DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

April 2003

RCRA Corrective Action **Rev. April 2007**

Environmental Indicator (EI) RCRIS code (CA725) **(revisions in bold type except for tables)**

Current Human Exposures Under Control

Facility Name:	Invensys Appliance Controls (formerly Robertshaw Controls)
Facility Address:	Westinghouse Drive, New Stanton, PA 15622
Facility EPA ID #:	PAD 004 316 832

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?

X 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 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 "Current Human Exposures Under Controls" 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 (CA725)

2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated"[1] 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)?

	Yes	No	?	Rationale/Key Contaminants
Groundwater	X			DCE, TCE, TCA
Air (indoors)[2]		**X**		**Mercury Building Demolished**
Surface Soil (e.g., <2 ft)	X			DCE, TCE, TCA, Mercury, **PCB**
Surface Water	X			DCE, TCE, **Mercury**
Sediment	X			DCE, TCE, TCA, Mercury
Subsurface Soil (e.g., >2 ft)	X			DCE, TCE, TCA
Air (outdoors)		X		

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

X 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):

See following pages for a full response to Question 2 (Rationale and Reference(s)).

[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 contaminants) does not present unacceptable risks.

Question #2 - Current Human Exposures Under Control (Rationale & Reference(s))

RESPONSE:

Groundwater

Groundwater samples were collected by the Invensys consultant from six bedrock, six deep bedrock, three offsite and six shallow monitoring wells from April 2001 through August 2002.

Several samples collected from the bedrock monitoring wells exceed the PADEP Statewide Health Standards (SHS) for 1,1-dichloroethane, cis-1,2-dichlorothene, 1,1-dichloroethene, 1,2-dichloroethene, 1,1,1-trichloroethane and trichloroethene.

Several samples from deep bedrock monitoring wells exceeded PADEP SHS for cis-1,2-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethene, 1,1,1-trichloroethane, and trichloroethene.

Several samples from the shallow monitoring wells exceeded PADEP's SHS for 1,1-dichloroethane, cis-1,2-dichloroethene, 1,1-dichloroethene, 1,1,1-trichloroethane, trichloroethene, and vinyl chloride.

Offsite monitoring wells contained no detections of analytical parameters.

Several of PADEP's groundwater samples contained exceedances of the Maximum Specific Concentrations (MSCs) for trichloroethylene, cis-1,2-dichloroethene, 1,1-dichloroethene, ethylidene dichloride, and bis (2-ethylhexyl) phthalate.

See the following tables, which summarize all analytical results.

Additionally, sampling conducted by DEP's contractor, Baker, in September 2005 confirmed the continued exceedances of 1,1-dichloroethane, trichloroethylene and 1,1,1-trichloroethane, among other parameters, in downgradient monitoring wells (levels exceed 25 Pa Code 250 non-residential used aquifer TDS <2500 standards)

Indoor and Outdoor Air

The facility operations ceased in 2000, hence most indoor and all outdoor exposure pathways would not exist. However, there remains a concern about the potential for mercury vapors remaining in the Mercury Building. DEP indoor air sampling (using a Jerome meter) in September 2000 indicated mercury concentrations up to 0.99 mg/m^3. While the sampling was not intended to be definitive, it indicated a potential concern with mercury vapor. Robertshaw conducted additional interior cleaning subsequent to the testing. However, there has been no subsequent air sampling to demonstrate that mercury levels meet a workplace standard (e.g. NIOSH/OSHA TWA for mercury vapor of $0.05mg/m^3$).

The concern about indoor air exposure at the mercury building has been mitigated by the demolition of the building in 2005-2006.

Surface and Subsurface Soils

The four most recent soil sampling events include the following:

- Site Characterization - April to December 2001-Surface and Subsurface.
- Mercury - Contaminated soil removal and confirmatory sampling-January 2002.
- Outfall 002 Drain Pipe Investigation-December 2000.
- PADEP Soil Sampling-September 2002.

The Site Characterization activities included the installation of 16 borings (collection of a total of 35 samples). Six samples exceeded the PADEP Soil to Groundwater (MSC) for one or more of the following parameters: 1,1-dichloroethene, trichloroethane, 1,1,1-trichloroethane, and trichloroethene. Table 1 summarizes all of the parameters detected. All of the samples were collected from the southern portion of the site in the vicinity of the former degreasing area, plating shop, and wastewater treatment plant.

Fifty soil samples (surface and subsurface) were collected from the vicinity of the Mercury Building prior to soil removal. Soil sample results can be found in Appendix D of the Final Decommissioning Interim Summary Report by IT Corporation dated January 2001. Two samples exceeded the SHS for direct contact of 240 mg/kg for mercury (note the SHS was subsequently increased to 840 mg/kg for mercury).

Approximately 30 tons of mercury-contaminated soil was removed from the vicinity of the Mercury Building prior to covering
the area with concrete. Six soil samples collected from the excavation (January 2002) contained concentrations of mercury, which ranged from 1.6 to 1,470 mg/kg. One sample (1,470 mg/kg) exceeded the PADEP direct contact standard. Four confirmation samples were collected as well; the concentration of mercury ranged from 0.26 to 31.3 mg/kg; however, mercury was also detected in the method blank.

Outfall 002 was investigated as mercury-bearing wastewater was discharged through it to an unnamed tributary for an undetermined number of years (prior to the use of carbon filters to remove the mercury). The drainpipe was removed and four soil samples were collected to determine if soil below the pipe had been impacted.

1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, trichloroethene, and mercury were detected, but below standards. For three of the samples, mercury was also detected in the field blank.

Soil samples were also collected by PADEP in September 2000 from the vicinity of the Mercury Building and Outfall 002 drain pipe. Mercury concentrations ranged from 39.87 to 9,434.2 mg/kg.

Soil /sediment in the former Mercury Building catch basins and drainage swale sampled by DEP contractor, Baker, in September 2005 exhibited elevated levels of mercury (greater than 25 PA Code 250 soil-to-groundwater standards). Absorbent material/soil under the T-4 transformer area had PCB (Arochlor 1254) above 25 PA Code 250 soil-to groundwater and direct contact standards.

Surface Water

An unnamed tributary (to which former NPDES outfalls discharged) flows one mile south to the Sewickley Creek. The Sewickley Creek then flows to the Youghiogheny River approximately 10 miles from the site.

PADEP and Robertshaw sampled surface water (October and December 2000). Several samples exceeded the most stringent standards (see Table 8). **Additional sampling by DEP between 2003 and 2006 and Baker in 2005 found elevated levels of mercury in surface water. Baker also detected some VOCs in surface water.**

Results prior to 2003- 2006 sampling are summarized in the following tables.

TABLE 1
SITE CHARACTERIZATION
Soil Sample Results (Detections Only)

Location	PADEP	PADEP	PADEP	SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-5	SB-5	SB-5
Depth	MSC	MSC	Soil to GW	0-1	5-6	0-1	3-.3.3	0-1	5-6	6-6.5	0-1	5.5-6.5	8.5-9.5
Sample Date	NR-Surface	NR-Subsurface	100X MSC	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Chloroform	72	82	10										
1,1-Dichloroethane	1000	1200	11							0.0015 J			
cis-1,2-Dichloroethene	1900	2100	7		0.002 J	0.0061					0.0024 J		
trans-1,2-Dichloroethene	3700	4300	10										
1,1-Dichloroethene	33	38	0.7							0.0034			**0.7**
1,2-Dichloroethene	--	--	--		0.002 J	0.0063					0.0024 J		
Methylene Chloride	3500	4000	0.5										
Tetrachloroethene	1500	3300	0.5										
1,1,1-Trichloroethane	10000	10000	20					0.0012		0.08	0.0081		2.2
Trichloroethene	970	1100	0.5	0.0012 J	0.0069	0.016	0.06	0.0014	0.02	0.140 J	0.13	**1.4**	**3.9**

Location	PADEP	PADEP	PADEP	SB-6	SB-6	SB-7	SB-7	SB-7	SB-8	SB-8	SB-10	SB-10
Depth	MSC	MSC	Soil to GW	0-1	9.5-10	0-1	4-6	8-9	8-9	8-9(dup)	0-1	8-9
Sample Date	NR-Surface	NR-Subsurface	100X MSC	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/16/01	4/17/01	4/17/01
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Chloroform	72	82	10				0.017					
1,1-Dichloroethane	1000	1200	11	0.0026 J	0.098 J		0.400 E	0.780 J				0.028
cis-1,2-Dichloroethene	1900	2100	7	0.026	0.058 J		0.028		0.64	0.72		0.19
trans-1,2-Dichloroethene	3700	4300	10				0.0059					0.0012 J
1,1-Dichloroethene	33	38	0.7		**1.7**			**5.1**				0.0026 J
1,2-Dichloroethene	--	--	--	0.027			0.034		0.74	0.82		0.2
Methylene Chloride	3500	4000	0.5				0.0048					
Tetrachloroethene	1500	3300	0.5				0.21					
1,1,1-Trichloroethane	10000	10000	20	0.22	5.3	0.0074	**1,500**	**3.9**			0.0033 J	0.0038 J
Trichloroethene	970	1100	0.5	0.21	**14**	0.064	**4000**	**81**	**6.3**	**9.7**	0.001 B	0.68 B

Location	PADEP	PADEP	PADEP	SB-11	SB-11	SB-12	SB-12	SB-13	SB-14	SB-15
Depth	MSC	MSC	Soil to GW	0-1	8-9	0-1	6.5-7	1-2	1-2	1-2
Sample Date	NR-Surface	NR-Subsurface	100X MSC	4/17/01	4/17/01	4/17/01	4/17/01	12/12/01	12/12/01	12/12/01
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Chloroform	72	82	10							
1,1-Dichloroethane	1000	1200	11				0.0027 J			
cis-1,2-Dichloroethene	1900	2100	7	0.0029 J			0.006	0.02	0.180 J	
trans-1,2-Dichloroethene	3700	4300	10					0.0058		
1,1-Dichloroethene	33	38	0.7				0.0024 J	0.0022 J		
1,2-Dichloroethene	--	--	--	0.003 J			0.0061	0.0258		
Methylene Chloride	3500	4000	0.5							
Tetrachloroethene	1500	3300	0.5							
1,1,1-Trichloroethane	10000	10000	20				0.0016			0.0026 J
Trichloroethene	970	1100	0.5	0.0067 B	0.011	0.0043 J	0.14	1.5/36	**7.7**	

NOTES:
J = Estimated
E = Concentration exceeds calibration range
Bold = Exceeds PADEP soil to groundwater MSC
Shaded = Non-Detect
B = Analyte also found in blank

Table 2
Groundwater Monitoring Wells - Shallow
Site Characterization
Invensys Appliance Controls
New Stanton, Pennsylvania

Sample Date / Units	TW-1 24-Apr-01 mg/l	TW-2 24-Apr-01 mg/l	TW-2 (Duplicate) 24-Apr-01 mg/l	TW-3 24-Apr-01 mg/l	TW-4 24-Apr-01 mg/l	TW-6 15-Jan-02 mg/l	TW-7 15-Jan-02 mg/l	PADEP MSC U/R mg/l	PADEP MSC U/NR mg/l
Carbon Tetrachloride	<0.005	<1	<1	<0.05	<0.05	<0.005	<0.05	0.005	0.005
Chlorobenzene	<0.005	<1	<1	<0.05	<0.05	<0.005	<0.05	0.055	0.12
Chloroethane	<0.01	<2	<2	<0.1	<0.1	<0.01	<0.1	28	58
Chloroform	<0.005	<1	<1	<0.05	<0.05	<0.005	<0.05	0.1	0.1
Chloromethane	<10	<2	<2	<0.1	<0.1	<0.01	<0.1	0.003	0.003
1,1-Dichloroethane	**0.19**	**4.9**	**4.9**	**0.2**	**0.22**	0.016	**0.19**	0.027	0.11
1,2-Dichloroethane	**0.0023 J**	<1	<1	<0.05	<0.05	<0.005	<0.05	0.005	0.005
cis-1,2-Dichloroethene	**0.29**	**19**	**20**	**1.3**	**1.4**	0.033	**1.3**	0.07	0.07
trans-1,2-Dichloroethene	**0.0072**	<1	<1	<0.05	<0.05	<0.005	<0.05	0.1	0.1
1,1-Dichloroethene	**0.065**	**0.89 J**	**0.97 J**	**0.079**	**0.091**	<0.005	<0.05	0.007	0.007
Methylene Chloride	<0.005	<1	<1	<0.05	<0.05	<0.005	<0.05	0.005	0.005
1,1,2,2-Tetrachloroethane	<0.005	<1	<1	<0.05	<0.05	<0.005	<0.05	0.00074	3200
Tetrachloroethene	<0.005	<1	<1	<0.05	<0.05	<0.005	<0.05	0.005	0.005
1,1,1-Trichloroethane	0.0023 J	**3.3**	**3.6**	**0.54**	**0.69**	**0.0027 J**	**0.3**	0.2	0.2
Trichloroethene	**0.31**	**5.7**	**6.2**	**0.89**	**1.1**	**0.011**	**0.52**	0.005	0.005
Vinyl Chloride	**0.026**	**0.52 J**	**0.47 J**	**0.022 J**	**0.021 J**	**0.0096 J**	<0.1	0.002	0.002

J = Estimated Value, below detection limit
U/NR = Used Aquifer, Non-Residential Use
U/R=Used Aquifer, Residential Use
MSC = Statewide Health Based Medium Specific Concentration
Bolded sample results exceed the applicable PADEP Statewide Health Standard

Table 3
Groundwater Monitoring Wells - Deep Bedrock Well
Site Characterization
Invensys Appliance Controls
New Stanton, PA

Sample Date / Units	MW02-06D 30-May-02 mg/l	MW02-06D (Duplicate) 30-May-02 mg/l	MW02-06D 16-Aug-02 mg/l	MW02-06D (Low Dilution) 16-Aug-02 mg/l	MW02-06D (Duplicate) 16-Aug-02 mg/l	PADEP MSC U/R mg/l	PADEP MSC U/NR mg/l
cis-1,2-Dichloroethene			**4.8**	**6.00**	**4.5**	0.07	0.07
trans-1,2-Dichloroethene			<1.000	<0.150	<1.000	0.1	0.1
Acetone	<2.000	<2.000	1.000 J	0.77	<4.000	3.7	10
Benzene	<0.200	<0.200	<1.000	<0.150	<1.000	0.005	0.005
Bromodichloromethane	<0.200	<0.200	<1.000	<0.150	<1.000	0.1	0.1
Bromoform (Tribromomethane)	<0.200	<0.200	<1.000	<0.150	<1.000	0.1	0.1
Bromomethane	<0.400	<0.400	<2.000	<0.300	<2.000	0.01	0.01
2-Butanone (Methyl Ethyl Ketone)	<1.000	<1.000	<4.000	0.084 J	<4.000	2.8	5.8
Carbon disulfide	<0.200	<0.200	<1.000	<0.150	<1.000	1.9	4.1
Carbon Tetrachloride	<0.200	<0.200	<1.000	<0.150	<1.000	0.005	0.005
Chlorobenzene	<0.200	<0.200	<1.000	<0.150	<1.000	0.055	0.12
Dibromochloromethane	<0.200	<0.200	<1.000	<0.150	<1.000		
Chloroethane	<0.400	<0.400	<2.000	0.15 J	<2.000	28	58
Chloroform	<0.200	<0.200	<1.000	<0.150	<1.000	0.1	0.1
Chloromethane	<0.400	<0.400	<2.000	<0.300	<2.000	0.003	0.003
1,1-Dichloroethane	**0.59**	**0.67**	**6.5**	**6.9 E**	**6**	0.027	0.11
1,2-Dichloroethane	<0.200	<0.200	<1.000	<0.150	<1.000	0.005	0.005
1,1-Dichloroethene	<0.200	<0.200	<1.000	**0.110 J**	<1.000	0.007	0.007
1,2-Dichloroethene (total)	**0.84**	**0.91**					
1,2-Dichloropropane	<0.200	<0.200	<1.000	<0.150	<1.000	0.005	0.005
cis-1,3-Dichloropropene	<0.200	<0.200	<1.000	<0.150	<1.000		
trans-1,3-Dichloropropene	<0.200	<0.200	<1.000	<0.150	<1.000		
Ethylbenzene	<0.200	<0.200	<1.000	<0.150	<1.000	0.7	0.7
2-Hexanone	<1.000	<1.000	<4.000	<0.600	<4.000		
Methylene Chloride	<0.400	<0.400	<1.000	<0.150	<1.000	0.005	0.005
4-Methyl-2-pentanone	<1.000	<1.000	<4.000	<0.600	<4.000		
Styrene	<0.200	<0.200	<1.000	<0.150	<1.000	0.1	0.1
1,1,2,2-Tetrachloroethane	<0.200	<0.200	<1.000	<0.150	<1.000	0.0003	0.0003
Tetrachloroethene	<0.200	<0.200	<1.000	<0.150	<1.000	0.005	0.005
Toluene	<0.200	<0.200	<1.000	<0.150	<1.000	1	1
1,1,1-Trichloroethane	**0.86**	**1.0**	**5.6**	**6.1 E**	**5.2**	0.2	0.2
1,1,2-Trichloroethane	<0.200	<0.200	<1.000	<0.150	<1.000	0.005	0.005
Trichloroethene	**4.5**	**5.1**	**33**	**35**	**31**	0.005	0.005
Vinyl Chloride	<0.400	<0.400	<2.000	<0.300	<2.000	0.002	0.002
Xylenes (total)	<0.600	<0.600	<3.000	<0.450	<3.000	10	10

U/NR = Used Aquifer, Non-Residential Use
U/R=Used Aquifer, Residential Use
MSC = Statewide Health Based Medium Specific Concentration
Bolded sample results exceed the applicable PADEP Statewide Health Standard
Due to the concentration of target compounds detected, samples were analyzed at a dilution factor of 200 unless indicated as a low dilution (dilution factor = 30).
J = Estimated Value, Below Limit of Quantification
E = Estimated Value, Concentration exceeds the calibration range.

Table 4
Groundwater Monitoring Wells - Bedrock
Site Characterization
Invensys Appliance Controls
New Stanton, PA

Sample Date / Units	MW01-1 23-Jul-01 mg/l	MW01-2 23-Jul-01 mg/l	MW01-2 (Duplicate) 23-Jul-01 mg/l	MW01-2 18-Feb-02 mg/l	MW01-3 23-Jul-01 mg/l	MW01-4 15-Jan-02 mg/l	MW01-4 (Duplicate) 15-Jan-02 mg/l	MW01-5 15-Jan-02 mg/l	MW01-5 (resample) 31-Jan-02 mg/l	PADEP MSC U/R mg/l	PADEP MSC U/NR mg/l
Carbon Tetrachloride	<0.005	<5	<7.5	<0.75	<0.005	<0.012	<0.012	<0.005	<0.005	0.005	0.005
Chlorobenzene	<0.005	<5	<7.5	<0.75	<0.005	<0.012	<0.012	<0.005	<0.005	0.055	0.12
Chloroethane	<0.01	<10	<15	<1.5	<0.01	<0.012	<0.012	<0.01	<0.01	28	58
Chloroform	<0.005	<5	<7.5	<0.75	<0.005	<0.012	<0.012	<0.005	<0.005	0.1	0.1
Chloromethane	<0.01	<10	<15	<1.5	<0.1	<0.025	<0.025	<0.1	<0.1	0.003	0.003
1,1-Dichloroethane	<0.005	**2.3 J**	**2.7 J**	**1.4**	<0.005	**0.14**	**0.15**	0.0036 J	0.0032 J	0.027	0.11
1,2-Dichloroethane	<0.005	<5	<7.5	<0.75	<0.005	<0.012	<0.012	<0.005	<0.005	0.005	0.005
cis-1,2-Dichloroethene	<0.005	--	--	--	--	**0.35**	**0.39**	0.0096	0.0091	0.07	0.07
trans-1,2-Dichloroethene	<0.005	--	--	--	--	<0.012	<0.012	<0.005	<0.005	0.1	0.1
1,1-Dichloroethene	<0.005	**2.4 J**	**2.7 J**	**0.7 J**	<0.005	**0.0075 J**	**0.0076 J**	<0.005	<0.005	0.007	0.007
1,2-Dichloroethene (total)	<0.005	**10**	**12**	**11**	0.0073	--	--	--	0.0097	--	--
Methylene Chloride	<0.005	<5	<7.5	<1.5	<0.005	<0.012	<0.012	<0.005	<0.005	0.005	0.005
1,1,2,2-Tetrachloroethane	<0.005	<5	<7.5	<0.75	<0.005	<0.012	<0.012	<0.005	<0.005	0.00074	3200
Tetrachloroethene	<0.005	<5	<7.5	<5	<0.005	<0.012	<0.012	<0.005	<0.005	0.005	0.005
1,1,1-Trichloroethane	<0.005	**210**	**230**	**24**	.002 J	<0.012	<0.012	<0.005	<0.005	0.2	0.2
Trichloroethene	0.0015 J	**170**	**190**	**24**	0.0041 J	**0.035**	**0.038**	**0.0062**	**0.0059**	0.005	0.005
Vinyl Chloride	<0.01	<10	<15	<1.5	<0.01	<0.012	<0.012	<0.01	<0.01	0.002	0.002

U/NR = Used Aquifer, Non-Residential Use
U/R=Used Aquifer, Residential Use
MSC = Statewide Health Based Medium Specific Concentration
Bolded sample results exceed the applicable PADEP Statewide Health Standard
J = Estimated Value, Below Limit of Quantification

Table 5
Groundwater Monitoring Wells - Off Site Wells
Site Characterization
Invensys Appliance Controls
New Stanton, PA

Sample Date Units	MW-11 13-Mar-02 mg/l	MW-15 13-Mar-02 mg/l	MW-17 (Duplicate) 13-Mar-02 mg/l	MW-17 13-Mar-02 mg/l	PADEP MSC U/R mg/l	PADEP MSC U/NR mg/l
Acetone	<0.01	<0.01	<0.01	<0.01	3.7	10
Benzene	<0.001	<0.001	<0.001	<0.001	0.005	0.005
Bromodichloromethane	<0.001	<0.001	<0.001	<0.001	0.1	0.1
Bromoform (Tribromomethane)	<0.001	<0.001	<0.001	<0.001	0.1	0.1
Bromomethane	<0.002	<0.002	<0.002	<0.002	0.01	0.01
2-Butanone (Methyl Ethyl Ketone)	<0.005	<0.005	<0.005	<0.005	2.8	5.8
Carbon disulfide	<0.001	0.0019	<0.001	<0.001	1.9	4.1
Carbon Tetrachloride	<0.001	<0.001	<0.001	<0.001	0.005	0.005
Chlorobenzene	<0.001	<0.001	<0.001	<0.001	0.055	0.12
Dibromochloromethane	<0.001	<0.001	<0.001	<0.001		
Chloroethane	<0.002	<0.002	<0.002	<0.002	28	58
Chloroform	<0.001	<0.001	<0.001	<0.001	0.1	0.1
Chloromethane	<0.002	<0.002	<0.002	<0.002	0.003	0.003
1,1-Dichloroethane	<0.001	<0.001	<0.001	<0.001	0.027	0.11
1,2-Dichloroethane	<0.001	<0.001	<0.001	<0.001	0.005	0.005
1,1-Dichloroethene	<0.001	<0.001	<0.001	<0.001	0.007	0.007
1,2-Dichloroethene (total)	<0.001	<0.001	<0.001	<0.001		
1,2-Dichloropropane	<0.001	<0.001	<0.001	<0.001	0.005	0.005
cis-1,3-Dichloropropene	<0.001	<0.001	<0.001	<0.001		
trans-1,3-Dichloropropene	<0.001	<0.001	<0.001	<0.001		
Ethylbenzene	<0.001	<0.001	<0.001	<0.001	0.7	0.7
2-Hexanone	<0.005	<0.005	<0.005	<0.005		
Methylene Chloride	<0.002	<0.002	<0.002	<0.002	0.005	0.005
4-Methyl-2-pentanone	<0.005	<0.005	<0.005	<0.005		
Styrene	<0.001	<0.001	<0.001	<0.001	0.1	0.1
1,1,2,2-Tetrachloroethane	<0.001	<0.001	<0.001	<0.001	0.0003	0.0003
Tetrachloroethene	<0.001	<0.001	<0.001	<0.001	0.005	0.005
Toluene	<0.001	<0.001	<0.001	<0.001	1	1
1,1,1-Trichloroethane	<0.001	<0.001	<0.001	<0.001	0.2	0.2
1,1,2-Trichloroethane	<0.001	<0.001	<0.001	<0.001	0.005	0.005
Trichloroethene	<0.001	<0.001	<0.001	<0.001	0.005	0.005
Vinyl Chloride	<0.002	<0.002	<0.002	<0.002	0.002	0.002
Xylenes (total)	<0.003	<0.003	<0.003	<0.003	10	10

U/NR = Used Aquifer, Non-Residential Use
U/R=Used Aquifer, Residential Use
MSC = Statewide Health Based Medium Specific Concentration
Bolded sample results exceed the applicable PADEP Statewide Health Standard
J = Estimated Value, Below Limit of Quantification

Table 6
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOIL SAMPLE RESULTS
(Detections Only)

Compound	**2563001**	**2563002**	**2563162**	**2563163**	**2563164**	**2563197**	**2563189**	**2563160**	**PADEP MSCs**
Sample Date	**3/21/02 (mg/kg)**	**3/21/02 (mg/kg)**	**9/28/00 (mg/kg)**	**9/28/00 (mg/kg)**	**9/28/00 (mg/kg)**	**10/10/00 (mg/kg)**	**10/10/00 (mg/kg)**	**9/12/00 (mg/kg)**	**No Direct Contact (Non-Residential) (mg/kg)**
METALS									
Lead	64	32.5	NA	NA	NA	41.7	36	61.2	450
Chromium *	43	69.1	NA	NA	NA	53.7	77.1	16.9	190
Cadmium	1.4	1.9	NA	NA	NA	1.2	1.6	2,9	38
Barium	127	284	NA	NA	NA	257	223	96.5	8,200
Silver	<0.7	<1.4	NA	NA	NA	<0.9	<0.7	3.0	84
Arsenic	7.9	20.3	NA	NA	NA	21.3	11.9	12.4	53
Selenium	<4.6	<9.5	NA	NA	NA	<6.2	<5.2	<6.1	26
Mercury	**18.05**	0.640	**1,053.43**	**1,063.38**	**1,072.67**	2.3	4.57	**12.19**	10
Nickel	NA	NA	NA	NA	NA	90.3	NA	249	650
Tin	NA	NA	NA	NA	NA	<35.4	NA	<35.1	680
Zinc	NA	NA	NA	NA	NA	205	NA	NA	12,000

Notes:

NA = Not Analyzed
ND = Non-Detect
BOLD = Indicates Exceedances
* = Unknown if Chromium III or IV; the more stringent standard was used.

Table 7
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
GROUNDWATER SAMPLE RESULTS
(Detections Only)

Compound	2563200	2563201	2563202	2563203	PADEP MSCs Used Aquifer Non-Residential (ug/L)
Sample Date	12/19/00	12/19/00	12/19/00	12/19/00	
	ug/L	ug/L	ug/L	ug/L	
VOCs/SVOCs					
Methyl Chloroform	65.5	17.5	ND	ND	900
Naphthalene	0.991 J	0.0364 J	ND	ND	100
Tetrachloroethylene	0.0629 J	0.205 J	ND	ND	5
Toluene	0.222 J	ND	ND	ND	1,000
Trichloroethylene	**196**	**22.2**	ND	ND	5
1,1,2-trichloroethane	0.0402 J	0.171 J	ND	ND	5
Chloroethene	37.4	6.82	ND	ND	900
n-propyl benzene	0.0797 J	ND	ND	ND	4,100
sec-butyl benzene	0.0505 J	ND	ND	ND	4,100
cis-1,2-dichloroethene	**418**	15	ND	ND	70
trans-1,2-dichloroethene	57.4	2.18	ND	ND	100
2-hexanone	0.615 J	ND	ND	ND	5,800
1,1-dichloroethene	**164**	**29.1**	ND	ND	7
Ethyl benzene	0.0448 J	ND	ND	ND	700
Ethylidene dichloride	**112**	4.72	ND	ND	110
Bis (2-ethylhexyl)phthalate	NA	ND	**20.09 B**	ND	6
Diphenylamine	NA	27.8	27.8	ND	200
Methylene chloride	ND	0.189 J	ND	ND	5
Benzene	ND	0.0456 J	ND	ND	5
Acetone	ND	3.76	ND	ND	10,000
Ethyl chloride	ND	0.551	ND	ND	900
2,6-dinitrotoluene	ND	ND	ND	13.46	100

NOTES:

ND = Non-Detect
J = Estimated
B = Also found in blank
Bold = Indicates exceedance

Table 8
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SURFACE WATER SAMPLE RESULTS
(Detections Only)

Compound	2563184	2563167	2563170	2563171	2563174	2563175	2563185 *	USEPA ** Water Quality Criteria (fresh Water)
Sample Date	10/10/00	10/10/00	10/10/00	10/10/00	10/10/00	10/10/00	10/10/00	
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
METALS								
Barium	61	NA	44	NA	65	NA	NA	NA
Zinc	ND	NA	80	NA	108	NA	NA	120
Lead	ND	NA	ND	NA	**21**	NA	NA	65
VOCs/SVOCs								
Methyl Chloroform	NA	1.88	NA	ND	NA	0.841	NA	NA
Trichloroethylene	NA	0.664	NA	**3.04**	NA	2.06	NA	2.7 HH
Chloroethene	NA	0.0579 J	NA	0.323	NA	0.0615 J	NA	NA
Dibromochloromethane	NA	0.237	NA	0.335	NA	ND	NA	NA
1,3-dichlorobenzene	NA	0.0803 J	NA	ND	NA	ND	NA	NA
Bromodichloromethane	NA	2.63	NA	3.84	NA	ND	NA	NA
1,1-dichloroethane	NA	0.200 J	NA	1.20	NA	ND	NA	NA
Chlorobenzene	NA	0.244	NA	0.118 J	NA	0.112 J	NA	NA
Ethylidene Dichloride	NA	0.619	NA	2.96	NA	1.33	NA	NA
Methyl Chloride Chloromethene	NA	ND	NA	11.2	NA	ND	NA	NA
cis, 1-2-dichloroethene	NA	ND	NA	**15.1**	NA	**2.65**	NA	0.38
trans, 1-2-dichloroethene	NA	ND	NA	0.0826 J	NA	0.0452 J	NA	HH
Acetone	NA	ND	NA	2.88 J	NA	2.76 J	NA	NA
Chloroform	NA	ND	NA	**18.5**	NA	ND	NA	5.7 HH
Ethylchloride	NA	ND	NA	0.101 J	NA	ND	NA	NA
1,2-dichlorobenzene	NA	ND	NA	ND	NA	0.0459 J	NA	NA
1,1-dichloroethene	NA	ND	NA	ND	NA	**0.123 J**	NA	0.057 HH

NOTES:
* = Sample 2563185 - UV analysis indicates the presence of a trace level of weathered petroleum product. The amount was too small to identify.
** For certain cases where USEPA surface water criteria were not available, criteria from 25 PA Code, Chapter 16, Table 1 were substituted.
NA = Not Applicable
ND = Non-Detect
HH = Human Health Criteria
J = Estimated
Bold = Indicates an exceedance

Table 9
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SEDIMENT SAMPLE RESULTS
(Detections Only)

Compound	2563181	2563190	2563194	2563198	2563188	2563186	2563180	2563193	2563165	2563161
Sample Date	**10/10/00**	**10/10/00**	**10/10/00`**	**10/10/00**	**10/10/00**	**10/10/00`**	**10/10/00**	**10/10/00**	**09/28/00`**	**09/12/00**
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
METALS										
Lead	NA	NA	NA	NA	NA	NA	NA	68.6	ND	41.2
Chromium	NA	NA	NA	NA	NA	NA	NA	74.4		51.5
Cadmium	NA	NA	NA	NA	NA	NA	NA	3.0	ND	1.8
Barium	NA	NA	NA	NA	NA	NA	NA	219	ND	128
Silver	NA	NA	NA	NA	NA	NA	NA	<0.7	ND	<0.8
Arsenic	NA	NA	NA	NA	NA	NA	NA	20	ND	10
Selenium	NA	NA	NA	NA	NA	NA	NA	<5.2	ND	<5.3
Mercury	NA	NA	NA	NA	NA	NA	NA	1.01	2.03	4.22
Nickel	NA	NA	NA	NA	NA	NA	NA	125	ND	59.2
Tin	NA	NA	NA	NA	NA	NA	NA	<29.8	ND	<30.2
Zinc	NA	NA	NA	NA	NA	NA		1,741	ND	NA
SVOCs/VOCs										
Methylene Chloride	ND	ND	ND	NA	2.13 J	354	2.82 J	NA	NA	N
Acetone	ND	ND	ND	NA	616 JB	721 JB	1,220 JB	NA	NA	NA
Benz(a)anthracene	2.50	21.7	ND	NA	ND	ND	ND	NA	NA	NA
Benzo(b)fluoranthene	2.71	16.3	0.827 J	NA	ND	ND	ND	NA	NA	NA
Benzo(k)fluoranthene	2.97	16.7	0.715 J	NA	ND	ND	ND	NA	NA	NA
Benzo(g,h,I)perylene	1.53 J	9.77 J	0.475 J	NA	ND	ND	ND	NA	NA	NA
Benzo(a)pyrene	2.48	17.7 J	0.537 J	NA	ND	ND	ND	NA	NA	NA
Chrysene	3.01	23	ND	NA	ND	ND	ND	NA	NA	NA
Dibenzo(a,h)anthracene	1.16	9.24 J	0.757 J	NA	ND	ND	ND	NA	NA	NA
Fluoranthene	5.97	57.1	1.08	NA	ND	ND	ND	NA	NA	NA
Indeno(1,2,3-cd)pyrene	2.61	17.5	0.889 J	NA	ND	ND	ND	NA	NA	NA
Phenanthrene	4.06	47	ND	NA	ND	ND	ND	NA	NA	NA
Pyrene	5.45	50.4	0.868	NA	ND	ND	ND	NA	NA	NA
Acenaphthene	ND	3.69 J	ND	NA	ND	ND	ND	NA	NA	NA
Anthracene	ND	9.50 J	ND	NA	ND	ND	ND	NA	NA	NA
Fluorene	ND	4.52 J	ND	NA	ND	ND	ND	NA	NA	NA
Methyl chloroform	ND	ND	ND	NA	ND	893	ND	NA	NA	NA
Trichloroethylene	ND	ND	ND	NA	ND	1,370	ND	NA	NA	NA
cis, 1-2-dichloroethene	ND	ND	ND	NA	ND	3,450	ND	NA	NA	NA
Trichlorofluoromethene	ND	ND	ND	ND	ND	78.2 JB	ND	NA	NA	NA
1,1-dichloroethene	ND	ND	ND	ND	ND	147 J	ND	NA	NA	NA
Ethylenedichloride	ND	ND	ND	ND	ND	351	ND	NA	NA	NA
PCBs/PESTICIDES										
Arochlor 1248	NA	NA	NA	2.0 J	NA	NA	NA	NA	NA	NA

NOTES:

NA = Not analyzed
ND = Non-detect
J = Estimated
B = Compound also found in blank

Table 10
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Sample Locations and Descriptions
(samples for which there were detections only)

Sample ID. No.	Sample Date	Sample Location	Sample Description
GROUNDWATER SAMPLES			
2563200	12/19/00	Collected from shallow groundwater entering the trench created from the removal of the pipe, which conveyed Outfall 002 to the unnamed tributary to Sewickley Creek.	Groundwater
2563200	12/19/00	Collected from shallow groundwater entering the trench created from the removal of the pipe, which conveyed Outfall 002 to the unnamed tributary to Sewickley Creek.	Groundwater
2563201	12/19/00	Collected from shallow groundwater entering the trench created from the removal of the pipe, which conveyed Outfall 002 to the unnamed tributary to Sewickley Creek.	Groundwater
2563203	12/19/00	Collected from shallow groundwater entering the trench created from the removal of the pipe, which conveyed Outfall 002 to the unnamed tributary to Sewickley Creek.	Groundwater
SEDIMENT SAMPLES			
2563001	3/31/02	North Trench Drain	Sediment
2563002	3/31/02	South Side Ditch	Sediment
2563162	9/28/00	Composite of material accumulated in stormwater catch basin on the northwest corner of Mercury Building at base of hillside	Sediment
2563163	9/28/00	Composite of material accumulated in stormwater catch basin on the north end of Mercury Building	Sediment
2563164	9/28/00	Composite sample collected from stormwater catch basin located approximately 30 feet north of sample 2563 163.	Sediment
2563165	9/28/00	Discrete sample collected in ditch north of Mercury Building looking toward the location of the former reflection pond (upper end of the cattails in the lower end of the ditch)	Sediment
2563180	10/10/00	Collected downstream of Siebe/Robertshaw Outfall 002 in the unnamed tributary to Sewickley Creek.	Sediment
2563181	10/10/00	Collected downstream of Siebe/Robertshaw Outfall 002 in the unnamed tributary to Sewickley Creek.	Sediment
2563183	10/10/00	Collected in the unnamed tributary to Sewickley Creek upstream of Siebe/Robertshaw Outfall 002. IR analysis indicated the presence of an organic compound, which could not be identified.	Sediment
2563186	10/10/00	Collected at the soil water interface in unnamed tributary to	Sediment

Table 10
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Sample Locations and Descriptions
(samples for which there were detections only)

Sample ID. No.	Sample Date	Sample Location	Sample Description
		Sewickley Creek adjacent to Siebe/Robertshaw Outfall 002.	
2563188	10/10/00	Collected at the soil water interface in unnamed tributary to Sewickley Creek upstream of Siebe/Robertshaw Outfall 002.	Sediment
2563189	10/10/00	Collected downstream of Siebe/Robertshaw Outfall 002 in the unnamed tributary to Sewickley Creek.	Sediment
2563190	10/10/00	Collected in pool area of the unnamed tributary to Sewickley Creek directly in front of Siebe/Robertshaw Outfall 002.	Sediment
2563192	10/10/00	Collected in the unnamed tributary to Sewickley Creek upstream of Siebe/Robertshaw Outfall 002. IR analysis indicated the presence of an organic compound, which could not be identified.	Sediment
2563193	10/10/00	Collected in pool area of the unnamed tributary to Sewickley Creek directly in front of Siebe/Robertshaw Outfall 002.	Sediment
2563194	10/10/00	Collected in the unnamed tributary to Sewickley Creek upstream of Siebe/Robertshaw Outfall 002.	Sediment
2563196	10/10/00	Collected in the unnamed tributary to Sewickley Creek upstream of Siebe/Robertshaw Outfall 002. IR analysis indicated the presence of an organic compound, which could not be identified.	Sediment
2563197	10/10/00	Collected in the unnamed tributary to Sewickley Creek upstream of Siebe/Robertshaw Outfall 002.	Sediment
2563198	10/10/00	Collected in pool area of the unnamed tributary to Sewickley Creek directly in front of Siebe/Robertshaw Outfall 002.	Sediment
2563161	9/12/00	Below outfall 003	Sediment with petroleum odor
SOIL SAMPLES			
2563157	9/12/00	At east side of the Mercury Building outside the first door on the southern end	Soil
2563158	9/12/00	At the east side of the Mercury Building outside a door on the northern end	Soil
2563166	9/28/00	Discrete surface soil sample collected outside of fenced property just north of guard shack in lawn area	Soil
2563159	9/12/00	At northern end of the Mercury Building adjacent to a stormwater grate.	Soil appeared to contain beads of mercury
2563156	9/12/00	At south end of the Mercury Building	Soil with what appeared to be elemental mercury beads present
2522106	9/12/00	Base of hillside behind the Mercury Building	Brown, wet soil with small silver specks of mercury
2563160	9/12/00	Below discharge point of combined outfalls 001 & 002.	Composed mainly of organic material (i.e. tree roots) (soil)

Table 10
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Sample Locations and Descriptions
(samples for which there were detections only)

Sample ID. No.	Sample Date	Sample Location	Sample Description
Surface Water			
2563167	10/10/00	Collected downstream of Robertshaw Outfall 002 in unnamed tributary to Sewickley Creek.	Surface water
2563168	10/10/00	Collected downstream of Robertshaw Outfall 002 in unnamed tributary to Sewickley Creek.	Surface water
2563170	10/10/00	Collected downstream of Robertshaw Outfall 002 in unnamed tributary to Sewickley Creek.	Surface water
2563171	10/10/00	Collected from the bank of the stream adjacent to Siebe/Robertshaw Outfall 0023 in the unnamed tributary of the Sewickley Creek. The creek was purposely disturbed to create a sheen for sampling purposes. UV analysis indicated the presence of a weathered petroleum product; however, the amount was too small to identify.	Surface water
2563174	10/10/00	Collected from the bank of the stream adjacent to Siebe/Robertshaw Outfall 0023 in the unnamed tributary of the Sewickley Creek. The creek was purposely disturbed to create a sheen for sampling purposes. UV analysis indicated the presence of a weathered petroleum product; however, the amount was too small to identify.	Surface water
2563175	10/10/00	Collected in unnamed tributary of Sewickley Creek upstream of Siebe/Robertshaw Outfall 002.	Surface water
2563184	10/10/00	Collected in unnamed tributary of Sewickley Creek upstream of Siebe/Robertshaw Outfall 002.	Surface water
2563185	10/10/00	Collected from the bank of the stream adjacent to Siebe/Robertshaw Outfall 0023 in the unnamed tributary of the Sewickley Creek. The creek was purposely disturbed to create a sheen for sampling purposes. UV analysis indicated the presence of a weathered petroleum product; however, the amount was too small to identify.	Surface water

Table 11
Drain Pipe Investigation
Surface Water and Sediment/Soil Sample Results (detections only)
December 2000

Compound	Outfall Surface Water ug/L	Outfall Soil/Sed. ug/kg	Three Down Surface Water ug/L	Four Down Surface Water ug/L	Outfall + 25' Sediment ug/kg	Outfall + 75' Sediment ug/kg	Outfall + 125' Sediment ug/kg	1-35 feet Surface Water ug/L	2-100 yard Sediment ug/L	2-100 yard Surface Water ug/L	3-200 yard Surface Water ug/L
Carbon tetrachloride	ND	646	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**20.5**	ND	11.4	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	ND	ND	ND	2.5	NA	NA	NA	NA	NA	NA	NA
1,1-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	**2.2**
1,2-dichloroethene	23.15	2,230	ND	11.3	NA	NA	ND	4.4	ND	8.5	6.3
Tetrachloroethene	ND	ND	ND	ND	NA	NA	NA	**11.3**	NA	**1.9**	NA
1,1,1-trichloroethane	11.8	1,490	ND	ND	ND	ND	ND	5.3	NA	3.5	2.6
Trichloroethene	ND	ND	ND	ND	192	445	36.3	**5.9**	275	**10**	**6.7**

Notes:
J = Estimated
ND = Non detect
NA = Not available (no explanation provided)
Bold = Exceedance of Water Quality Criteria for Toxic Substances, 25 PA Code, Chapter 16, Table 1

Table 12
Drain Pipe Investigation
Soil Sample Results (detections only)
December 2000

Compound	E. Basin Sediment	C. Basin Sediment	W. Basin Sediment	C. Basin Outlet Soil	C. Basin + 50' Soil	Outfall + 175' Soil	Outfall + 225' Soil	Direct Contact Non Residential		Residential All
								Surface Soil	Subsurface Soil	
1,1-Dichloroethane (ug/kg)	ND	360	2.0 J	7.6	15	ND	ND	1,000,000	1,000,000	200,000
1,1-Dichloroethene (ug/kg)	ND	130 J	ND	ND	2.6 J	ND	ND	33,000	38,000	6,400
1,2-Dichloroethene (ug/kg)	3.0 J	2,000	15	49	86	ND	ND	1,900,000	2,100,000	670,000
1, 1, 1-Dichloroethane (ug/kg)	ND	150 J	ND	ND	ND	ND	ND	10,000,000	10,000,000	10,000,000
Trichloroethene (ug/kg)	4.6 J	2,400	31	17	20	22	2.1 J	970,000	1,100,000	190,000
Vinyl chloride (ug/kg)	ND	ND	ND	ND	3.1 J	ND	ND	20,000	22,000	3,800
Mercury (mg/kg)	**82.9**	10.4	7.3	0.91	0.033 B	0.037 B	0.079 B	240	190,000	19

Notes:

ND = Non detect
J = Estimated
B = Identified in the field blank
Bold = Indicates exceedance

Table 13
Drain Pipe Investigation
Surface Water Sample Results (detections only)
December 2000

Compound	Outfall Water	Basin Water	USEPA MCLs	PA Used Aquifer Residential	PA Used Aquifers Non-Residential	USEPA Surface Water Quality Criteria (ug/L)
1,1-Dichloroethane (ug/l)	**34**	**820**	NA	27	110	NA
1,1-Dichloroethene (ug/l)	**17**	**140**	7	7	7	NA
1,2-Dichloroethene (ug/l)	**140**	**3,200**	NA	70	70	NA
1, 1, 1-Dichloroethane (ug/l)	67	82 J	NA	200	200	NA
Trichloroethene (ug/l)	**100**	**1,100**	5	5	5	NA
Vinyl chloride (ug/l)	**6.1 J**	**190 J**	2	2	2	NA
Mercury (ug/l)	0.2	0.53	2	2	2	1.4

Notes:

J = estimated
NA = not applicable
Bold = Indicates exceedance of most stringent standard

Table 14

Mercury Confirmation Samples
Site Characterization
Invensys Appliance Controls
New Stanton, PA

	Statewide Medium Specific Concentrations			Excavation - Southwest Side of Mercury Bldg						Extent Confirmation Samples			
Location	PADEP	PADEP	PADEP	West-1	West-2	West-3	West-4	West-5	West-6	CB2+2 North	CB1+22North	West 7	West 8
Depth (ft)	MSC	MSC	Soil-to -GW	0.5-1	0.5-1	0.5-1	0.5-1	1.5	1.5	1	1	0.5-0.75	0.25-0.5
Sample Date	NR-Surface	NR - Subsurface	100X MSC	1/29/02	1/29/02	1/29/02	1/29/02	1/29/02	1/29/02	1/31/02	1/31/02	1/31/02	1/31/02
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Mercury	840	190,000	200	196	1.6	**1470**	21.1	233	454	31.3 B	0.26 B	2.2 B	5.3 B

Note:
B = Method Blank Contamination
Soil to Groundwater Pathway value assumes non-use restriction for property and >1,000 feet to nearest offsite well
Extent Confiramtion Samples collected just above shale bedrock
Bold indicates value exceeds direct contact MSC

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

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"	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[1]
Groundwater	NO	YES	NO	YES	NO	NO	NO
Air (indoors)	NO	**NO**	NO	**NO**	NO	NO	NO
Soil (surface, e.g., <2 ft)	NO	YES	NO	YES	YES	NO	NO
Surface Water	YES	YES	NO	YES	YES	NO	NO
Sediment	YES	YES	NO	YES	YES	NO	NO
Soil (subsurface e.g., >2 ft)	NO	YES	NO	YES	NO	NO	NO
Air (outdoors)	NA	NA	NA	NA	NA	NA	NA

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).

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.

X 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):

See following page for response to Question 3 (Rational and Reference(s)).

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

Question #3 - Current Human Exposures Under Control (Rationale and Reference(s))

RESPONSE:

Residents are not expected to be exposed to groundwater as information sources indicate the site and surrounding areas are serviced with public water from two surface water sources between 10 and 20 miles from the site.

Residents are not expected to be impacted by any air contamination. Residents could access the unnamed tributary and the Sewickley Creek, hence they could be exposed to contaminated surface water and sediment (offsite portions of these water bodies).

Workers and construction personnel could be exposed to contamination by surface soil contamination (if it remains), subsurface soil contamination through intrusive or excavation activities (if it remains), and surface water and sediment if working in or near the unnamed tributary to the Sewickley Creek.

Recreation activities are not expected to be impacted by site conditions.

Due to the guarded and fenced site perimeter, trespassers are not expected to be able to gain access to the site. However, if trespassers gain access to the site, they would be exposed to contaminated surface soil, surface water, and sediment. Trespassers are not expected to be exposed to indoor air contamination. Trespassers are not expected to be exposed to subsurface soil contamination due to the depth at which it exists.

No day care facilities are located in the vicinity of the site.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"** (i.e., potentially[1] " unacceptable" levels) 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)?

X	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):

While several groundwater, surface water, sediment, and soil sample results exceeded applicable standards, and there are several complete exposure pathways, the exposures generally do not appear to be significant, as.

- Access to the site is limited by fences and security guards;
- Residents do not use groundwater as a potable water source;
- No offsite monitoring wells contain contaminants of concern above applicable standards **(although additional wells are needed to better confirm this for areas downgradient of the VOC contamination plume)** and reportedly adjacent landowners use public water supplies;
- The immediate unnamed tributary to Sewickley Creek does not support recreation activities and would not be expected to be subject to routine use, and
- Proper personal protective equipment would be used by site workers and construction workers in the event of intrusive activities.

With the demolition of the Mercury Building in 2005-2006, the risk to potentially elevated levels of mercury in indoor air was eliminated. Invensys will need to keep the building floor/foundation and adjacent hillside concrete capped sealed and off-limits to minimize potential mercury exposure. Additionally, on September 28, 2006, DEP's Water Management program issued an order to Robertshaw to clean-up remaining mercury contaminated soil and sediment and treat any mercury-contaminated run-off. In a September 27, 2006 site remediation status report, Invensys indicated that it had removed additional contaminated sediment from the Mercury Building catch basins and collected additional soil samples from around the building area. Additional mercury contaminated soil/sediment removal is still likely necessary. Invensys intends to complete the Act 2 process for mercury contamination. Although the transformers with PCB contaminated absorbent material are not in use, Invensys should remove and properly dispose of the absorbent material.

[1] 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 (CA725)

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 a "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 a "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):

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS Code (CA725)

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):

X 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 Invensys Appliance Controls (formerly Robertshaw Controls facility, EPA ID PAD 004 316 832, located at Westinghouse Drive, New Stanton, PA 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: *Carl Spadaro* Date (revised) April 23, 2007

Facilities Engineer, PADEP SWRO

(approved) August 14, 2007

/Griff E. Miller/

Remedial Project Manager

EPA Region 3

Supervisor: ***David E Eberle*** Date (revised) April 23, 2007

Facilities Manager, PADEP SWRO

(approved) August 14, 2007

/Paul Gotthold/

PA Operations Branch Chief

EPA Region 3, WCMD

Locations where References may be found:

References have been appended to the Environmental Indicator Report and can be found at PADEP's Pittsburgh Office and USEPA Region III's Office.

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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.