

The following Fact Sheet was prepared in September 2009.

This Fact Sheet has been prepared in accordance with the NJDEP's Technical Requirements for Site Remediation as they pertain to Public Notification and Outreach (N.J.A.C. 7:26E-1.4), and also as part of BP's on-going effort to keep the Paulsboro community informed of progress with environmental investigation and cleanup at the Site. This Fact Sheet summarizes information that has been provided on this website, in newsletters, at public meetings and in the various reports which have been prepared and submitted to the NJDEP. If you have any questions regarding the information provided, BP and NJDEP contacts are provided in the Fact Sheet.

## **Public Notice Fact Sheet BP Former Paulsboro Terminal 303 Mantua Ave., Paulsboro, Gloucester County, NJ**

### **Site Location**

BP Former Paulsboro Terminal  
303 Mantua Ave.  
Paulsboro, Gloucester County, New Jersey  
Tax Block 1, Lots 2, 4-6, 8, 21-23; Tax Block 1.07, Lots 20, 23, 26-44; Tax Block 1.14, Lots 45-50; Tax Block 2, Lots 9-11

### **Site Information**

Preferred Program Interest Name: BP Oil Inc Paulsboro Terminal  
Preferred Program Interest Number (Preferred ID#): 004975  
NJDEP Case Number: E95444

**Release Information:** Environmental investigations were initiated at the Site in 1979 with the installation of monitoring wells pursuant to an NJDEP directive to evaluate secondary containment features, which identified free product on groundwater. Subsequent remedial investigation activities identified, characterized, and delineated petroleum hydrocarbon and specialty chemical impacts to soil and groundwater as a result of the historic operations at the Site. A final Remedial Investigation Report was submitted to NJDEP in August 2007, and approved in December 2007 (following minor amendment). Residual chemical constituents in soil are confined within the Site boundaries; and chemical constituents in groundwater are delineated within an approximately 700 acre area surrounding the Site. Summaries of the soil and groundwater data are provided in the tables below.

**Description of Actions Taken to Minimize Impact to Public:** Remedial investigation activities have delineated soil impacts within the Site boundaries; have delineated groundwater impacts and demonstrated protection of groundwater use receptors; and have included potential vapor intrusion evaluation to demonstrate protection of potential receptors. Interim remedial measures (IRM) implemented at the Site since the 1980s have included: free product removal, groundwater extraction and containment, soil vapor extraction and air sparging, and soil excavation and disposal/treatment. A Remedial Action Selection Report (RASR) was submitted to NJDEP in August 2007, and approved in March 2008 (following minor amendment). The RASR selected the appropriate final remedial technologies and strategies to be employed for Site cleanup. Individual Remedial Action Workplans (RAWs) are being prepared and submitted to the NJDEP which present the details for the planned remediation activities in various areas, or Remedial Management Units (RMUs), at the Site.

To date, seven RAWs, out of 13 total, have been submitted to the NJDEP, which have focused on Site-wide groundwater, former stormwater management basins, and planned soil excavation remedies for the Site. Six of these seven initial RAWs have been approved by the NJDEP (between February and August 2009). The remaining six RAWs are planned to be submitted to NJDEP during

2009, which will focus on planned onsite, in-situ remediation activities. In addition to active remediation of Site soil and groundwater impacts, minimization of potential impact to the public will include institutional controls (Deed Notice) and property use restrictions, including engineering controls (i.e. surface covers / capping).

The current soil and groundwater data indicates that the Site poses no public health threats to the nearby communities.

#### Notice/Contact Information

Atlantic Richfield Company	New Jersey Department of Environmental Protection Office of Community Relations
Sasa Jazic Atlantic Richfield Company (a BP affiliated company) 28100 Torch Parkway Mail Code 2-S Warrenville IL 60555 Tel: 630-386-1620 <a href="mailto:Sasa.Jazic@bp.com">Sasa.Jazic@bp.com</a>	Division of Remediation Support New Jersey Department of Environmental Protection 401 East State Street, 6 <sup>th</sup> Floor P.O.Box 413 Trenton, NJ 08625-0413 Attention: Office of Community Relations

Table 1: Primary Chemical Constituents in Soil (1982-2008)

Chemical of Concern	Minimum Concentration above SCC		Maximum Concentration above SCC		NJDEP SCC/SRS	
	Concentration	Units	Concentration	Units	Concentration	Units
1,2,4-Trichlorobenzene	88.5	mg/kg	11300	mg/kg	68	mg/kg
1,2-Dibromoethane (Ethylene dibromide)	0.413	mg/kg	10.3	mg/kg	0.008	mg/kg
1,2-Dichlorobenzene	72	mg/kg	9710	mg/kg	50	mg/kg
1,2-Dichloroethane	1.3	mg/kg	3300	mg/kg	0.9	mg/kg
1,3-Dichlorobenzene	5230	mg/kg	5780	mg/kg	100	mg/kg
1,4-Dichlorobenzene	8.92	mg/kg	10700	mg/kg	5	mg/kg
Aroclor 1254	0.658	mg/kg	7.09	mg/kg	0.49	mg/kg
Aroclor 1260	0.5	mg/kg	4.19	mg/kg	0.49	mg/kg
Arsenic	20.8	mg/kg	118	mg/kg	20	mg/kg
Benzene	1.01	mg/kg	1500	mg/kg	1	mg/kg
Benzo[a]anthracene	0.973	mg/kg	102	mg/kg	0.9	mg/kg
Benzo[a]pyrene	0.68	mg/kg	69.4	mg/kg	0.66	mg/kg
Benzo[b]fluoranthene	0.907	mg/kg	40.2	mg/kg	0.9	mg/kg
Benzo[k]fluoranthene	0.906	mg/kg	17.5	mg/kg	0.9	mg/kg
Beryllium	2.1	mg/kg	9.5	mg/kg	2	mg/kg
bis(2-Ethylhexyl)phthalate	151	mg/kg	151	mg/kg	49	mg/kg
Butyl benzyl phthalate	162	mg/kg	1190	mg/kg	100	mg/kg
Carbon tetrachloride	1.1	mg/kg	1910	mg/kg	1	mg/kg
Chlorobenzene	1.2	mg/kg	4850	mg/kg	1	mg/kg
Chloroform	0.83	mg/kg	2320	mg/kg	0.6	mg/kg
Chromium	20.1	mg/kg	174	mg/kg	20	mg/kg
Chrysene	9.02	mg/kg	120	mg/kg	9	mg/kg
cis-1,2-Dichloroethene	1.02	mg/kg	236	mg/kg	1	mg/kg
Dibenz[a,h]anthracene	0.705	mg/kg	5	mg/kg	0.66	mg/kg
Dieldrin	0.0935	mg/kg	1.64	mg/kg	0.042	mg/kg
Ethylbenzene	110	mg/kg	4530	mg/kg	100	mg/kg
Fluorene	109	mg/kg	109	mg/kg	100	mg/kg
Indeno[1,2,3-cd]pyrene	0.951	mg/kg	8.51	mg/kg	0.9	mg/kg
Lead	403	mg/kg	19300	mg/kg	400	mg/kg
Methylene chloride	7.17	mg/kg	10.7	mg/kg	1	mg/kg
Naphthalene	6.5	mg/kg	3660	mg/kg	6	mg/kg
Naphthalene (by 8270)	18.4	mg/kg	19.6	mg/kg	6	mg/kg
Nickel	254	mg/kg	254	mg/kg	250	mg/kg
Phenol	1010	mg/kg	3230	mg/kg	50	mg/kg
Pyrene	412	mg/kg	412	mg/kg	100	mg/kg
Styrene	24.8	mg/kg	46.9	mg/kg	23	mg/kg
Tetrachloroethene (PCE)	1.1	mg/kg	770	mg/kg	1	mg/kg
Toluene	550	mg/kg	5600	mg/kg	500	mg/kg

Chemical of Concern	Minimum Concentration above SCC		Maximum Concentration above SCC		NJDEP SCC/SRS	
	Units	Units	Units	Units	Units	Units
Total TIC, Volatile	1026	mg/kg	1904	mg/kg	1000	mg/kg
TPH by 418.1	10100	mg/kg	250000	mg/kg	10000	mg/kg
Trichloroethene (TCE)	1.04	mg/kg	25.3	mg/kg	1	mg/kg
Vinyl chloride	2.55	mg/kg	20.2	mg/kg	2	mg/kg
Xylenes (Total)	68.4	mg/kg	19300	mg/kg	67	mg/kg

Table 2: Primary Chemical Constituents in Groundwater (since 2000)

Chemical Of Concern	Since 2000 Maximum Concentration		2008 Maximum Concentration		NJDEP GWQC	
	Units	Units	Units	Units	Units	Units
1,1,1-Trichloroethane	1,200	ug/l	NA		30	ug/l
1,1,2-Trichloroethane	750	ug/l	NA		3	ug/l
1,1-Dichloroethane	1,200	ug/l	NA		50	ug/L
1,1-Dichloroethene	500	ug/l	5.9	ug/l	2	ug/l
1,2,4-Trichlorobenzene	8,670	ug/l	NA		9	ug/l
1,2-Dibromoethane (Ethylene dibromide)	2,490	ug/l	NA		0.05	ug/l
1,2-Dichlorobenzene	3,960	ug/l	NA		600	ug/l
1,2-Dichloroethane	14,700	ug/l	7,500	ug/l	2	ug/l
1,2-Dichloropropane	250	ug/l	5	ug/l	1	ug/l
1,4-Dichlorobenzene	7,800	ug/l	NA		600	ug/l
2-Butanone (MEK)	126,000	ug/l	950	ug/l	300	ug/l
2-Hexanone	1,200	ug/l	NA		100	ug/l
2-Methylnaphthalene	23,900	ug/l	NA		100	ug/l
4,4'-DDD (p,p'-TDE)	0.11	ug/l	NA		0.1	ug/l
4,4'-DDT	0.18	ug/l	NA		0.1	ug/l
4-Methyl-2-Pentanone (MIBK)	1,420	ug/l	NA		400	ug/l
Acetone	26,000	ug/l	26,000	ug/l	700	ug/l
Antimony	29	ug/l	NA		20	ug/l
Arsenic	1,200	ug/l	382	ug/l	8	ug/l
Benzene	20,200	ug/l	3,200	ug/l	1	ug/l
Benzo[a]anthracene	4.10	ug/l	NA		0.2	ug/l
Benzo[a]pyrene	2.60	ug/l	NA		0.2	ug/l
Benzo[b]fluoranthene	2.60	ug/l	NA		10	ug/l
Benzo[k]fluoranthene	0.57	ug/l	NA		1	ug/l
bis(2-Ethylhexyl)phthalate	540	ug/l	9	ug/l	3	ug/l
Bromodichloromethane	250	ug/l	2	ug/l	1	ug/l
Butyl benzyl phthalate	406	ug/l	NA		100	ug/l
Carbon disulfide	1,880	ug/l	NA		800	ug/l
Carbon tetrachloride	80,300	ug/l	17,000	ug/l	2	ug/l
Chlorobenzene	546,000	ug/l	380,000	ug/l	50	ug/l
Chloroform	15,900	ug/l	1,600	ug/l	6	ug/l
Chloromethane (Methyl chloride)	1,200	ug/l	NA		30	ug/l
Chromium	9,810	ug/l	1,250	Ug/l	100	ug/l
Chrysene	11	ug/l	NA		5	ug/L
cis-1,2-Dichloroethene	2,630	ug/l	430	ug/l	70	ug/l
Dieldrin	0.11	ug/l	NA		0.03	ug/l
Ethylbenzene	36,800	ug/l	4,000	ug/l	700	ug/l
Fluorene	402	ug/l	NA		300	ug/l
Indeno[1,2,3-cd]pyrene	0.78	ug/l	NA		10	ug/l
Lead	6,190	ug/l	150	ug/l	5	ug/l
Methyl Tertiary-Butyl Ether (MTBE)	5,740	ug/l	790	ug/l	70	ug/l
Methylene chloride	1,760	ug/l	160	ug/l	2	ug/l
Naphthalene	40,300	ug/l	500	ug/l	300	ug/l
Phenanthrene	916	ug/l	NA		100	ug/l
Pyrene	266	ug/l	NA		200	ug/l
Styrene	1,200	ug/l	NA		100	ug/l
Tertiary-Butyl Alcohol (TBA)	12,000	ug/l	890	ug/l	100	ug/l
Tetrachloroethene (PCE)	9,480	ug/l	180	ug/l	1	ug/l
Toluene	122,000	ug/l	26,000	ug/l	600	ug/l
Total TIC, Semi-Volatile	5,025	ug/l	NA		500	ug/l
Total TIC, Volatile	17,800	ug/l	NA		500	ug/l
Trichloroethene (TCE)	250	ug/l	23	ug/l	1	ug/l

Chemical Of Concern	Since 2000		2008		NJDEP	
	Maximum Concentration	Units	Maximum Concentration	Units	GWQC	Units
Vinyl chloride	487	ug/l	32	ug/l	5	ug/l
Xylenes (total)	280,000	ug/l	27,000	ug/l	1000	ug/l

Notes

Includes groundwater samples from monitoring wells, remediation wells, and investigations (temporary well points, test pits, etc.)

Includes all constituents historically detected above NJDEP GWQC in any groundwater sample.

NA : Constituent not detected above GWQC OR analysis not performed on groundwater samples collected in 2008.

Information on the chemicals listed above can be found at:

[www.epa.gov/superfund/health/index.htm](http://www.epa.gov/superfund/health/index.htm) or [www.atsdr.cdc.gov/toxfaqs/index.asp](http://www.atsdr.cdc.gov/toxfaqs/index.asp)

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