TABLE D-3
SUMMARY OF INORGANIC ANALYTICAL RESULTS FOR SURFACE WATER DRAINAGE SAMPLES
CASMALIA RESOURCES SUPERFUND SITE REMEDIAL INVESTIGATION
(All Results in µg/L)

		North Drainage										(upgradient)			
		RISWOF-02 *		RISWOF-02 *		RISWOF-02 *		RISWOF-02 *		RISWOF-06 *		RISWOF-03 *		RISWOF-03 *	
		8/31/2004		10/27/2004		3/22/2005		1/1/2006		1/1/2006		8/19/2004		11/9/2004	
Parameter	**CAS RN**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**
Aluminum	7429-90-5	<110	<110	**450**	<110	**150000** J	**6700**	**49000** J	-	**9500**	-	**1500**	<110	**820** J	<110
Amenable Cyanide	A57-12-5	< 6.3	-	< 6.3	-	-	-	-	-	-	-	< 6.3	-	< 6.3	-
Antimony	7440-36-0	**150** J	<0.25	**140** J	0.63 J	<0.25	<0.25	0.23 J	<0.25	<0.25	<0.25	**40** J	<0.25	**44** J	<0.25 UJ
Arsenic	7440-38-2	**15.5**	**23**	**14.4**	**22**	**47** J	**9.8**	**7.4**	**15**	**5.8**	**8**	**2.4**	**5.3**	**1.8** J	**3.3**
Barium	7440-39-3	**50** J	**41** J	**64**	**58**	**1100**	**100**	**74**	-	**91**	-	**66**	**51**	**60**	**54**
Beryllium	7440-41-7	<0.018	0.034 J	<0.018	<0.018	**9**	0.17 J	<0.018	**1.6** J	<0.018	0.31 J	0.09 J	<0.018	0.039 J	<0.018
Cadmium	7440-43-9	**0.46** J	**0.35** J	<0.012	<0.012	**13**	**0.49** J	<0.011	**4.2**	**0.76** J	**2.2**	**0.3** J	<0.012	0.14 J	<0.012
Calcium	7440-70-2	740000	720000	690000	690000	81000	10000	210000	-	420000	-	180000	170000	170000	180000
Chromium	7440-47-3	4 J	**5** J	**16** J	**10** J	**380**	**6.5** J	**110**	-	**21** J	-	**4.9** J	<10	4 J	2.1 J
Cobalt	7440-48-4	<3.8	**8** J	**10** J	**11** J	**63** J	<3.8	**12** J	-	<0.75	-	<3.8	<3.8	<3.8	0.9 J
Copper	7440-50-8	<10	<10	<10	**7** J	**160**	**4.2** J	**30** J	-	**9** J	-	**2.2** J	<10	<10	<10
Iron	7439-89-6	480 J	36 J	3900	150 J	220000 J	3800	69000 J	-	12000	-	2200	5.5 J	1100 J	4.9 J
Lead	7439-92-1	0.042 J	0.062 J	0.11 J	0.054 J	**63**	0.83 J	<0.020	**20**	<0.020	**3.8**	0.72 J	<0.027	0.42 J	0.12 J
Magnesium	7439-95-4	660000	660000	710000	720000	87000	7700	180000	-	340000	-	84000	84000	82000	88000
Manganese	7439-96-5	**500**	**410**	**1600**	**1400**	**2000**	42 J	**150**	-	**260**	-	49	23	31	20
Mercury	7439-97-6	<0.050	<0.050	<0.050	<0.050	0.23	0.05	0.03 J	-	0.022 J	-	<0.050	<0.050	<0.050	<0.050
Molybdenum	7439-98-7	**72** J	**64** J	**54** J	**68** J	<5.5	<5.5	35 J	-	**77** J	-	20 J	22 J	22 J	21 J
Nickel	7440-02-0	**9** J	**17** J	**22** J	**26** J	**440**	**35** J	**140**	-	**56** J	-	**5.8** J	1.5 J	**4.2** J	1.6 J
Potassium	7440-09-7	56000	53000	46000	48000	33000	2200 J	17000	-	30000	-	4900	4400	4300	4300
Selenium	7782-49-2	**96**	**120**	**46.9**	**76**	**6**	0.71 J	**16**	**11**	**57**	**44**	2.3	4.2	0.46 J	2.3
Silver	7440-22-4	<0.014	**1**	<0.014	<0.014	**0.53** J	<0.014 UJ	<0.0080	0.31 J	<0.0080	0.12 J	0.023 J	<0.014	<0.014	<0.014 UJ
Sodium	7440-23-5	2100000	2100000	2100000	2200000	100000	85000	600000	-	1300000	-	120000	120000	110000	120000
Thallium	7440-28-0	0.14 J	0.53 J	<0.045	1 J	**2.8**	<0.045	<0.045	0.98 J	0.21 J	0.39 J	<0.045	<0.045	0.1 J	0.23 J
Tin	7440-31-5	<0.085	<0.085	<0.085	<0.085	**4.4**	<0.085	<0.085	1.4 J	<0.085	<0.085	<0.085	<0.085	<0.085	<0.085
Total Cyanide	57-12-5	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-
Vanadium	7440-62-2	**160**	**160**	**78**	**74**	**310**	<5.0	**36** J	-	**60** J	-	**44**	**40**	**35**	**31**
Zinc	7440-66-6	**10**	**9.9**	**15.9**	**15**	**470**	**44**	**100**	**170**	**64**	**37**	**10.6**	<0.46	**4.7** J	1.1 J

Footnotes:
* = Benchmark Location
µg/L = micrograms per liter
CAS RN = Chemical Abstract Services Registry Number
U = Non-detect
J = Estimated value
< = Result less than detection limit
Bold values indicate exceedances of one or more screening levels.

TABLE D-3
SUMMARY OF INORGANIC ANALYTICAL RESULTS FOR SURFACE WATER DRAINAGE SAMPLES
CASMALIA RESOURCES SUPERFUND SITE REMEDIAL INVESTIGATION
(All Results in µg/L)

		C Drainage / Casmalia Creek													
		RISWOF-03 *		RISWOF-04		RISWOF-04		RISWOF-04		RISWOF-05		RISWOF-05		(downgradient) RISWOF-05	
		3/22/2005		8/19/2004		11/9/2004		3/22/2005		8/18/2004		10/26/2004		3/22/2005	
Parameter	**CAS RN**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**
Aluminum	7429-90-5	**100000** J	**4800**	**690**	<110	**890** J	<110	**80000** J	**1100**	**15000**	<110	**30000**	<110	**92000** J	**1100**
Amenable Cyanide	A57-12-5	-	-	< 6.3	-	< 6.3	-	-	-	< 6.3	-	< 6.3	-	-	-
Antimony	7440-36-0	0.49 J	<0.25	**40** J	<0.25	**38** J	<0.25 UJ	0.5 J	<0.25	**36** J	0.39 J	**27** J	0.42 J	0.48 J	<0.25
Arsenic	7440-38-2	**19** J	**6.4**	**4.2**	**6.9**	**2.5**	**3.7**	**17** J	**6.1**	**9.3**	**9**	**9.9**	**6.6**	**18** J	**5.6**
Barium	7440-39-3	**640**	**55**	**40**	**34**	**56**	**48**	**480**	**27** J	**160**	**48**	**270**	**40** J	**540**	**25** J
Beryllium	7440-41-7	**4.7**	0.05 J	0.033 J	<0.018	0.033 J	<0.018	**3.8**	<0.018 UJ	**0.67** J	<0.018	**1.1**	<0.018	**4.3**	0.02 J
Cadmium	7440-43-9	**6.1**	0.15 J	<0.012	<0.012	0.096 J	<0.012	**4.5**	0.18 J	**1.7**	<0.012	**3.6**	<0.012	**4.9**	0.13 J
Calcium	7440-70-2	55000	21000	180000	170000	170000	170000	60000	35000	180000	170000	140000	120000	71000	38000
Chromium	7440-47-3	**240**	<10	2.2 J	<10	3.9 J	1.8 J	**190**	<10	**36**	<10	**73**	<2.0	**240**	<10
Cobalt	7440-48-4	<3.8	<3.8	<3.8	<3.8	<3.8	1.3 J	<3.8	<3.8	**6.5** J	<3.8	**13** J	<3.8	<3.8	<3.8
Copper	7440-50-8	**110**	<10	0.9 J	0.9 J	<10	<10	**94**	<10	**46**	1 J	**67**	<2.1	**110**	<10
Iron	7439-89-6	130000 J	800	1100	11 J	1200 J	13 J	100000 J	720	22000	<11	4200	18 J	110000 J	670
Lead	7439-92-1	**34**	0.32 J	0.36 J	0.05 J	0.32 J	0.1 J	**27**	0.58 J	**6.3**	<0.027	**11.8**	<0.027	**33**	0.56 J
Magnesium	7439-95-4	43000	13000	85000	86000	87000	84000	43000	21000	90000	87000	80000	69000	52000	23000
Manganese	7439-96-5	**650**	11 J	**60**	39	**60**	39	**500**	12 J	**340**	**110**	**630**	**140**	**710**	18 J
Mercury	7439-97-6	0.12 J	<0.050	<0.050	<0.050	<0.050	<0.050	0.11 J	<0.050	<0.050	<0.050	<0.2	<0.050	0.11 J	<0.050
Molybdenum	7439-98-7	<5.5	<5.5	21 J	23 J	24 J	24 J	<5.5	19 J	27 J	29 J	27 J	30 J	<5.5	17 J
Nickel	7440-02-0	**230**	**18** J	**4** J	1.5 J	**2.3** J	1.6 J	**190**	**19** J	**41**	**3.2** J	**83**	**6.5** J	**230**	**22** J
Potassium	7440-09-7	18000	4600 J	5200	5100	5100	4600	14000	4700 J	11000	8100	19000	14000	18000	4500 J
Selenium	7782-49-2	4.3	**5.8**	2.6	**5.6**	1.2 J	3.2	4.8	4.9	4.8	**6.2** J	4.8	**5.2**	**5.7**	4.4
Silver	7440-22-4	**0.53** J	<0.014 UJ	0.009 J	0.02 J	<0.014	<0.014 UJ	**0.45** J	<0.014 UJ	0.14 J	<0.014	0.24 J	<0.014 UJ	**0.48** J	<0.014 UJ
Sodium	7440-23-5	66000	70000	130000	130000	130000	130000	81000	87000	140000	150000	150000	150000	93000	97000
Thallium	7440-28-0	1.6	<0.045	<0.045	0.16 J	0.3 J	0.1 J	1.2	<0.045	0.27 J	<0.045	0.72 J	0.31 J	1.5	<0.045
Tin	7440-31-5	**3.2**	<0.085	<0.085	<0.085	<0.085	<0.085	**2.9**	<0.085	0.75 J	<0.085	0.69 J	<0.085	**2.7**	<0.085
Total Cyanide	57-12-5	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-	< 6.3	-
Vanadium	7440-62-2	**230**	<5.0	**38**	**35**	**36**	**30**	**190**	<5.0	**86**	**40**	**130**	**38** J	**200**	<5.0
Zinc	7440-66-6	**280**	**8.2**	**5.5**	<0.46	**6.8**	0.69 J	**230**	**7.6**	**62.4**	<0.46	**126**	<0.46	**250**	**4.3** J

Footnotes:
* = Benchmark Location
µg/L = micrograms per liter
CAS RN = Chemical Abstract Services Registry Number
U = Non-detect
J = Estimated value
< = Result less than detection limit
Bold values indicate exceedances of one or more screening levels.

TABLE D-3
SUMMARY OF INORGANIC ANALYTICAL RESULTS FOR SURFACE WATER DRAINAGE SAMPLES
CASMALIA RESOURCES SUPERFUND SITE REMEDIAL INVESTIGATION
(All Results in µg/L)

		A Drainage		RCRA Canyon						Screening Levels	
		RISWOF-01		RISWRC-01		RISWRC-01		RISWRC-01		Lowest Human Health Risk Screening Level	Lowest Ecological Screening Level
		3/22/2005		12/28/2004		3/22/2005		12/31/2005			
Parameter	**CAS RN**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**	**Total**	**Dissolved**		
Aluminum	7429-90-5	**4100** J	**330**	**3900**	<110	**570** J	<110	**430**	-	1000	87
Amenable Cyanide	A57-12-5	-	-	-	-	-	-	-	-	150	5.2
Antimony	7440-36-0	<0.25	<0.25	**130**	<0.25	0.4 J	<0.25	0.9 J	0.93 J	6	30
Arsenic	7440-38-2	**2.3** J	**1.8** J	**103**	**270**	**48** J	**86**	**180**	**160**	0.045	1
Barium	7440-39-3	**35** J	**23** J	**190**	**24**	**97**	**24** J	**34** J	-	1000	4
Beryllium	7440-41-7	0.1 J	0.03 J	0.19 J	0.051 J	0.08 J	<0.018 UJ	<0.018	<0.018	4	0.66
Cadmium	7440-43-9	**0.23** J	0.1 J	**2.8**	**0.99** J	**0.92** J	**0.34** J	**4.7**	**5.6**	0.18	0.25
Calcium	7440-70-2	18000	19000	360000	440000	320000	370000	460000	-	-	-
Chromium	7440-47-3	<10	<10	**26**	**5**	<10	**7.8** J	<0.40	-	50	4
Cobalt	7440-48-4	<3.8	<3.8	<6.0	<3.8	<3.8	<3.8	<0.75	-	730	3
Copper	7440-50-8	**32** J	<10	**44**	**8.5**	<10	<10	<0.41	-	1000	1
Iron	7439-89-6	4000 J	950	5000	<14	750 J	<14	510	-	-	-
Lead	7439-92-1	0.86 J	0.15 J	1.7	<0.027	0.41 J	0.03 J	<0.020	0.81 J	15	2.5
Magnesium	7439-95-4	11000	12000	320000	400000	240000	280000	470000	-	-	-
Manganese	7439-96-5	31 J	<11	**86**	<11	**160**	**95**	**86** J	-	-	50
Mercury	7439-97-6	<0.050	<0.050	<0.050	0.14 J	0.14 J	0.1	0.062 J	-	2	0.77
Molybdenum	7439-98-7	<5.5	14 J	**52**	**58**	35 J	31 J	**86** J	-	180	40
Nickel	7440-02-0	**13** J	**6.3** J	**96**	**100**	**67**	**74**	**160**	-	100	2
Potassium	7440-09-7	4200 J	3200 J	13000	15000	11000	11000	22000	-	-	-
Selenium	7782-49-2	1.7 J	1 J	**441**	**1000**	**200**	**350**	**740**	**690**	50	5
Silver	7440-22-4	<0.014	<0.014 UJ	0.065 J	0.075 J	0.02 J	<0.014 UJ	<0.0080	0.042 J	180	0.34
Sodium	7440-23-5	31000	35000	740000	890000	560000	630000	940000	-	-	-
Thallium	7440-28-0	<0.045	<0.045	0.098 J	<0.045	0.13 J	0.17 J	0.14 J	0.18 J	2	10
Tin	7440-31-5	<0.085	<0.085	0.3	<0.085	0.33 J	<0.085	<0.085	<0.085	22000	2
Total Cyanide	57-12-5	< 6.3	-	-	-	< 6.3	-	-	-	150	5.2
Vanadium	7440-62-2	<5.0	<5.0	**70**	**80**	<5.0	**47** J	**47** J	-	260	19
Zinc	7440-66-6	**10**	**3.8** J	**33.7**	**20**	**12**	**7.8**	**28**	**20**	5000	3

Footnotes:
* = Benchmark Location
µg/L = micrograms per liter
CAS RN = Chemical Abstract Services Registry Number
U = Non-detect
J = Estimated value
< = Result less than detection limit
Bold values indicate exceedances of one or more screening levels.