

**Table 3-1A**  
**Soil Remediation Standards/Criteria - Hexavalent Chromium and CCPW Metals**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

<b>Constituent</b>	<b>CrSCC (mg/kg)</b>	<b>RDCSRS (mg/kg)</b>	<b>RDCSRS-GAG<sup>1</sup> (mg/kg)</b>	<b>NRDCSRS (mg/kg)</b>
HEXAVALENT CHROMIUM	20	N/A	N/A	N/A
ANTIMONY	N/A	31	N/A	450
CHROMIUM (TOTAL) <sup>2</sup>	N/A	120,000	N/A	N/A
NICKEL	N/A	1,600	N/A	23,000
THALLIUM	N/A	N/A	N/A	N/A
VANADIUM	N/A	N/A	390	1,100

**Notes:**

<sup>1</sup> RDCSRS-GAG is an alternative remediation standard approved by the NJDEP on December 28, 2016 (NJDEP, 2016).

<sup>2</sup> There is currently no NJDEP SRS and no NJDEP SCC for total chromium. Therefore, total chromium results are compared to the interim NJDEP Residential SCC for trivalent chromium of 120,000 mg/kg as the cleanup criteria for soil at the Garfield Avenue Group Sites. There is no non-residential SCC for trivalent chromium.

CCPW - Chromate Chemical Production Waste

CrSCC - Chromium Soil Cleanup Criteria

GAG - Garfield Avenue Group

mg/kg - milligrams per kilogram

N/A - not available

NJDEP - New Jersey Department of Environmental Protection

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard

RDCSRS - Residential Direct Contact Soil Remediation Standard

SCC - Soil Cleanup Criteria

SRS - Soil Remediation Standard

**Table 3-1B**  
**Soil Remediation Standards/Criteria - Non-CCPW Metals**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

<b>Constituent</b>	<b>NRDCSRS (mg/kg)</b>	<b>RDCSRS (mg/kg)</b>
ALUMINUM	N/A	78,000
ARSENIC	19	19
BARIUM	59,000	16,000
BERYLLIUM	140	16
BORON	N/A	N/A
CADMIUM	78	78
CALCIUM METAL	N/A	N/A
COBALT	590	1,600
COPPER	45,000	3,100
CYANIDE	680	47
CYANIDE REACTIVITY	N/A	N/A
IRON	N/A	N/A
LEAD	800	400
MAGNESIUM	N/A	N/A
MANGANESE	5,900	11,000
MERCURY	65	23
POTASSIUM	N/A	N/A
SELENIUM	5,700	390
SILVER	5,700	390
SODIUM	N/A	N/A
SULFUR	N/A	N/A
ZINC	110,000	23,000

**Notes:**

CCPW - Chromate Chemical Production Waste

mg/kg - milligrams per kilogram

N/A - not available

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard

RDCSRS - Residential Direct Contact Soil Remediation Standard

**Table 3-1C**  
**Soil Remediation Standards/Criteria - PCBs**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

<b>Constituent</b>	<b>NRDCSRS (mg/kg)</b>	<b>RDCSRS (mg/kg)</b>
PCB 1016	1	0.2
PCB 1221	1	0.2
PCB 1232	1	0.2
PCB 1242	1	0.2
PCB 1248	1	0.2
PCB 1254	1	0.2
PCB 1260	1	0.2
PCB 1262	1	0.2
PCB 1268	1	0.2

**Notes:**

mg/kg - milligrams per kilogram

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard

PCB - polychlorinated biphenyl

RDCSRS - Residential Direct Contact Soil Remediation Standard

**Table 3-1D**  
**Soil Remediation Standards/Criteria - Pesticides**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

Constituent	NRDCSRS (mg/kg)	RDCSRS (mg/kg)
4,4'-DDD	13	3
4,4'-DDE	9	2
4,4'-DDT	8	2
ALDRIN	0.2	0.04
ALPHA-BHC	0.5	0.1
ALPHA-CHLORDANE	1	0.2
BETA-BHC	2	0.4
CHLORDANE	1	0.2
DELTA-BHC	N/A	N/A
DIELDRIN	0.2	0.04
ENDOSULFAN SULFATE	6,800	470
ENDOSULFAN-I	6,800	470
ENDOSULFAN-II	6,800	470
ENDRIN	340	23
ENDRIN ALDEHYDE	N/A	N/A
ENDRIN KETONE	N/A	N/A
GAMMA-BHC (LINDANE)	2	0.4
GAMMA-CHLORDANE	1	0.2
HEPTACHLOR	0.7	0.1
HEPTACHLOR EPOXIDE	0.3	0.07
METHOXYCHLOR	5,700	390
TOXAPHENE	3	0.6

**Notes:**

mg/kg - milligrams per kilogram

N/A - not available

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard

RDCSRS - Residential Direct Contact Soil Remediation Standard

**Table 3-1E**  
**Soil Remediation Standards/Criteria - SVOCs**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

Constituent	NRDCSRS (mg/kg)	RDCSRS (mg/kg)
1,2,4,5-TETRACHLOROBENZENE	N/A	N/A
1,2,4-TRICHLOROBENZENE	820	73
1,2-DICHLOROBENZENE	59,000	5,300
1,4-DICHLOROBENZENE	13	5
1,4-DIOXANE	N/A	N/A
1-1'-BIPHENYL	240	61
2,2'-OXYBIS(1-CHLOROPROPANE) [a]	67	23
2,3,4,6-TETRACHLOROPHENOL	N/A	N/A
2,4,5-TRICHLOROPHENOL	68,000	6,100
2,4,6-TRICHLOROPHENOL	74	19
2,4-DICHLOROPHENOL	2,100	180
2,4-DIMETHYLPHENOL	14,000	1,200
2,4-DINITROPHENOL	1,400	120
2,4-DINITROTOLUENE	3	0.7
2,6-DINITROTOLUENE	3	0.7
2-CHLORONAPHTHALENE	N/A	N/A
2-CHLOROPHENOL	2,200	310
2-METHYLNAPHTHALENE	2,400	230
2-METHYLPHENOL	3,400	310
2-NITROANILINE	23,000	39
2-NITROPHENOL	N/A	N/A
3,3'-DICHLOROBENZIDINE	4	1
3,5,5-TRIMETHYL-2-CYCLOHEXENE-1-ONE	2,000	510
3+4-METHYLPHENOL	340	31
3-NITROANILINE	N/A	N/A
4,6-DINITRO-2-METHYLPHENOL	68	6
4-BROMOPHENYL PHENYL ETHER	N/A	N/A
4-CHLORO-3-METHYLPHENOL	N/A	N/A
4-CHLOROPHENYL PHENYL ETHER	N/A	N/A
4-NITROPHENOL	N/A	N/A
ACENAPHTHENE	37,000	3,400
ACENAPHTHYLENE	300,000	N/A
ACETOPHENONE	5	2
ANTHRACENE	30,000	17,000
ATRAZINE	2,400	210
BENZALDEHYDE	68,000	6,100
BENZO(A)ANTHRACENE	17	5
BENZO(A)PYRENE	2	0.5
BENZO(B)FLUORANTHENE	17	5
BENZO(G,H,I)PERYLENE	30,000	380,000
BENZO(K)FLUORANTHENE	170	45
BENZYL ALCOHOL	N/A	N/A
BENZYL BUTYL PHTHALATE	14,000	1,200
BIS(-2-CHLOROETHOXY)METHANE	N/A	N/A
BIS(2-CHLOROETHYL)ETHER	2	0.4
BIS(2-ETHYLHEXYL)PHTHALATE	140	35

**Table 3-1E**  
**Soil Remediation Standards/Criteria - SVOCs**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

Constituent	NRDCSRS (mg/kg)	RDCSRS (mg/kg)
CAPROLACTAM	340,000	31,000
CARBAZOLE	96	24
CHRYSENE	1,700	450
DIBENZO(A,H)ANTHRACENE	2	0.5
DIBENZOFURAN	N/A	N/A
DIETHYL PHTHALATE	550,000	49,000
DIMETHYL PHTHALATE	N/A	N/A
DI-N-BUTYLPHTHALATE	68,000	6,100
DI-N-OCTYL PHTHALATE	27,000	2,400
FLUORANTHENE	24,000	2,300
FLUORENE	24,000	2,300
HEXACHLORO-1,3-BUTADIENE	25	6
HEXACHLOROBENZENE	1	0.3
HEXACHLOROCYCLOPENTADIENE	110	45
HEXACHLOROETHANE	48	12
INDENO(1,2,3-CD)PYRENE	17	5
M-DICHLOROBENZENE	59,000	5,300
METHANAMINE, N-METHYL-N-NITROSO	0.7	0.7
NAPHTHALENE	17	6
NITROBENZENE	14	5
N-NITROSO-DI-N-PROPYLAMINE	0.3	0.2
N-NITROSODIPHENYLAMINE	390	99
P-CHLOROANILINE	N/A	N/A
PENTACHLOROPHENOL	3	0.9
PHENANTHRENE	300,000	N/A
PHENOL	210,000	18,000
P-NITROANILINE	N/A	N/A
PYRENE	18,000	1,700

**Notes:**

mg/kg - milligrams per kilogram

N/A - not available

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard

RDCSRS - Residential Direct Contact Soil Remediation Standard

SVOC - semi-volatile organic compound

[a] - Chemical name was changed by the Integrated Risk Information System (IRIS) on November 30, 2007 from bis(2-chloroisopropyl)ether to bis(2-chloro-1-methylethyl)ether (common name). This compound is also known as 2,2'-oxybis(1-chloropropane) (Chemical Abstracts Service index name). See the link at [https://cfpub.epa.gov/ncea/iris/iris\\_documents/documents/subst/0407\\_summary.pdf](https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0407_summary.pdf), Section VIII, for "Synonyms" of this chemical.

**Table 3-1F**  
**Soil Remediation Standards/Criteria - VOCs**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

<b>Constituent</b>	<b>NRDCSRS (mg/kg)</b>	<b>RDCSRS (mg/kg)</b>
1,1,1-TRICHLOROETHANE	N/A	160,000
1,1,2,2-TETRACHLOROETHANE	3	1
1,1,2-TRICHLOROETHANE	6	2
1,1,2-TRICHLOROTRIFLUOROETHANE	N/A	N/A
1,1-DICHLOROETHANE	24	8
1,1-DICHLOROETHYLENE	150	11
1,2,3-TRICHLOROBENZENE	N/A	N/A
1,2,4-TRICHLOROBENZENE	820	73
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	0.2	0.08
1,2-DIBROMOETHANE(EDB)	0.04	0.008
1,2-DICHLOROBENZENE	59,000	5,300
1,2-DICHLOROETHANE	3	0.9
1,2-DICHLOROPROPANE	5	2
1,4-DICHLOROBENZENE	13	5
1,4-DIOXANE	N/A	N/A
2-BUTANONE (MEK)	44,000	3,100
4-METHYL-2-PENTANONE (MIBK)	N/A	N/A
ACETONE	N/A	70,000
BENZENE	5	2
BROMODICHLOROMETHANE	3	1
BROMOMETHANE	59	25
CARBON DISULFIDE	110,000	7,800
CARBON TETRACHLORIDE	4	2
CHLOROBENZENE	7,400	510
CHLOROBROMOMETHANE	N/A	N/A
CHLORODIBROMOMETHANE	8	3
CHLOROETHANE	1,100	220
CHLOROFORM	2	0.6
CHLOROMETHANE	12	4
CIS-1,2-DICHLOROETHENE	560	230
CIS-1,3-DICHLOROPROPENE	7	2
CYCLOHEXANE	N/A	N/A
DICHLORODIFLUOROMETHANE	230,000	490
DICHLOROMETHANE	230	46
ETHYLBENZENE	110,000	7,800
ISOPROPYLBENZENE	N/A	N/A
M+P-XYLENE	170,000	12,000
M-DICHLOROBENZENE	59,000	5,300
METHYL ACETATE	N/A	78,000
METHYL N-BUTYL KETONE	N/A	N/A
METHYLCYCLOHEXANE	N/A	N/A
METHYL-TERT-BUTYL ETHER	320	110
O-XYLENE	170,000	12,000
STYRENE (MONOMER)	260	90
TETRACHLOROETHENE	1,500	43
TOLUENE	91,000	6,300

**Table 3-1F**  
**Soil Remediation Standards/Criteria - VOCs**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

<b>Constituent</b>	<b>NRDCSRS (mg/kg)</b>	<b>RDCSRS (mg/kg)</b>
TRANS-1,2-DICHLOROETHENE	720	300
TRANS-1,3-DICHLOROPROPENE	7	2
TRIBROMOMETHANE	280	81
TRICHLOROETHYLENE	10	3
TRICHLOROFLUOROMETHANE	340,000	23,000
VINYL CHLORIDE	2	0.7
XYLENES	170,000	12,000

**Notes:**

mg/kg - milligrams per kilogram

N/A - not available

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard

RDCSRS - Residential Direct Contact Soil Remediation Standard

VOC - volatile organic compound



**Table 3-1G**  
**Soil Remediation Standards/Criteria - EPH and TPH**  
**Site 114, Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

Constituent	EPH Soil Remediation Criterion (mg/kg)
<b>EPH</b>	
C10-C12 AROMATICS	1,700
C12-C16 ALIPHATICS	1,700
C12-C16 AROMATICS	1,700
C16-C21 ALIPHATICS	1,700
C16-C21 AROMATICS	1,700
C21-C36 AROMATICS	1,700
C21-C40 ALIPHATICS	1,700
C9-C12 ALIPHATICS	1,700
TOTAL ALIPHATICS	1,700
TOTAL AROMATICS	1,700
TOTAL EPH	1,700
TOTAL EPH (C9-C40)	1,700
<b>TPH</b>	
TPH-DRO (C10-C28)	1,700
TPH-GRO (C6-C10)	1,700

**Notes:**

DRO - diesel range organics

EPH - extractable petroleum hydrocarbons

GRO - gasoline range organics

mg/kg - milligrams per kilogram

TPH - total petroleum hydrocarbons