DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

RCRA Corrective Action
Environmental Indicator (EI) RCRAInfo Code (CA725)
Current Human Exposures Under Control

Facility Name: **Former Inmont Corporation Hawthorne Plant**
Facility Address: **150 Wagaraw Road, Hawthorne, New Jersey, 07506**
Facility EPA ID#: **NJD002165371**

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EIs) are measures being used by the Resource Conservation and Recovery Act (RCRA) Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved) 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 objectives of the RCRA Corrective Action program, the EIs 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 is for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and does 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 determination status codes should remain in the Resource Conservation and Recovery Information System (RCRAInfo) national database ONLY as long as they remain true (i.e., RCRAInfo status codes must be changed when the regulatory authorities become aware of contrary information).

Facility Information

The Inmont Corporation Hawthorne Plant is a former manufacturing site located on approximately 16 acres in southeastern Passaic County, New Jersey. The facility is bounded to the north by the Borough of Hawthorne's North Wagaraw Municipal Well field and Wagaraw Road, to the south by the Passaic River, and to the east and west by industrial properties.

In 1946, Inmont Corporation (a division of United Technologies Corporation [UTC]) purchased the site from the Borough of Hawthorne and developed manufacturing operations consisting of production of dyestuffs, dyestuff intermediates, pigment intermediates, specialty polymers and chemicals. Organic chemical production was discontinued in 1967 and dyestuff production ceased in 1974. After 1974, operations consisted of manufacturing of pigments, aqueous dispersions, and flush bases.

In 1985, Inmont sold the property to BASF, which triggered the Industrial Site Recovery Act (ISRA). The New Jersey Department of Environmental Protection (NJDEP) issued an Administrative Consent Order (ACO) in July 1985. The ACO required investigation and remediation of soil and groundwater contamination that had resulted from numerous spills. Between 1985 and 1997, Inmont conducted several subsurface investigations and soil remediation events. NJDEP has provided no further action (NFA) determinations for the majority of the areas of concern (AOCs).

BASF ceased operations at the site in May 1986, which triggered ISRA for site decommissioning. BASF fulfilled the ISRA requirements by 1989 and received a negative declaration (i.e. NFA) from NJDEP in 1990. In preparation for future sale of the property, BASF completed improvement activities that included the removal of former building slabs, foundations and associated utilities; and environmental suitability studies that included soil boring investigations. Contaminant concentrations were detected above NJ soil cleanup criteria during these activities, which required remediation despite prior NFA approval of these areas. Remedial actions associated with several remaining impacted soil areas and site-wide groundwater contamination is currently ongoing by Inmont.

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 (SWMUs), regulated units (RUs), and areas of concern (AOCs)), 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

Areas of Environmental Concern

A total of 23 AOCs that were suspected to contain chemical constituents in soil above the relevant NJDEP soil cleanup criteria (SCC)[1] were identified over a period of several years. In 1985, 14 AOCs were identified as part of the original Environmental Cleanup Responsibility Act (ECRA) General Information Submission and Site Evaluation Submission, as described in the ECRA Sampling Plan Results Report (March 1989) (Ref. 1) and the Cleanup Plan Report (February 1990) (Ref. 2). Five AOCs were subsequently identified in the Supplemental Sampling Plan Addendum II Results Report (May 1990) (Ref. 3). Four additional AOCs were identified during investigations from 1990 to the present (Refs. 9, 10).

In 1996, BASF voluntarily initiated soil investigations in the northern 12-acre portion of the facility, referred to as the Contract Area, in preparation for planned reuse or sale of the property (See Figure 1-1, Site Map from the October 2002 Soil Delineation Report [Ref. 18]). Subsequently, a site improvement plan was designed and completed, and divided the Contract Area into Areas A, B, C, and D. A total of seven of the identified AOCs were located in the Contract Area. Several of the AOCs contained within these four areas had previously received NFA approval from NJDEP. Numerous remedial investigations and actions were performed from 1996 through 1999 resulting in the entire Contract Area (including all seven AOCs) receiving NFA from NJDEP. NFA designations for areas in the Contract Area were provided in various correspondence dated December 9, 1994 (Ref. 8), May 12, 1999 (Ref. 12), and December 8, 1999 (Ref. 13). A Deed Notice was prepared on August 16, 2000, to outline residual contamination areas in Areas C and D (Ref. 17). NJDEP plans to issue a NFA/Covenant Not to Sue Letter upon completion of the ISRA Case (Ref. 12). The Contract Area is currently utilized by a large warehouse and beverage distribution facility (Ref. 19).

The remainder of the AOCs (16) were located in the southern portion of the property, and were generally referred to as "AOCs outside the Contract Area." This portion of the site is currently inactive, with the exception of ongoing remedial activities. Numerous remedial investigations and actions have also been performed by Inmont at these AOCs from 1985 to the present. A majority of the AOCs (13) in the southern portion of the property (non-contract area) have received a NFA designation from NJDEP (Refs. 4, 5, 6, 7, 8), with the exception of the 4-84 Remediation Area, the Concrete Pads near the 4-84

[1] Soil contamination at the Inmont facility was generally evaluated using the most stringent NJ soil cleanup criteria (SCC), either the New Jersey Residential Direct Contact Soil Cleanup Criteria (NJ RDCSCC) or the New Jersey Impact to Groundwater Soil Cleanup Criteria (NJ IGWSCC). However, for purposes of this EI determination, only contaminants present above the New Jersey Non-Residential Direct Contact Soil Cleanup Criteria (NJ NRDCSCC) have been evaluated, given that the site is currently utilized for industrial purposes.

area, and the Historic Fill Area (see Figure 1-1, Site Map, from the October 2002 Soil Delineation Report [Ref. 18]). Brief descriptions of these areas are provided below.

4-84 Remediation Area: This area is located on the south side of the facility. Several soil remediation phases have been conducted to remove lead, copper, and xylene contamination. A total of 6,036 tons of soil were excavated as of April 1996, of which 114 tons were disposed of off site as hazardous waste and 5,922 tons were disposed of as nonhazardous waste (Ref. 15). NJDEP subsequently requested additional sampling east of the 4-84 area (in an area west of the drainage ditch) to verify that all impacted soil was removed. However, upon further investigation in the historic fill area (discussed below), Inmont determined that the historic fill area actually extends west of the drainage ditch. Thus, all requested delineation sampling in this area was considered part of the historic fill area delineation sampling (see below) (Ref. 18).

Concrete Pad Near 4-84 Area: This AOC, located adjacent to and west of the 4-84 Remediation Area, was identified during a September 3, 1997, site visit (Ref. 10). The AOC consists of two concrete pad structures, referred to as the western and eastern pads. The western pad is exposed at the surface, while the eastern pad was historically located beneath an earthen berm. Inmont has indicated that the former uses of these areas are unknown; however, use of the pads for drum storage was documented as unlikely. Inmont has collected soil samples in the vicinity of these pads as part of the 4-84 remediation. Results have indicated that all concentrations are below the most stringent NJ SCC. NJDEP requested that additional sampling should be performed specific to these areas as the historic use is unknown. Between May and September 2002, four additional soil borings (one on each side of the concrete pad) were drilled. Once again, all results were below the most stringent NJ SCC. In October 2002, the concrete pad was removed from the site by the property owner (BASF). Thus, Inmont has recommended no further investigation for this area (Ref. 18).

Lead Contamination in Soil Along Eastern Property Boundary: This AOC extends from the BASF - Calgon Corporation property boundary (adjacent property to the east) to beneath the foundation of former Building No. 24. It consists of historic fill that contains lead and mercury concentrations in excess of relevant standards (Ref. 11). The mercury contaminated soils have been excavated and require no further action. NJDEP requested additional delineation for the areas containing lead-contaminated soil (Ref. 11). Four additional sampling rounds were performed in 2000 to meet this requirement, yet delineation of the lateral and vertical extent of the contamination remained incomplete (Ref. 14). Results indicated that the impacted area was approximately 1.8 acres in size with general lead contamination ranging from 1,000 to 5,000 mg/kg, with isolated hot spots in the range of 10,000 to 40,000 mg/kg. Based on these results, Inmont suggested institutional and engineering controls, with some hot spot removal, as a likely remedial solution. NJDEP agreed with Inmont's assessment and requested additional delineation of both soil and groundwater conditions (Ref. 16). Additional soil delineation was performed from May through September 2002. A total of ten layers of historic fill were identified, extending down to 11 feet below ground surface (bgs). Sample results indicated that semi-volatile organic compounds (SVOCs) (benzo[a]anthracene, benzo[a]pyrene, 1,2,4-trichlorobenzene, 3,3-dichlorobenzidine) and metals (arsenic, chromium, copper, lead, zinc) were present above NJ NRDCSCC. Aroclor-1254 was also detected in one test pit location (TP-4, Layer 4) at 3.2 mg/kg, which is above the NJ NRDCSCC of 2.0 mg/kg. The historic fill area was also determined to extend from the eastern property boundary west towards the drainage ditch, as well as in areas west of the drainage ditch and up to the 4-84 Remediation Area. Inmont believes

this area has been adequately characterized. In addition, they argue that sample results indicate that most of the historical fill materials do not contain constituents at concentrations above the NJ SCC. Thus, Inmont plans to begin evaluating remedial options for the historic fill area (including areas to the east and west of the drainage ditch). Inmont will develop a Remedial Action Selection Report, and has indicated that the likely alternative is excavation and off-site disposal of fill in limited areas, followed by construction of a cap and an institutional control (Ref. 18).

Thus, all soil areas of concern at the site have achieved a NFA designation, with the exception of the three areas outlined above. Groundwater contamination at the site is being addressed on a site-wide basis. Contamination is currently being characterized and remediated. Information on groundwater characterization, contamination, and associated remedial efforts is discussed in Questions 2 through 4 of this EI determination.

References:

1. ECRA Sampling Plan Results for Former Inmont Facility, Hawthorne, New Jersey. Prepared by Fred C. Hart Associates, Inc. Dated March 1989.
2. Cleanup Plan for Inmont Corporation Facility, Hawthorne, New Jersey. Prepared by Fred C. Hart Associates. Dated February 28, 1990.
3. Supplemental Soil Sampling Plan Addendum II Cleanup Plan for Inmont Corporation Facility, Hawthorne, New Jersey. Prepared by Fred C. Hart Associates. Dated May 21, 1990.
4. Letter from Karl Delaney, NJDEP, to Paul Kaminski, United Technologies Corporation, re: Industrial Establishment: Inmont Corp. - Hawthorne Facility ("Inmont") Location: 150 Wagaraw Road, Hawthorne Boro, Passaic County, Block: 12, Lot: 7, Transaction: Transfer of Stock, Cleanup Plan Dated: February 28, 1990, ECRA Case #85563. Dated May 23, 1990.
5. Letter from Thomas Sherman, NJDEP, to Dale Webster, Engineering and Ecology, re: S01/S02 Closure Certification for the BASF Corporation. Dated January 14, 1992.
6. Letter from Tessie Fields, NJDEP, to Frederick Johnson, United Technologies Corporation, re: Inmont Corporation (Inmont), Hawthorne Borough, Passaic County, ECRA Case #85563. Dated December 14, 1992.
7. Letter from Daniel Kopcow, Baker Environmental, Inc., to Jacob Schupak, NJDEP, re: Response to NJDEP letter dated May 23, 1994, United Technologies, Corporation (former Inmont Corporation) Facility, Hawthorne Borough, Passaic County, New Jersey, ISRA Case No. 85563. Dated June 22, 1994.
8. Letter from Douglas Stuart, NJDEP, to Frederick Johnson, United Technologies Corporation, re: Administrative Consent Order (ACO) in the Matter of United Technologies Corporation, Inmont Corporation, Hawthorne Boro, Passaic County, ISRA Case #85563. Dated December 29, 1994.
9. Letter from Douglas Stuart, NJDEP, to Frederick Johnson, United Technologies Corporation, re: Administrative Consent Order (ACO) in the Matter of United Technologies Corporation, Inmont Corporation, ISRA Case #85563. Dated May 2, 1995.
10. Letter from Michael Justiniano, NJDEP, to Frederick Johnson, United Technologies Corporation, re: Administrative Consent Order (ACO) in the Matter of United Technologies Corporation, Inmont Corporation, ISRA Case #85563. Dated September 8, 1997.
11. Letter from Michael Justiniano, NJDEP, to Frederick Johnson, United Technologies Corporation, re: Environmental Results and Site Improvement Plan dated January 8, 1998. Analytical Data Package received by the NJDEP on June 26, 1998. Dated August 18, 1998.
12. Letter from Michael Justiniano, NJDEP, to Frederick Johnson, United Technologies Corporation, re: Administrative Consent Order (ACO) In the Matter of United Technologies Corporation, Inmont

Corporation, ISRA Case #85563, Remedial Investigation Report Dated March 3, 1998 and Addendum Dated May 5, 1999. Dated May 12, 1999.

13. Letter from Michael Justiniano, NJDEP, to Frederick Johnson, United Technologies Corporation, re: Administrative Consent Order (ACO), In the Matter of United Technologies Corporation, Inmont Corporation, ISRA Case #85563, Response to the NJDEP's letter of February 20, 1998 dated March 11, 1998, Summary of Baseline Groundwater Sampling Report dated May 5, 1998, Quarterly Groundwater Sampling Reports dated November 4, 1998 and December 20, 1998, Hawthorne MUA Dewatering Activities Impact Monitoring Report dated November 4, 1998, Cleanup Plan Progress Report date November 25, 1998, Letters to NJDEP dated April 1, 1998, May 15, 1998, August 20, 1998, and February 23, 1999, Remedial Action Schedule dated July 20, 1999. Dated December 8, 1999.
14. Eastern Fenceline Lead Issues at the United Technologies Corporation, Former Inmont Facility, Hawthorne, NJ, ISRA Case No. 85563, Summary Report, Volume I. Prepared by Baker Environmental, Inc. Dated February, 2001.
15. Hawthorne Remedial Action Report. Prepared by IT Corporation. Dated April 11, 2001.
16. Letter from Kris Geller, NJDEP, to Jacob Schupak, NJDEP, Referral Type: Remedial Action Report, Document Name: Summary Report; Eastern Fenceline Issues. Dated April 18, 2001.
17. Letter from John Persico, Blasland Bouck & Lee, Inc., to Barry Tornick, USEPA, re: Response to December 7, 2001 e-mail request from Elizabeth Butler. Dated June 12, 2002.
18. Soil Delineation Report. Prepared by Blasland, Bouck & Lee, Inc. Dated October 2002.
19. Letter from Joseph Tota, United Technologies, to Barry Tornick, USEPA, re: Response to November 25, 2003 Letter Requesting Additional Information for the Environmental Indicators Determination. Dated May 24, 2004.

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be "**contaminated**"[2] 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	X			VOCs, SVOCs
Air (indoors)[3]		X		
Surface Soil (e.g., <2 ft)	X			Benzo(a)pyrene
Surface Water	X			SVOCs
Sediment	X			SVOCs
Subsurface Soil (e.g., >2 ft)	X			VOCs, SVOCs, Metals
Air (Outdoor)		X		

___ 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.

_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:

Groundwater

The site is physiographically located in the Piedmont Province of north-central New Jersey. It is locally situated in a broad valley bordered to the west-northwest by the Watchung Mountains (Orange Mountain Basalt) and to the south by the Passaic River. In general, the bedrock beneath the site is overlain by unconsolidated glacial deposits (overburden). The overburden is primarily composed of glacial-fluvial and glacial-lacustrine deposits consisting of moderately sorted silt, sand, and gravel layers, which range in total

[2] "Contamination" and "contaminated" describe 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).

[3] Recent evidence (from the Colorado Department 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.

thickness from 30 to 50 feet. Bedrock beneath the site is comprised of the Passaic Formation, which generally consists of interbedded red sandstone, siltstone, shale, and conglomerate (Ref. 2).

The groundwater system beneath the site consists of two aquifers: an overburden aquifer and a bedrock aquifer. The bedrock aquifer is further segregated into an upper bedrock unit and a lower bedrock unit. The overburden aquifer is typically unconfined and groundwater flow is controlled by topography. Some of the well-sorted, coarser-grained glacial deposits are capable of yielding large quantities of water. These deposits are generally limited to the south-southeastern portion of the site. Under non-pumping conditions, groundwater flow in the overburden aquifer beneath the site is to the south, towards the Passaic River, which acts as a discharge area for the overburden aquifer (Ref. 2). Depth to the overburden aquifer ranges from approximately six feet to 50 feet bgs.

Groundwater within the bedrock aquifer is contained primarily within secondary porosity features and is sometimes found under artesian conditions. Regional groundwater flow within this aquifer is strongly controlled by the structural features within the formation. Outcrops in the vicinity of the site indicate that near vertical fractures tending northeast to southwest are the primary pathway for groundwater movement. However, the interbedding of the formation also displays fractures (cleavage and parting) that can store and allow the migration of groundwater in a direction roughly perpendicular to the strikes and the near-vertical fractures. The upper bedrock aquifer is found at a depth up to 90 feet bgs, while the lower bedrock unit is found at depths of greater than 90 feet to approximately 250 feet bgs.

Under non-pumping conditions, groundwater in the upper portion of the bedrock aquifer flows south and likely discharges to the Passaic River. Groundwater flow direction in the lower bedrock is to the north-northwest toward the municipal well field and also to the south towards the Passaic River. A groundwater divide is apparent across the center of the site (see Figure 7, Groundwater Contour Map - November 3, 2003 - Deep Bedrock Zone, from the February 2004 Second Semi-Annual Groundwater Remedial Progress Report [Ref. 5]).

Groundwater beneath the site is classified as Class II-A, protected for potable use. There are currently several groundwater contaminants of concern (COCs) that exceed the New Jersey Ground Water Quality Criteria (NJ GWQC) for Class II-A groundwater, including nitrobenzene, aniline, benzene, styrene, toluene, 1,2,4-trichlorobenzene, and 1,4-dichlorobenzene. Table 1 outlines the contaminants detected above NJ GWQC during the 3rd and 4th Quarter 2003 sampling events. Refer to Figure 1, Site Map, from the February 2004 Second Semi-Annual Groundwater Remedial Progress Report, for a figure depicting the well locations identified in Table 1 (Ref. 5).

Table 1 - Contaminants Detected above NJ GWQC During the 3rd (August) and 4th (November) Quarter 2003 Sampling Events (µg/L)

Well	Type	Contaminant	8/2003	11/2003	NJ GWQC
Overburden					
13-85	Compliance	All contaminants non-detect			
IW03-93	Compliance	All contaminants non-detect			
IW07-92	Compliance	Nitrobenzene	5,840	ND	10

Well	Type	Contaminant	8/2003	11/2003	NJ GWQC
X02-84	Source	Benzene	73.8	20.7	1
		Styrene	177	227	100
		1,2,4-trichlorobenzene	185	--	9
		1,4-dichlorobenzene	93.2	--	75
		Aniline	8.4	14.2	6
		Nitrobenzene	1,460	6,720	10
X02-92	Source	Benzene	23.5	17.1	1
		Styrene	149	139	100
		1,2,4-trichlorobenzene	231	--	9
		1,4-dichlorobenzene	118	--	75
		Aniline	ND	BS	6
		Nitrobenzene	2,210	4,400	10
X04-84	Source	Benzene	52.9	1.3	1
		Styrene	140	BS	100
		1,2,4-trichlorobenzene	30.7	--	9
		1,4-dichlorobenzene	83.6	--	75
		Aniline	6.9	BS	6
		Nitrobenzene	947	2,510	10
09-85	Background	Nitrobenzene	NS	BS	
10-85	Background		NS	ALL ND	
11-85	Background		NS	ALL ND	
Upper Bedrock					
IW08-93	Compliance	1,2,4-trichlorobenzene	17.4	ALL ND	9
		Aniline	6.3		6
		Nitrobenzene	2,860		10
XR7-93	Compliance	Benzene	11.4	20.5	1
		Styrene	BS	151	100
		1,2,4-trichlorobenzene	101	--	9
		Aniline	BS	BS	6
		Nitrobenzene	ND	4,930	10
XR1-92	Source	Benzene	24.2	7.2	1
		Styrene	BS	122	100
		1,2,4-trichlorobenzene	194	--	9
		1,4-dichlorobenzene	81.6	--	75
		Aniline	BS	ND	6
		Nitrobenzene	1,610	BS	10
XR2-92	Source	Benzene	20.5	BS	1
		Styrene	117	BS	100
		1,2,4-trichlorobenzene	141	--	9
		Aniline	BS	BS	6
		Nitrobenzene	681	BS	10

Well	Type	Contaminant	8/2003	11/2003	NJ GWQC
XR3-92	Source	Benzene Styrene 1,2,4-trichlorobenzene 1,4-dichlorobenzene Aniline Nitrobenzene	23 130 188 80.3 BS 1,390	13.3 142 -- -- BS 4,360	1 100 9 75 6 10
XR4-84	Source	Benzene Styrene 1,2,4-trichlorobenzene Aniline Nitrobenzene	20.4 116 146 BS 458	10.2 132 -- ND BS	1 100 9 6 10
Deep Bedrock					
BR03-84	Compliance	Nitrobenzene	NS	15.9	10
BR08-02	Compliance	Benzene Aniline	NS	13.9 14.9	1 6
BR08-82	Compliance	Benzene Aniline	NS	13.9 14.9	1 6
BR08-85	Compliance	Benzene Styrene Toluene Aniline Nitrobenzene	NS	19.5 792 1,760 160 218,000	1 100 1,000 6 10
BR09-85	Compliance	Nitrobenzene	NS	48.2	10
BR10-85M	Compliance		NS	ALL ND	
BR12-89	Compliance	Benzene Nitrobenzene	NS	1.8 23,100	1 10
BR13-01	Compliance		NS	ALL ND	

[1] Constituents analyzed for during the August 2003 sampling round included BTEX, styrene, and SVOCs (Ref. 5).
[2] Constituents analyzed for during the November 2003 sampling round included BTEX, styrene, aniline and nitrobenzene (Ref. 5).
-- Not analyzed
BS - Contaminant concentration detected below NJ GWQC
ND - Contaminant not detected
NS - Well not sampled during quarterly event

The volatile organic compound (VOC) and SVOC contamination has impacted both the overburden and bedrock aquifers to a depth of at least 250 feet bgs. The highest levels of contamination occur on the south side of the facility, along the Passaic River. It is asserted that contamination of the lower bedrock aquifer occurred via preferential pathways created by poor well construction and the sealing of existing well casings of deep wells.

Air (Indoors)

To evaluate the potential for VOCs to migrate into indoor air at the Inmont site, recently detected VOC concentrations in the uppermost (overburden) aquifer were compared to the State of Connecticut Proposed Revisions to the Groundwater Volatilization Criteria for the Industrial/Commercial Scenario (CT I/C GWVC) (March 2003). The proposed values were used because they have been revised to be more consistent with EPA's 2002 Draft Guidance "Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soil." Thus, these updated values are based on the most up-to-date Johnson-Ettinger Model, toxicity information, and exposure assumptions. Based upon a review of recently detected contaminant concentrations (4th Quarter 2003), only one impacted well is located within 100 feet of an active building. Well X02-84 (Source Well) is located approximately 100 feet south-southeast of the on-site groundwater treatment building. Groundwater in this vicinity is being influenced by the on-site groundwater recovery and treatment system, as well X02-84 is utilized as an overburden extraction well on site. Thus, contamination detected in well X02-84 is coming from surrounding overburden locations, possibly including the area beneath the groundwater recovery treatment building. Recent monitoring results (4th Quarter 2003) indicated the presence of benzene (20.7 µg/L) and styrene (227 µg/L) in well X02-84 (Ref. 5). However, the concentrations of benzene and styrene are well below the CT I/C GWVC (benzene = 310 µg/L, styrene = 42,000 µg/L). Based on this analysis, current VOC concentrations in overburden groundwater are not expected to migrate into indoor air at elevated levels. Thus, indoor air is not being considered currently impacted for purposes of this EI determination.

Surface/Subsurface Soil

As mentioned in response to Question 1, corrective action has been completed at a majority of the AOCs resulting in NFA designations from NJDEP. However, there are several areas at the site with residual contamination above the most stringent NJ SCC. The site is currently being utilized for industrial purposes. Thus, the only residual soil contamination above the NJ NRDCSCC will be discussed in this EI determination.

AOCs within the Contract Area

As mentioned in response to Question 1, the entire Contract Area has received an NFA designation from NJDEP. However, a Deed Notice has been put in place at the site to outline residual contamination that is present above the NJ SCC. As outlined in the Deed Notice for the Contract Area (Ref. 3), only benzo(a)pyrene (2.2 mg/kg) is present above the NJ NRDCSCC (0.66 mg/kg) in subsurface soil (13 feet bgs) at one sample location (SB-135) in former Area D. There is no residual contamination in the surface soil that is above NJ NRDCSCC.

AOCs Outside the Contract Area

A majority of the AOCs in the southern portion of the site obtained NFA designations because sample results indicated contaminant concentrations were all below the most stringent NJ SCC. However, contamination does remain in the Historic Fill Area and extends west to the drainage ditch and beyond the drainage ditch into the 4-84 Remediation Area.

> **Historic Fill Area (including the 4-84 Remediation Area):** Initial sampling was performed in this area in 2000. Soil contamination was identified in layers, generally defined as a shallow layer (usually of grey material) between zero to three feet, and a deeper layer (generally black) between four to seven feet. A majority of the sample results showed detections in 1,000 to 5,000 mg/kg range for lead, with isolated hot spots in the range of 10,000 to 40,000 mg/kg (Ref. 1).

Additional delineation was performed between May and September 2002; 21 test pits were dug and 60 soil boring were installed. Test pit and soil boring analytical results showed detections of contaminants above the NJ NRDCSCC. Table 3 below identifies the contaminants present above the NJ NRDCSCC and the sample location.

Table 3 - Contaminants Detected in Historic Fill Area Above the NJ NRDCSCC 2002 Sampling Results[1] (mg/kg)

Contaminant	Sample ID (Depth[2]) or Test Pit Number (Layer)[3]	Concentration	NJ NRDCSCC
Arsenic	SS-60 (8.5-9.0)	21.7	20
Chromium	TP-4 (Layer 1) TP-4 (Layer 4) TP-5 (Layer 1) TP-14 (Layer 4)	20.8 136 23.6 27.3	20[4]
Copper	SS-55 (3.0-3.5) SS-60 (8.5-9.0) GP-14 (5.0-5.5) TP-4 (Layer 4) TP-14 (Layer 4)	668 763 906 5030 607	600
Lead	SS-60 (8.5-9.0) GP-21 (2.0-2.5) TP-4 (Layer 4) TP-14 (Layer 4) TP-19 (Layer 10) TP-20 (Layer 10)	756 1,040 1,620 675 3,440 1,300	600
Zinc	SS-60 (8.5-9.0)	1,610	1500
Aroclor-1254	TP-4 (Layer 4)	3.2	2.0
Benzo(a)pyrene	**GP-9 (0.5-1.0)** **GP-9A (1.5-2.0)** **GP-11 (0.5-1.0)** **GP-13 (1.0-1.5)** GP-22 (3.0-3.5) TP-4 (Layer 4) TP-14 (Layer 4) TP-19 (Layer 10) TP-20 (Layer 10)	**1.87** **0.67** **1.84** **1.34** 1.3 1.01J[5] 0.74 4.26 9.05	0.66
Benzo(a)anthracene	TP-19 (Layer 10) TP-20 (Layer 10)	4.26 10.1	4
3,3-Dichlorobenzidine	TP-4 (Layer 4)	374	6
1,2,4-Trichlorobenzene	SS-55 (5.5-6.0) SS-46 (5.5-6.0)	5.24 18.8	1.2

1. October 2002 Soil Delineation Report (Ref. 4)
2. In feet bgs.
3. The layers identified are not associated with a constant depth bgs. All layers with contamination above NJ NRDCSCC identified in Table 3 are in the subsurface. Please refer to Figures 3-4 and 3-5 in the October 2002 Soil Delineation Report (Ref. 4) for a depiction and description of each of the layers identified.
4. SCC for chromium are for contact dermatitis for hexavalent chromium.
5. Estimated value.

Sample locations and concentrations in bold are detected in surface soil.

Surface Water/Sediment

The Passaic River flows easterly along the southern boundary of the site. The river is classified by the State of New Jersey as a Freshwater Class 2, Non-Trout Waterway (FW2-NT), which indicates that the water can be used for maintenance, migration and propagation of the natural and established biota, primary and secondary contact recreation, industrial and agricultural water supply, and public water supply after conventional filtration (Ref. 3). Under natural groundwater flow conditions, groundwater in the overburden and upper bedrock zones discharges to the Passaic River. However, under current conditions, the groundwater recovery and treatment system exerts hydraulic control on the overburden aquifer (Ref. 5). Groundwater contour plots indicate inward flow towards the three extraction wells (X02-84, X04-84, X02-92). The plots further demonstrate that the five injection wells (IW02-93, IW03-93, IW04-93, IW07-92, IW09-92) have effectively created a hydraulic barrier along the southern boundary of the site and the Passaic River. Hydraulic control is also apparent in the upper bedrock aquifer (Ref. 5). Groundwater contour plots demonstrate inward flow to the five extraction wells (XR1-92, XR2-92, XR3-92, XR4-84, XR7-93) and a groundwater mounding effect at the three injection wells (IW10-92, IW06-93, IW08-93). Thus, impacted groundwater in the overburden and upper bedrock units beneath the site is not discharging to the Passaic River.

Groundwater flow direction in the lower bedrock aquifer varies spatially and temporally. The flow direction at the northern portion of the facility, away from the contaminated groundwater zone, fluctuates between a northwest and southeast orientation as the groundwater divide migrates across the site. In the southwest portion of the site where the SVOC plume is located, the groundwater sometimes stagnates as hydraulic gradients fatten out, but more typically flows to the south-southeast towards the Passaic River. However, based upon current available information, it is not possible to determine if groundwater in the lower bedrock unit discharges (either in part or in full) to the Passaic River. No surface water samples have been collected by UTC in the river. Thus, per EI guidance, contaminant concentrations in the deep bedrock unit closest to the Passaic River were compared to ten times their respective NJ GWQC and the New Jersey Surface Water Quality Criteria (SWQC) to determine if there is a concern for adverse impacts to surface water quality in the Passaic River. Refer to Figure 12, Groundwater SVOC Concentration Map, Deep Bedrock Zone - November 2003 in the February 2004 Second Semi-Annual Groundwater Remedial Progress Report for a map depicting the deep bedrock well locations closest to the Passaic River (Ref. 5)

Table 4 - Groundwater Concentrations in the Deep Bedrock Aquifer in Wells Adjacent to the Passaic River (µg/L) - November 2003

Well ID	Contaminant	Concentration[1]	10x NJ GWQC	NJ SWQC[2]
BR08-85	Aniline Nitrobenzene	**160** **218,000**	60 100	NA 16
BR13-01	Aniline Nitrobenzene	ND ND	60 100	NA 16
BR12-89	Aniline Nitrobenzene	ND **231,000**	60 100	NA 16
BR3-84	Aniline Nitrobenzene	ND 15.9	60 100	NA 16

1. Concentrations reported during the 4th Quarter 2003 (November 2003) sampling event (Ref. 5).

2. NJ SWQC for FW2 waterways.
ND - Not Detected
NA - Criteria not available
Concentration in bold exceed relevant criteria.

As outlined in Table 4 above, concentrations of nitrobenzene are well above ten times the NJ GWQC and the NJ SWQC. Aniline is also present in well BR08-85 at concentrations greater than ten times the NJ GWQC. Thus, there appears to be a potential for groundwater contamination in the deep bedrock unit to cause adverse impacts to surface water, and possibly to sediment quality in the Passaic River if groundwater in the lower bedrock unit is discharging, either in part or full, to the Passaic River. Thus, based upon available information, surface water and sediment in the Passaic River is being considered potentially impacted for the purposes of this EI determination.

Air (Outdoors)

No assessment of the impacts to outdoor air has been conducted at the site. All documented soil contamination in the Contract Area is located in the subsurface and is not a concern relative to outdoor air migration. Residual contamination in the southern portion is located in the Historic Fill Area and 4-84 Remediation Area, which is also generally located in the subsurface. Limited areas of contamination may extend to the surface, but these areas are covered by vegetation, which limits the potential for contaminated particulate migration. On-site soil and groundwater remediation efforts are the only activities taking place at this site. During remedial activities, on-site remedial workers take the necessary precautions to limit dusts and contaminated particulate migration. Migration of VOCs from groundwater into outdoor air is also not expected to be a concern due to the limited VOCs present in overburden groundwater and the natural dispersion of contaminants once they reach the surface. Based upon the limited extent of exposed surface contamination and the lack of high VOC concentrations in groundwater beneath the site, volatile emissions and/or the migration of particulates entrained on dust are not expected to cause a concern for outdoor air impacts.

References:

1. Eastern Fenceline Lead Issues at the United Technologies Corporation, Former Inmont Facility, Hawthorne, NJ, ISRA Case No. 85563, Summary Report, Volume I. Prepared by Baker Environmental, Inc. Dated February, 2001.
2. Hawthorne Remedial Action Report. Prepared by IT Corporation. Dated April 11, 2001.
3. Letter from John Persico, Blasland Bouck & Lee, Inc., to Barry Tornick, USEPA, re: Response to December 7, 2001 e-mail request from Elizabeth Butler. Dated June 12, 2002.
4. Soil Delineation Report. Prepared by Blasland, Bouck & Lee, Inc. Dated October 2002.
5. Second Semi-Annual Groundwater Remedial Progress Report 2003. Prepared by Blasland, Bouck & Lee, Inc. Dated February 2004.

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	Trespasser	Recreation	Food[4]
Groundwater	No	No	No	No	–	–	No
~~Air (indoor)~~				–	–	–	–
Surface Soil (e.g. < 2 ft)	No	No	No	Yes	No	No	No
Surface Water	No	No	–	–	No	Yes	No
Sediment	No	No	–	–	No	Yes	No
Subsurface Soil (e.g., > 2 ft)	–	–	–	Yes	–	–	No
~~Air (outdoors)~~						–	–

Instruction 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. These spaces instead have dashes ("--"). 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

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

Rationale:

Groundwater

Overburden and Upper Bedrock Units

As discussed in Question 2, VOCs and SVOCs are present in overburden and upper bedrock units. A groundwater recovery and treatment system was installed to minimize the discharge of contaminated waters to the Passaic River and a water treatment facility was constructed at the Borough of Hawthorne's municipal well field to minimize the potential impacts of contaminant migration. Contaminants are currently present in only the southern section of the site (e.g., non-contract area). This area is within site boundaries, thus there is no concern for day care, resident, or food exposures.

The groundwater remedial system has been operating at the site since 1997. The existing pump and treatment system consists of eight pumping wells (three extracting groundwater from the overburden aquifer and five extracting groundwater from the upper bedrock aquifer) and eight reinjection wells. Periodic Cleanup Plan Progress Reports and quarterly sampling reports have been issued to document the system status. Extracted groundwater is treated in the on-site treatment plant (Refs. 2, 6). The groundwater recovery and treatment system was issued a New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Groundwater (DGW) Permit on March 6, 1997 (Permit No. NJ7000995). Groundwater monitoring data confirm that the system is maintaining hydraulic control of the contamination plume in both the overburden and the upper bedrock aquifers (Ref. 2).

A CEA proposal was submitted for the site in December 2002. The property boundary forms the horizontal boundary of the CEA on the northern and eastern sides of the site. The Passaic River forms the boundary of the CEA on the southern side of the site. The western boundary of the CEA is located 200 feet west of monitoring well BR05-85 (located on the western property boundary), as requested by NJDEP. The vertical depth of the CEA is 250 feet bgs, as requested by NJDEP. The duration of the CEA is unknown at this time and will depend upon future groundwater monitoring data (Ref. 6).

Depth to groundwater in the overburden ranges from approximately six to 13 feet bgs. Given that non-contract area is currently an inactive portion of the site, there is currently no concern for on-site worker exposure to groundwater contamination. However, remedial workers are currently performing remedial activities associated with soil and groundwater in this area of the site. Given the that shallow groundwater can be found at depths of less than 10 feet bgs, a potential exists for on-site remedial workers (classified as construction workers for the purpose of this EI determination) to come in direct contact with contaminated groundwater while conducting remedial activities.

Deep Bedrock Unit

As outlined in Table 1, VOCs and SVOCs are also present in the deep bedrock aquifer. Groundwater flow direction in the lower bedrock aquifer varies spatially and temporally. As mentioned previously, in the southwest portion of the site, the groundwater sometimes stagnates as hydraulic gradients fatten out, but more typically flows to the south-southeast towards the Passaic River, and may flow beneath the river. Thus, the contaminated area flows southerly and away from the municipal wells located to the north of the site, which provide potable water to the Borough of Hawthorne (Ref. 5).

It should be noted that a treatment system is utilized at the Hawthorne Municipal Well field to mitigate the potential for hazardous constituents reaching potable water sources. Routine sampling has been conducted by UTC from 1991 to 2003 and has not shown impacts of nitrobenzene and aniline, which are the primary contaminants present in deep bedrock groundwater at the site (Ref. 7).

As mentioned in Question 2, given the limited information available about the hydraulic interaction between the deep bedrock unit and the Passaic River, the potential for deep bedrock groundwater to discharge to the Passaic River either in part or in full is being considered. Thus, a potential exists for contaminated groundwater to migrate beneath and south of the Passaic River. In order to evaluate the potential for exposure to deep bedrock groundwater on the south side of the Passaic River, UTC conducted an updated well search in October 2002 and also contacted both the Borough of Hawthorne and the City of Paterson to inquire about potable water supplies in those areas. The City of Paterson indicated that the Passaic Valley Water Commission (PVWC) provides potable water to the City of Paterson and derives its water from the Passaic and Pompton Rivers. According to the PVWC, the water is not treated for VOCs or SVOCs because it does not contain these constituents. The City of Paterson was not aware of any private potable supply wells in their community and indicated that all roads within the city are serviced by a water main (Ref. 7).

The well search results also confirmed the lack of potable supply wells within 0.5 mile radius of the site. All wells were reported as either industrial or municipal with the exception of one well at Norris Manufacturing Company, which is located 0.5 mile upgradient of the site. The well service type listed at the time of installation in 1965 was “industrial and domestic;” however, given the information provided by the Borough of Hawthorne, it is likely that this location is now served by public water supply. Thus, the well search results were consistent with information provided by the Borough of Hawthorne and the City of Paterson. Therefore, the potential for direct exposure to impacted groundwater associated with the Inmont site at off-site locations (e.g., off-site residents, day-care facilities, food sources) south of the Passaic River is not being considered a potentially complete exposure pathway at this time (Ref. 7)

Surface/Subsurface Soil

All soil contamination associated with the Inmont facility is maintained within site boundaries, thus there is no concern for resident, day care, or food exposures. The entire Inmont site is surrounded by a chain link fence, thus preventing exposure to on-site soil contamination for off-site receptors (e.g., trespassers). In addition, there is fencing that separates the areas in the non-contract area from the Contract Area preventing workers that may work at the current warehouse and beverage distribution facility from entering the southern portion of the site. Only remedial activities are ongoing in the southern portion of the site (e.g., non-contract area) for both soil and groundwater. Remedial workers (considered construction workers for the purpose of this EI determination) will likely perform intrusive activities in areas of impacted surface and subsurface soil (Ref. 2).

AOCs within the Contract Area

> All soil contamination above NJ NRDCSCC in the Contract Area is located in the subsurface at greater than 10 feet bgs. Thus, there is no concern for direct exposure to on-site receptors. In addition, a Deed Notice has been filed for the sample locations where contamination is present. The Deed Notice restricts use of the area to non-residential use only. In addition, the Deed Notice restricts disturbance of the natural clean soil cover (Ref. 3). Thus, exposure to impacted

subsurface soil is not considered a potentially complete exposure pathway for on-site receptors (e.g., construction workers) in the Contract Area.

AOCs Outside the Contract Area

Historic Fill Area (including the 4-84 Remediation Area): Based upon available sampling data, VOCs, SVOCs and metals are present in soil within this area at concentrations above the NJ NRDCSCC. A majority of the contamination exists in the subsurface, but limited areas of surface contamination (0-2 feet bgs) are present (Refs. 1, 4). Given that remedial activities in these areas are ongoing, a potential exists for on-site construction workers (e.g., remedial workers) to come in contact with soil contamination.

Surface Water/Sediment

As discussed in Question 2, limited information is available regarding the hydraulic interaction between the Passaic River and the deep bedrock unit at the Inmont site. Based upon an evaluation of current groundwater contaminant concentrations in the lower bedrock unit, in wells closest to the river, a potential exists for elevated levels of nitrobenzene and aniline to discharge to the Passaic River (Ref. 5). Surface water sampling has not been conducted in the Passaic River along the site, thus the impacts of deep bedrock groundwater on the Passaic River can neither be confirmed nor denied. Thus, for conservativeness, the potential for recreators to come in contact with impacted surface water and sediment in the Passaic River is being considered a potentially complete exposure pathway at this time. Food exposure (e.g., fish) is not being considered a potentially complete exposure pathway given that the contaminants of concern for discharge to the river are aniline and nitrobenzene. Aniline and nitrobenzene are both SVOCs and are not considered bioaccumulative. Therefore, fish populations in the Passaic River along the facility boundary would not be expected to be adversely impacted by these non-bioaccumulative contaminants.

On-site construction workers (e.g., remedial workers) are currently not expected to conduct any remedial activities in the river. A chain link fence is located along the southern property boundary to prevent access to the river. Thus, exposure to potentially impacted surface water and sediment are not considered potentially complete exposure pathways for this receptor at this time.

References:

1. Eastern Fenceline Lead Issues at the United Technologies Corporation, Former Inmont Facility, Hawthorne, NJ, ISRA Case No. 85563, Summary Report, Volume I. Prepared by Baker Environmental, Inc. Dated February, 2001.
2. Hawthorne Remedial Action Report. Prepared by IT Corporation. Dated April 11, 2001.
3. Letter from John Persico, Blasland Bouck & Lee, Inc., to Barry Tornick, USEPA, re: Response to December 7, 2001 e-mail request from Elizabeth Butler. Dated June 12, 2002.
4. Soil Delineation Report. Prepared by Blasland, Bouck & Lee, Inc.. Dated October 2002.
5. Second Semi-Annual Groundwater Remedial Progress Report 2003. Prepared by Blasland, Bouck & Lee, Inc.. Dated February 2004.
6. Letter from John Persico, Blasland, Bouck & Lee, Inc., to Mark Fisher, Environmental Liability Management, re: Request for Access to Shotmeyer Property. Dated May 20, 2004.

7. Letter from Jospeh Tota, United Technologies, to Barry Tornick, USEPA, re: Response to November 25, 2003 Letter Requesting Additional Information for the Environmental Indicators Determination. Dated May 24, 2004.

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **significant**[5] (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?

_X_ If no (exposures cannot 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:

Groundwater

As discussed in the response to Question 3, the potential for on-site remedial workers to come in direct contact with contaminated groundwater is being considered a potentially complete exposure pathway in the non-contract area. However, exposures are not expected to be significant because remedial workers are assumed to wear personal protective equipment (PPE) and adhere to strict Occupational Safety and Health Administration (OSHA) guidelines to minimize exposure to contamination. Thus, exposure to contaminated groundwater for remedial workers conducting remedial activities is not expected to pose a significant risk.

Surface/Subsurface Soil

As discussed in the response to Question 3, the potential for on-site remedial workers to come in direct contact with contaminated surface and subsurface soil is being considered a potentially complete exposure pathway in the non-contract area. However, exposures are not expected to be significant because remedial workers are assumed to wear PPE and adhere to strict OSHA guidelines to minimize exposure to contamination. Thus, exposure to contaminated soil for remedial workers conducting remedial activities is not expected to pose a significant risk.

[5] 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.

Surface Water/Sediment

As discussed in response to Questions 2 and 3, limited information regarding the hydraulic interaction between the lower bedrock unit and the Passaic River is available. At this time, available information appears to indicate that the lower bedrock unit may discharge to the Passaic River either in part or in full. Thus, for conservativeness, groundwater concentrations in wells closest to the river were considered to discharge to the Passaic River, and the potential for adverse impacts and exposure is being evaluated. However, based upon information provided by UTC, the potential for exposure to receptors in the Passaic River in the vicinity of the site does not appear to pose a significant risk.

First, UTC maintains personnel at the Inmont site for at least four hours per day each day to maintain the on-site groundwater pump and treat system. During the last three and a half years, the on-site plant treatment operator has not observed any recreational use of the Passaic River in the vicinity of the site. Second, UTC indicates that this section of the river adjacent to the Inmont Facility is highly industrialized. Most facilities are either immediately adjacent to the river, or the property boundaries along the river are fenced; thus, access to this portion of the river is minimal. Third, the aesthetics of the Passaic River in the area of the site do not attract recreational use. This area of the river typically contains visual debris both within the river and along the banks of the river (e.g., tires, shopping carts). UTC provided photographs to support the contention that the area is not likely to attract recreational users (Ref. 1). Lastly, UTC indicates that based upon visual observations of the river, it appears the depth of the river is very shallow, ranging from one to five feet bgs.

Thus, based upon a review of all available information, it does not appear that recreator exposure to potentially impacted surface water and sediment in the Passaic River would pose significant risk given the unlikelihood for routine or long-term exposure in this area.

References:

1. Letter from Jospeh Tota, United Technologies, to Barry Tornick, USEPA, re: Response to November 25, 2003 Letter Requesting Additional Information for the Environmental Indicators Determination. Dated May 24, 2004.

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.

This question is not applicable. See the response to Question 4.

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 Former Inmont Corporation Hawthorne Plant, EPA ID# NJD002165371, located at 150 Wagaraw Road, Hawthorne, New Jersey, 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:_____
Kristin McKenney
Risk Assessor
Booz Allen Hamilton

Reviewed by: _____ Date:_____
Kathy Rogovin
Senior Risk Assessor
Booz Allen Hamilton

Also Reviewed by: _____ Date:_____
Sameh Abdellatif, RPM
RCRA Programs Branch
EPA Region 2

_____ Date:_____
Barry Tornick, Section Chief
RCRA Programs Branch
EPA Region 2

Approved by: Original signed by: Date: 8/26/2004
Adolph Everett, Chief
RCRA Programs Branch
EPA Region 2

Locations where references may be found:

References reviewed to prepare this EI determination are identified after each response. Reference materials are available at the EPA Region 2, RCRA Records Center, located at 290 Broadway, 15th Floor, New York, New York, and the New Jersey Department of Environmental Protection Office located at 401 East State Street, Records Center, 6th Floor, Trenton, New Jersey.

Contact telephone and e-mail numbers: Sameh Abdellatif, EPA RPM
(212) 637-4103
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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.

Attachments

The following attachments have been provided to support this EI determination.

- Attachment 1 – Summary of Media Impacts Table

Attachment - Summary of Media Impacts Table

Former Inmont Corporation Hawthorne Plant

	AIR (Indoors)	SURF SOIL	SURF WATER	SED	SUB SURF SOIL	AIR (Outdoors)	CORRECTIVE ACTION MEASURE	KEY CONTAMINANTS
AOCs Within Contract Area								
All NFA								
AOCs Outside of the Contract Area								
4-84 Remediation Area	No	No	No	No	No	No	▸ Soil excavation ▸ Additional delineation conducted as part of the investigations at the Historic Dill Area (see below)	See Historic Fill Area.
Concrete Pad Near 4-84 Area	No	No	No	No	No	No	▸ Inmont has requested no further investigation (November 2002)	None identified above NJ SCC
Historic Fill Area	No	Yes	No	No	Yes	No	▸ Inmont contends that delineation is complete (November 2002) ▸ Inmont plans to develop a RASR which will likely outline planned excavation and disposal of limited areas of contamination, along with engineering and institutional controls to address the impacted areas	benzo(a)pyrene, benzo(a)anthracene, 1,2,4-trichlorobenzene, 3,3-dichlorobenzidine, arsenic, chromium, copper, lead, zinc, Aroclor 1254
Site-wide Groundwater	Yes						▸ Ongoing groundwater recovery, treatment, and reinjection ▸ Establishing CEA ▸ Ongoing monitoring	benzene, styrene, toluene, 1,2,4-trichlorobenzene, 1,4-dichlorobenzene, aniline, nitrobenzene