.13 | 45.8 | 17.6 | 27.2 |
| SELENIUM | mg/kg | T | | 6.32 | 5.58 | 2.69 | 10.8 |
| VANADIUM | mg/kg | T | | 8.01 J | 47.2 J | 20.5 J | 82.1 J |
| ZINC | mg/kg | T | | 90600 | 21900 | 3190 | 98600 |
| PERCENT MOISTURE | % | T | | 16.7 | 21.4 | 15.9 | 21.7 |
| PH | STD UNITS | T | | 6.1 | 7.3 | 5.3 | 5.9 |
| SULFIDE | mg/kg | T | | 10800 | <10.7 U | <10 U | <10.7 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S3-4 | RFI2-S4-1 | RFI2-S4-1 | RFI2-S4-1 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/10/2003 15:40 | 11/11/2003 10:00 | 11/11/2003 10:00 | 11/11/2003 10:00 |
| | | | Top (ft) | 6 | 0 | 2 | 4 |
| | | Total (T)/ | Bottom (ft) | 8 | 2 | 4 | 6 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | <0.979 U | <0.726 U | <0.948 U | <1.21 U |
| ARSENIC | mg/kg | T | | 3.69 | 120 | 1600 | 192 |
| BARIUM | mg/kg | T | | 35.2 | 206 | 166 | 238 |
| CADMIUM | mg/kg | T | | 88 | 0.979 | <1.55 U | <1.97 U |
| CHROMIUM | mg/kg | T | | 5.30 J | 7.76 J | 9.43 J | 17.8 J |
| COPPER | mg/kg | T | | 81.7 | 86.8 | 536 | 981 |
| IRON | mg/kg | T | | 8480 | 124000 | 239000 | 217000 |
| LEAD | mg/kg | T | | 45.2 | 312 | 546 | 529 |
| MANGANESE | mg/kg | T | | 15.5 | 1180 | 20.3 | 9.69 |
| NICKEL | mg/kg | T | | 4.22 | 6.09 | 3.07 | 2.64 |
| SELENIUM | mg/kg | T | | 1.15 J | 43.8 | 102 | 15.2 |
| VANADIUM | mg/kg | T | | 9.85 J | 9.48 J | 43.0 J | 24.5 J |
| ZINC | mg/kg | T | | 1060 | 1230 | 120 | 63 |
| PERCENT MOISTURE | % | T | | 32.6 | 10.9 | 31.1 | 45.8 |
| PH | STD UNITS | T | | 3.6 | 7.1 | 2.7 | 2.2 |
| SULFIDE | mg/kg | T | | 223 | 125 | <12.2 U | <15.5 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S4-1 | RFI2-S4-1 | RFI2-S4-2 | RFI2-S4-2 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 10:00 | 11/11/2003 10:00 | 11/11/2003 10:40 | 11/11/2003 10:40 |
| | | | Top (ft) | 6 | 8 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 8 | 10 | 2 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | <1.20 U | <1.44 U | 18 | <0.810 U |
| ARSENIC | mg/kg | T | | 23.6 | 7.33 | 1600 | 15.2 |
| BARIUM | mg/kg | T | | 233 | 229 | 292 | 87.9 |
| CADMIUM | mg/kg | T | | <1.97 U | 7.21 | 2.74 | 9.37 |
| CHROMIUM | mg/kg | T | | 63.5 J | 82.9 J | 33 | 19.1 |
| COPPER | mg/kg | T | | 1740 | 4480 | 212 | 49.2 |
| IRON | mg/kg | T | | 276000 | 71600 | 127000 | 22600 |
| LEAD | mg/kg | T | | 460 | 391 | 6750 | 186 |
| MANGANESE | mg/kg | T | | 9.35 | 67.2 | 531 | 294 |
| NICKEL | mg/kg | T | | 2.83 | 39.8 | 17.8 | 22.1 |
| SELENIUM | mg/kg | T | | 14.5 | 1.50 J | 10.3 | 0.864 J |
| VANADIUM | mg/kg | T | | 28.5 J | 11.7 J | 19.3 | 16 |
| ZINC | mg/kg | T | | 58.3 | 1290 | 804 | 886 |
| PERCENT MOISTURE | % | T | | 45.6 | 54.6 | 15.4 | 18.5 |
| PH | STD UNITS | T | | 2.4 | 3.7 | 6.5 | 6.4 |
| SULFIDE | mg/kg | T | | <15.4 U | <18.5 U | <9.9 U | <10.3 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S4-2 | RFI2-S4-2 | RFI2-S4-3 | RFI2-S4-3 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 10:40 | 11/11/2003 10:40 | 11/11/2003 11:00 | 11/11/2003 11:00 |
| | | | Top (ft) | 4 | 6 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 6 | 8 | 2 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 2.76 J | <0.797 U | 4.37 | <0.816 U |
| ARSENIC | mg/kg | T | | 19.9 | 93.1 | 531 | 147 |
| BARIUM | mg/kg | T | | 214 | 93.7 | 220 | 110 |
| CADMIUM | mg/kg | T | | 49.8 | 7.65 | 2.29 | <0.0667 U |
| CHROMIUM | mg/kg | T | | 33.6 | 7.16 | 13.3 | 11.1 |
| COPPER | mg/kg | T | | 64.8 | 32.1 | 54.9 | 29.5 |
| IRON | mg/kg | T | | 69500 | 11300 | 51200 | 13100 |
| LEAD | mg/kg | T | | 548 | 47.9 | 826 | 144 |
| MANGANESE | mg/kg | T | | 696 | 619 | 574 | 44.6 |
| NICKEL | mg/kg | T | | 50 | 11.1 | 15.1 | 15 |
| SELENIUM | mg/kg | T | | 1.52 | <0.567 U | 3.71 | 0.687 J |
| VANADIUM | mg/kg | T | | 26.3 | 10.6 | 23.7 | 20 |
| ZINC | mg/kg | T | | 5810 | 789 | 1200 | 75.8 |
| PERCENT MOISTURE | % | T | | 31.9 | 18 | 12.3 | 19.1 |
| PH | STD UNITS | T | | 6.8 | 8.8 | 8.1 | 7.7 |
| SULFIDE | mg/kg | T | | 13.2 J | <10.2 U | 39.7 | <10.4 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S4-4 | RFI2-S4-4 | RFI2-S7-1 | RFI2-S7-1 |
|---|---|---|---|---|---|---|---|
| | | | Date | 11/11/2003 11:15 | 11/11/2003 11:15 | 11/12/2003 9:15 | 11/12/2003 9:15 |
| | | | Top (ft) | 0 | 2 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 2 | 4 | 2 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 297 | 101 | 798 J | 149 J |
| ARSENIC | mg/kg | T | | 9050 | 15200 | 1090 | 473 |
| BARIUM | mg/kg | T | | 5960 | 1090 | 1930 J | 3740 J |
| CADMIUM | mg/kg | T | | 6.71 | 13.4 | 392 J | 286 J |
| CHROMIUM | mg/kg | T | | 26.2 | 29.8 | 15.1 J | 22.6 J |
| COPPER | mg/kg | T | | 84.9 | 206 | 1910 J | 1230 J |
| IRON | mg/kg | T | | 23000 | 82100 | 127000 | 95000 |
| LEAD | mg/kg | T | | 3300 | 4320 | 62000 J | 35500 J |
| MANGANESE | mg/kg | T | | 32.9 | 479 | 2420 | 1950 |
| NICKEL | mg/kg | T | | 14.3 | 22.3 | 11.5 J | 13.5 J |
| SELENIUM | mg/kg | T | | 4.69 | 5.94 | 15.4 | 5.88 |
| VANADIUM | mg/kg | T | | 37.2 | 59.4 | 30.6 J | 26.9 J |
| ZINC | mg/kg | T | | 171 | 1400 | 55800 | 41600 |
| PERCENT MOISTURE | % | T | | 18.6 | 18.6 | 21.2 | 18 |
| PH | STD UNITS | T | | 5.1 | 5.8 | 8 | 7.9 |
| SULFIDE | mg/kg | T | | <10.3 U | <10.3 U | <10.7 U | <10.2 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S7-1 | RFI2-S7-2 | RFI2-S7-3 | RFI2-S7-4 | RFI2-S7-4 |
|---|---|---|---|---|---|---|---|---|
| | | | Date | 11/12/2003 9:15 | 11/12/2003 9:40 | 11/12/2003 9:00 | 11/12/2003 8:30 | 11/12/2003 8:30 |
| | | | Top (ft) | 4 | 0 | 0 | 0 | 2 |
| | | Total (T)/ | Bottom (ft) | 6 | 2.5 | 2 | 2 | 4 |
| **Analyte** | **units** | **Diss. (D)** | **Duplicate #** | 1 | 1 | 1 | 1 | 1 |
| ANTIMONY | mg/kg | T | | 745 J | 1010 J | 38.6 J | 339 J | 833 J |
| ARSENIC | mg/kg | T | | 4620 | 1510 | 84.1 | 827 | 1180 |
| BARIUM | mg/kg | T | | 1040 J | 1120 J | 5680 J | 4640 J | 2450 J |
| CADMIUM | mg/kg | T | | 305 J | 227 J | 38.9 J | 518 J | 76.4 J |
| CHROMIUM | mg/kg | T | | 11.0 J | 20.3 J | 10.6 J | 39.9 J | 83.7 J |
| COPPER | mg/kg | T | | 642 J | 4840 J | 155 J | 1760 J | 2350 J |
| IRON | mg/kg | T | | 61400 | 151000 | 17200 | 81400 | 44800 |
| LEAD | mg/kg | T | | 178000 J | 138000 J | 6760 J | 43000 J | 45600 J |
| MANGANESE | mg/kg | T | | 207 | 2120 | 639 | 1540 | 105 |
| NICKEL | mg/kg | T | | 4.11 J | 8.83 J | 11.0 J | 24.7 J | 26.0 J |
| SELENIUM | mg/kg | T | | 85 | 13.6 | 1.66 | 18.9 | 49.6 |
| VANADIUM | mg/kg | T | | 17.1 J | 39.9 J | 22.7 J | 49.0 J | 101 J |
| ZINC | mg/kg | T | | 25300 | 84800 | 5390 | 50900 | 33400 |
| PERCENT MOISTURE | % | T | | 28.1 | 31.5 | 18.5 | 22.7 | 35.7 |
| PH | STD UNITS | T | | 6.1 | 6.2 | 7.2 | 7.4 | 6 |
| SULFIDE | mg/kg | T | | 23.0 J | <12.3 U | <10.3 U | <10.9 U | <13.1 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

| | | | Sample ID | RFI2-S7-4 |
|---|---|---|---|---|
| | | | Date | 11/12/2003 8:30 |
| | | | Top (ft) | 4 |
| | | Total (T)/ | Bottom (ft) | 6 |
| Analyte | units | Diss. (D) | Duplicate # | 1 |
| ANTIMONY | mg/kg | T | | 517 J |
| ARSENIC | mg/kg | T | | 805 |
| BARIUM | mg/kg | T | | 4870 J |
| CADMIUM | mg/kg | T | | 75.1 J |
| CHROMIUM | mg/kg | T | | 48.1 J |
| COPPER | mg/kg | T | | 2650 J |
| IRON | mg/kg | T | | 145000 |
| LEAD | mg/kg | T | | 42400 J |
| MANGANESE | mg/kg | T | | 150 |
| NICKEL | mg/kg | T | | 21.4 J |
| SELENIUM | mg/kg | T | | 19.8 |
| VANADIUM | mg/kg | T | | 63.6 J |
| ZINC | mg/kg | T | | 30100 |
| PERCENT MOISTURE | % | T | | 30.7 |
| PH | STD UNITS | T | | 5.9 |
| SULFIDE | mg/kg | T | | <12.1 U |

< and ND = Non detect at stated reporting limit

Appendix A
Summary of Riley Park Sump Water Data
DuPont East Chicago Facility
East Chicago, Indiana

**ARSENIC CONCENTRATIONS (ug/l) - Preliminary**

| Sump Location | November-2004 | | 1990 Concentrations | |
|---|---|---|---|---|
| | Total | Dissolved | Avg (Tot) | Range (Tot) |
| Riley Park Sumps | NA | NA | < 6.000* | ND-28.000 |
| 4928 Ivy | 27.000 | NA | NA | NA |
| 4928 Ivy (EPA) | 18.666 | NA | NA | NA |
| 4942 Ivy | 8.4J | NA | NA | NA |
| 4942 Ivy (EPA) | 7.715 | NA | NA | NA |
| 4903 Euclid | 39.000 | NA | NA | NA |
| 4903 Euclid (EPA) | 34.543 | NA | NA | NA |
| 4935 Grasselli | 5.3J | NA | NA | NA |
| 4935 Grasselli (EPA) | 4.044 | NA | NA | NA |

* Average concentration of 8 sump water samples associated with the southern half of the 4900 block of Riley Park

< and ND = Non detect at stated reporting limit



~7766457.xls:2004 Sump Water
12/14/2004 6:21 PM

Appendix A
Summary of Riley Park Surface Soil Analytical Results
DuPont East Chicago Facility
East Chicago, Indiana

**ARSENIC CONCENTRATIONS (mg/kg) - Preliminary**

| Riley Park | November-2004 | | EPA Region IX PRG | |
|---|---|---|---|---|
| Soil Sample Location | DuPont | EPA | Resident | Industrial |
| 4928 Ivy | 69.500 | 77.800 | 0.390 | 1.600 |
| 4928 Ivy (Dup) | 61.400 | NA | 0.390 | 1.600 |
| 4928 Ivy (Bckgnd) | 9.500 | NA | 0.390 | 1.600 |
| 4942 Ivy | 9.290 | 9.610 | 0.390 | 1.600 |
| 4942 Ivy (Bckgnd) | 11.800 | NA | 0.390 | 1.600 |
| 4903 Euclid | 48.200 | 52.100 | 0.390 | 1.600 |
| 4903 Euclid (Bckgnd) | 75.000 | 84.900 | 0.390 | 1.600 |
| 4907 Euclid | 54.800 | 64.300 | 0.390 | 1.600 |
| 4907 Euclid (Bckgnd) | 30.000 | NA | 0.390 | 1.600 |

< and ND = Non detect at stated reporting limit



~7766457.xls:2004 Riley Park Surface Soil
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# APPENDIX B

**Table B-1**
**Intake Assumptions**
**Intermittent Exposure to Basement Water**

| PARAMETER | | | child resident | adult resident |
|---|---|---|---|---|
| ATc | Averaging time (cancer effects) = 70 years x 365 day/yr | (1) | 25550 | 25550 |
| ATn | Averaging time (noncancer effects) = ED x 365 day/yr | (1) | 2190 | 10950 |
| BW | Body weight, kg | (2) | 15 | 70 |
| CF | Conversion factor: water (L/mL or $cm^3$) | | 1E-03 | 1E-03 |
| ED | Exposure duration, years | (3) | 6 | 30 |
| EF | Exposure frequency, days/yr | (3) | 10 | 10 |
| ET | Exposure time, hours/day | (3) | 2 | 2 |
| FC | Fraction contacted from contaminated source | | 1 | 1 |
| IW | Water ingestion rate, L/day | (4) | 0.05 | 0.05 |
| PC | Permeability constant, water, cm/hr (chemical-specific) | (5) | Chemical-Specific | Chemical-Specific |
| SA | Skin surface area, $cm^2$/event | (6) | 3500 | 2000 |
| **INTAKE FACTORS** | | | | |
| **Water (L/kg BW-day)** | | | | |
| Ingestion = | (IW x EF x ED) / (AT x BW) | | | |
| | | noncancer | 9.13E-05 | 1.96E-05 |
| | | cancer | 7.83E-06 | 8.39E-06 |
| Dermal = | (SA x PC x ET x EF x ED x CF) / (AT x BW) | | | |
| | | noncancer | 1.28E-02 | 1.57E-03 |
| | | cancer | 1.10E-03 | 6.71E-04 |

(1) Averaging time: Noncarcinogens = ED expressed in days. Carcinogens = 70-year lifetime expressed in days.

(2) Body weight: Average adult and child (age 1-6 years) body weight (USEPA, 1989) .

(3) Exposure Time, Frequency and Duration: Assumes occassional contact with sump water for one event per day, 2 hours/event, 10 days/year. Conservative site-specific estimate of exposure which probably exceeds what would be required to fix a pump.

(4) Groundwater ingestion rate: Residents are assumed to come into contact with sump water due to accidental splashing. A 50-mL/hour ingestion rate is estimated for the exposure and is consistent with USEPA Region IV default values for swimming activities (USEPA Region IV, 2000).

(5) Permeability Constant: Chemical specific values obtained from Table 5-7 in Dermal Risk Assessment Guidance (USEPA, 1992).

(6) 3500 $cm^2$ = Skin surface area in contact with water is equivalent to hands, one-half lower legs, and feet (USEPA, 1997).
2000 $cm^2$ = Skin surface area in contact with water is equivalent to hands and one-half lower arms (USEPA, 1997).

**Table B-1**
**Intake Assumptions**
**Intermittent Exposure to Basement Water**

**References:**

USEPA, 1989. Risk Assessment Guidance for Superfund. Volume I Human Health Evaluation Manual, Part A. Interim Final.Office of Emergency and Remedial Response, Washington D.C. December.

USEPA, 1992. Dermal Exposure Assessment: Principles and Applications. Office of Research and Development. Washington, D.C. EPA/600/8-91/011B. January 1992.

USEPA, 1997. Expsoure Factors Handbook. Office of Research and Development. Washington, D.C. EPA/600/P-95/002Fa. August.

USEPA Region IV, 2000. Supplemental Guidance to RAGs: Region IV Bulletins. Office of Technical Services. October 1995 (revised May 2000).

**Table B-2**
**Chemical Concentrations**
**Perimeter Monitoring Well Data**
**95% UCL Concentrations in Well Water (1)**

| | |
|---|---|
| Aluminum | 1.58E+00 |
| Antimony | 6.61E-03 |
| Arsenic | 9.62E-01 |
| Boron | 4.53E-01 |
| Cadmium | 2.60E-02 |
| Chromium | 1.60E-02 |
| Iron | 5.67E+01 |
| Manganese | 1.28E+00 |
| Nickel | 1.80E-02 |
| Vanadium | 5.80E-03 |
| Zinc | 4.58E+01 |

Units: mg/L

(1) MW-1, MW-10, MW-11, MW21-MW25: 1999 - 2003

**TABLE B-3**
**INTERMITTENT EXPOSURE TO BASEMENT WATER**
**Data from Perimeter Monitoring Wells (MW-1, MW-10, MW-11, MW-21 through MW-25)**
**Adult Resident (Dermal Contact)**

**HQ = Chemical Intake / RfD**
**CR = Chemical Intake x SF**

**Where:**
RfD = Reference Dose (mg/kg-day)
SF = Cancer Slope Factor ((mg/kg-day)-1)
HQ = Hazard Quotient for noncancer effects
CR = Cancer risk

| Chemical of Concern | Groundwater conc. (mg/L) | Intake Factor (L/kg-day) | PC | Chemical Intake (mg/kg-day) | RfD (mg/kg-day) | HQ | Intake Factor (L/kg-day) | Chemical Intake (mg/kg-day) | SF (mg/kg-day)-1 | Cancer Risk |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1.58E+00 | 1.57E-03 | 1.00E-03 | 2.47E-06 | 1.00E+00 | 2.47E-06 | 6.71E-04 | 1.06E-06 | - | |
| Antimony | 6.61E-03 | 1.57E-03 | 1.00E-03 | 1.03E-08 | 4.00E-04 | 2.59E-05 | 6.71E-04 | 4.44E-09 | - | |
| Arsenic | 9.62E-01 | 1.57E-03 | 1.00E-03 | 1.51E-06 | 3.00E-04 | 5.02E-03 | 6.71E-04 | 6.45E-07 | 1.50E+00 | 9.68E-07 |
| Boron | 4.53E-01 | 1.57E-03 | 1.00E-03 | 7.09E-07 | 2.00E-01 | 3.55E-06 | 6.71E-04 | 3.04E-07 | - | |
| Cadmium | 2.60E-02 | 1.57E-03 | 1.00E-03 | 4.07E-08 | 1.25E-05 | 3.26E-03 | 6.71E-04 | 1.74E-08 | - | |
| Chromium | 1.60E-02 | 1.57E-03 | 1.00E-03 | 2.50E-08 | 1.50E+00 | 1.67E-08 | 6.71E-04 | 1.07E-08 | - | |
| Iron | 5.67E+01 | 1.57E-03 | 1.00E-03 | 8.87E-05 | 3.00E-01 | 2.96E-04 | 6.71E-04 | 3.80E-05 | - | |
| Manganese | 1.28E+00 | 1.57E-03 | 1.00E-03 | 2.01E-06 | 2.40E-02 | 8.37E-05 | 6.71E-04 | 8.61E-07 | - | |
| Nickel | 1.80E-02 | 1.57E-03 | 2.00E-04 | 5.64E-09 | 2.00E-02 | 2.82E-07 | 6.71E-04 | 2.42E-09 | - | |
| Vanadium | 5.80E-03 | 1.57E-03 | 1.00E-03 | 9.08E-09 | 7.00E-03 | 1.30E-06 | 6.71E-04 | 3.89E-09 | - | |
| Zinc | 4.58E+01 | 1.57E-03 | 6.00E-04 | 4.30E-05 | 3.00E-01 | 1.43E-04 | 6.71E-04 | 1.84E-05 | - | |
| | | | | | Hazard Index = | 8.83E-03 | | | Cancer Risk = | 9.68E-07 |

**TABLE B-4**
**INTERMITTENT EXPOSURE TO BASEMENT WATER**
**Data from Perimeter Monitoring Wells (MW-1, MW-10, MW-11, MW-21 through MW-25)**
**Adult Resident (Ingestion)**

**HQ = Chemical Intake / RfD**
**CR = Chemical Intake x SF**

**Where:**
RfD = Reference Dose (mg/kg-day)
SF = Cancer Slope Factor ((mg/kg-day)-1)
HQ = Hazard Quotient for noncancer effects
CR = Cancer risk

| Chemical of Concern | Groundwater conc. (mg/L) | Intake Factor (L/kg-day) | Chemical Intake (mg/kg-day) | RfD (mg/kg-day) | HQ | Intake Factor (L/kg-day) | Chemical Intake (mg/kg-day) | SF (mg/kg-day)-1 | Cancer Risk |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1.58E+00 | 1.96E-05 | 3.09E-05 | 1.00E+00 | 3.09E-05 | 8.39E-06 | 1.32E-05 | - | |
| Antimony | 6.61E-03 | 1.96E-05 | 1.29E-07 | 4.00E-04 | 3.23E-04 | 8.39E-06 | 5.54E-08 | - | |
| Arsenic | 9.62E-01 | 1.96E-05 | 1.88E-05 | 3.00E-04 | 6.28E-02 | 8.39E-06 | 8.07E-06 | 1.50E+00 | 1.21E-05 |
| Boron | 4.53E-01 | 1.96E-05 | 8.86E-06 | 2.00E-01 | 4.43E-05 | 8.39E-06 | 3.80E-06 | - | |
| Cadmium | 2.60E-02 | 1.96E-05 | 5.09E-07 | 5.00E-04 | 1.02E-03 | 8.39E-06 | 2.18E-07 | - | |
| Chromium | 1.60E-02 | 1.96E-05 | 3.13E-07 | 1.50E+00 | 2.09E-07 | 8.39E-06 | 1.34E-07 | - | |
| Iron | 5.67E+01 | 1.96E-05 | 1.11E-03 | 3.00E-01 | 3.70E-03 | 8.39E-06 | 4.75E-04 | - | |
| Manganese | 1.28E+00 | 1.96E-05 | 2.51E-05 | 2.40E-02 | 1.05E-03 | 8.39E-06 | 1.08E-05 | - | |
| Nickel | 1.80E-02 | 1.96E-05 | 3.52E-07 | 2.00E-02 | 1.76E-05 | 8.39E-06 | 1.51E-07 | - | |
| Vanadium | 5.80E-03 | 1.96E-05 | 1.14E-07 | 7.00E-03 | 1.62E-05 | 8.39E-06 | 4.86E-08 | - | |
| Zinc | 4.58E+01 | 1.96E-05 | 8.97E-04 | 3.00E-01 | 2.99E-03 | 8.39E-06 | 3.84E-04 | - | |
| | | | | Hazard Index = | 7.19E-02 | | | Cancer Risk = | 1.21E-05 |

**TABLE B-5**
**INTERMITTENT EXPOSURE TO BASEMENT WATER**
**Data from Perimeter Monitoring Wells (MW-1, MW-10, MW-11, MW-21 through MW-25)**
**Child Resident (Ingestion)**

**HQ = Chemical Intake / RfD**
**CR = Chemical Intake x SF**

**Where:**
RfD = Reference Dose (mg/kg-day)
SF = Cancer Slope Factor ((mg/kg-day)-1)
HQ = Hazard Quotient for noncancer effects
CR = Cancer risk

| Chemical of Concern | Groundwater conc. (mg/L) | Intake Factor (L/kg-day) | Chemical Intake (mg/kg-day) | RfD (mg/kg-day) | HQ | Intake Factor (L/kg-day) | Chemical Intake (mg/kg-day) | SF (mg/kg-day)-1 | Cancer Risk |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1.58E+00 | 9.13E-05 | 1.44E-04 | 1.00E+00 | 1.44E-04 | 7.83E-06 | 1.24E-05 | - | |
| Antimony | 6.61E-03 | 9.13E-05 | 6.04E-07 | 4.00E-04 | 1.51E-03 | 7.83E-06 | 5.17E-08 | - | |
| Arsenic | 9.62E-01 | 9.13E-05 | 8.79E-05 | 3.00E-04 | 2.93E-01 | 7.83E-06 | 7.53E-06 | 1.50E+00 | 1.13E-05 |
| Boron | 4.53E-01 | 9.13E-05 | 4.14E-05 | 2.00E-01 | 2.07E-04 | 7.83E-06 | 3.55E-06 | - | |
| Cadmium | 2.60E-02 | 9.13E-05 | 2.37E-06 | 5.00E-04 | 4.75E-03 | 7.83E-06 | 2.04E-07 | - | |
| Chromium | 1.60E-02 | 9.13E-05 | 1.46E-06 | 1.50E+00 | 9.74E-07 | 7.83E-06 | 1.25E-07 | - | |
| Iron | 5.67E+01 | 9.13E-05 | 5.18E-03 | 3.00E-01 | 1.73E-02 | 7.83E-06 | 4.44E-04 | - | |
| Manganese | 1.28E+00 | 9.13E-05 | 1.17E-04 | 2.40E-02 | 4.88E-03 | 7.83E-06 | 1.00E-05 | - | |
| Nickel | 1.80E-02 | 9.13E-05 | 1.64E-06 | 2.00E-02 | 8.22E-05 | 7.83E-06 | 1.41E-07 | - | |
| Vanadium | 5.80E-03 | 9.13E-05 | 5.30E-07 | 7.00E-03 | 7.57E-05 | 7.83E-06 | 4.54E-08 | - | |
| Zinc | 4.58E+01 | 9.13E-05 | 4.18E-03 | 3.00E-01 | 1.39E-02 | 7.83E-06 | 3.59E-04 | - | |
| | | | | Hazard Index = | 3.36E-01 | | | Cancer Risk = | 1.13E-05 |

**TABLE B-6**
**INTERMITTENT EXPOSURE TO BASEMENT WATER**
**Data from Perimeter Monitoring Wells (MW-1, MW-10, MW-11, MW-21 through MW-25)**
**Child Resident (Dermal Contact)**

**HQ = Chemical Intake / RfD**
**CR = Chemical Intake x SF**

**Where:**
RfD = Reference Dose (mg/kg-day)
SF = Cancer Slope Factor ((mg/kg-day)-1)
HQ = Hazard Quotient for noncancer effects
CR = Cancer risk

| Chemical of Concern | Groundwater conc. (mg/L) | Intake Factor (L/kg-day) | PC | Chemical Intake (mg/kg-day) | RfD (mg/kg-day) | HQ | Intake Factor (L/kg-day) | Chemical Intake (mg/kg-day) | SF (mg/kg-day)-1 | Cancer Risk |
|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 1.58E+00 | 1.28E-02 | 1.00E-03 | 2.02E-05 | 1.00E+00 | 2.02E-05 | 1.10E-03 | 1.73E-06 | - | |
| Antimony | 6.61E-03 | 1.28E-02 | 1.00E-03 | 8.45E-08 | 4.00E-04 | 2.11E-04 | 1.10E-03 | 7.24E-09 | - | |
| Arsenic | 9.62E-01 | 1.28E-02 | 1.00E-03 | 1.23E-05 | 3.00E-04 | 4.10E-02 | 1.10E-03 | 1.05E-06 | 1.50E+00 | 1.58E-06 |
| Boron | 4.53E-01 | 1.28E-02 | 1.00E-03 | 5.79E-06 | 2.00E-01 | 2.90E-05 | 1.10E-03 | 4.96E-07 | - | |
| Cadmium | 2.60E-02 | 1.28E-02 | 1.00E-03 | 3.32E-07 | 1.25E-05 | 2.66E-02 | 1.10E-03 | 2.85E-08 | - | |
| Chromium | 1.60E-02 | 1.28E-02 | 1.00E-03 | 2.05E-07 | 1.50E+00 | 1.36E-07 | 1.10E-03 | 1.75E-08 | - | |
| Iron | 5.67E+01 | 1.28E-02 | 1.00E-03 | 7.25E-04 | 3.00E-01 | 2.42E-03 | 1.10E-03 | 6.21E-05 | - | |
| Manganese | 1.28E+00 | 1.28E-02 | 1.00E-03 | 1.64E-05 | 2.40E-02 | 6.83E-04 | 1.10E-03 | 1.41E-06 | - | |
| Nickel | 1.80E-02 | 1.28E-02 | 2.00E-04 | 4.60E-08 | 2.00E-02 | 2.30E-06 | 1.10E-03 | 3.95E-09 | - | |
| Vanadium | 5.80E-03 | 1.28E-02 | 1.00E-03 | 7.42E-08 | 7.00E-03 | 1.06E-05 | 1.10E-03 | 6.36E-09 | - | |
| Zinc | 4.58E+01 | 1.28E-02 | 6.00E-04 | 3.51E-04 | 3.00E-01 | 1.17E-03 | 1.10E-03 | 3.01E-05 | - | |
| | | | | | Hazard Index = | 7.21E-02 | | | Cancer Risk = | 1.58E-06 |

# APPENDIX C

**Table C-1**
**SWMU 4**
**DuPont East Chicago Facility**
**SURFACE SOIL INGESTION - CT**
**Current/Future Trespasser**

**HQ = Chemical Intake / RfD**
**CR = Chemical Intake x SF**

**Where:**
RfD = Reference Dose (mg/kg-day)
SF = Cancer Slope Factor ((mg/kg-day)$^{-1}$)
HQ = Hazard Quotient for noncancer effects
CR = Cancer risk

| Chemical of Concern | Soil Conc. (mg/kg) | Intake Factor (kg/kg-day) | Chemical Intake (mg/kg-day) | RfD (mg/kg-day) | HQ | Intake Factor (kg/kg-day) | Chemical Intake (mg/kg-day) | SF (mg/kg-day)$^{-1}$ | Cancer Risk |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 8.50E-01 | 7.61E-09 | 6.47E-09 | 5.00E-04 | 1.29E-05 | 1.09E-09 | 9.24E-10 | 3.40E-01 | 3.14E-10 |
| Antimony | 2.97E+02 | 7.61E-09 | 2.26E-06 | 4.00E-04 | 5.65E-03 | 1.09E-09 | 3.23E-07 | - | |
| Arsenic | 1.43E+04 | 7.61E-09 | 1.08E-04 | 3.00E-04 | 3.61E-01 | 1.09E-09 | 1.55E-05 | 1.50E+00 | 2.32E-05 |
| Barium | 5.58E+03 | 7.61E-09 | 4.24E-05 | 7.00E-02 | 6.06E-04 | 1.09E-09 | 6.06E-06 | - | |
| Iron | 1.27E+05 | 7.61E-09 | 9.67E-04 | 3.00E-01 | 3.22E-03 | 1.09E-09 | 1.38E-04 | - | |
| Zinc | 3.78E+04 | 7.61E-09 | 2.88E-04 | 3.00E-01 | 9.60E-04 | 1.09E-09 | 4.11E-05 | - | |
| | | | | Hazard Index = | 3.72E-01 | | | Cancer Risk = | 2.32E-05 |

HIs by Target Organ
0.0 Systemic
0.0 Circulatory
0.4 Dermal/Ocular
0.0 Respiratory

**Table C-2**
**SWMU 4**
**DuPont East Chicago Facility**
**SURFACE SOIL DERMAL CONTACT - CT**
**Current/Future Trespasser**

**Chemical Intake = Conc. x Intake Factor x AB**
**HQ = Chemical Intake / RfD**
**CR = Chemical Intake x SF**

**Where:**
AB = Absorption factor (unitless)
RfD = Reference Dose (mg/kg-day)
SF = Cancer Slope Factor ((mg/kg-day)$^{-1}$)
HQ = Hazard Quotient for noncancer effects
CR = Cancer risk

| Chemical of Concern | Soil Conc. (mg/kg) | Intake Factor (kg/kg-day) | AB | Chemical Intake (mg/kg-day) | RfD (mg/kg-day) | HQ | Intake Factor (kg/kg-day) | AB | Chemical Intake (mg/kg-day) | SFD (mg/kg-day)$^{-1}$ | Cancer Risk |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 8.50E-01 | 4.26E-08 | 0.030 | 1.09E-09 | 5.00E-04 | 2.17E-06 | 6.09E-09 | 0.030 | 1.55E-10 | 3.40E-01 | 5.28E-11 |
| Antimony | 2.97E+02 | 4.26E-08 | 0.010 | 1.27E-07 | 4.00E-04 | 3.16E-04 | 6.09E-09 | 0.010 | 1.81E-08 | - | |
| Arsenic | 1.43E+04 | 4.26E-08 | 0.030 | 1.82E-05 | 3.00E-04 | 6.07E-02 | 6.09E-09 | 0.030 | 2.60E-06 | 1.50E+00 | 3.90E-06 |
| Barium | 5.58E+03 | 4.26E-08 | 0.010 | 2.38E-06 | 7.00E-02 | 3.39E-05 | 6.09E-09 | 0.010 | 3.39E-07 | - | |
| Iron | 1.27E+05 | 4.26E-08 | 0.010 | 5.41E-05 | 3.00E-01 | 1.80E-04 | 6.09E-09 | 0.010 | 7.73E-06 | - | |
| Zinc | 3.78E+04 | 4.26E-08 | 0.010 | 1.61E-05 | 3.00E-01 | 5.38E-05 | 6.09E-09 | 0.010 | 2.30E-06 | - | |
| | | | | | Hazard Index = | 6.13E-02 | | | | Cancer Risk = | 3.90E-06 |

HIs by Target Organ
0.0 Systemic
0.0 Circulatory
0.1 Dermal/Ocular
0.0 Respiratory

**Table C-3**
**SWMU 4**
**DuPont East Chicago Facility**
**INHALATION OF AIR PARTICULATES - CT**
**Current/Future Trespasser**

**HQ = Chemical Intake / RfD**
**CR = Chemical Intake x SF**

**Where:**
PEF = Particulate emission factor ($m^3$/kg)
VF = Volatilization factor ($m^3$/kg), chemical specific
RfD = Reference Dose (mg/kg-day)
SF = Cancer Slope Factor ((mg/kg-day)$^{-1}$)
HQ = Hazard Quotient for noncancer effects
CR = Cancer risk

| Chemical of Concern | Soil Conc. (mg/kg) | Intake Factor ($m^3$/kg-day) | PEF or VF ($m^3$/kg) | Chemical Intake (mg/kg-day) | RfDi (mg/kg-day) | HQ | Intake Factor ($m^3$/kg-day) | Chemical Intake (mg/kg-day) | SFi (mg/kg-day)$^{-1}$ | Cancer Risk |
|---|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDT | 8.50E-01 | 2.85E-04 | 1.32E+09 | 1.84E-13 | 5.00E-04 | 3.68E-10 | 4.08E-05 | 2.63E-14 | 3.40E-01 | 8.93E-15 |
| Antimony | 2.97E+02 | 2.85E-04 | 1.32E+09 | 6.42E-11 | - | | 4.08E-05 | 9.17E-12 | - | |
| Arsenic | 1.43E+04 | 2.85E-04 | 1.32E+09 | 3.08E-09 | - | | 4.08E-05 | 4.40E-10 | 1.50E+01 | 6.60E-09 |
| Barium | 5.58E+03 | 2.85E-04 | 1.32E+09 | 1.21E-09 | 1.40E-04 | 8.61E-06 | 4.08E-05 | 1.72E-10 | - | |
| Iron | 1.27E+05 | 2.85E-04 | 1.32E+09 | 2.75E-08 | - | | 4.08E-05 | 3.92E-09 | - | |
| Zinc | 3.78E+04 | 2.85E-04 | 1.32E+09 | 8.18E-09 | - | | 4.08E-05 | 1.17E-09 | - | |
| | | | | | Hazard Index = | 8.61E-06 | | | Cancer Risk = | 6.60E-09 |

Table C-4
Summary of Health Risks, SWMU 4
DuPont East Chicago Facility
East Chicago, Indiana

| Receptor/Pathway | | |
|---|---|---|
| | HI | CR |
| Current/Future Trespasser | | |
| Surface Soil Ingestion | 4.E-01 | 2.E-05 |
| Surface Soil Dermal Contact | 6.E-02 | 4.E-06 |
| Inhalation of Air Particulates - Surface Soil | 9.E-06 | 7.E-09 |
| **Total** | **4.E-01** | **3.E-05** |