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NAS PENSACOLA
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REMEDIAL INVESTIGATION ADDENDUM

OPERABLE UNIT 2

NAVAL AIR STATION PENSACOLA

Contract No. N62467-89-D-0318

Contract Task Order 059

Volume II of IV
Appendices A to C

Prepared for:

Department of the Navy
Southern Division
Naval Facilities Engineering Command
North Charleston, South Carolina

Prepared by:

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April 2005

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Appendix A

Soil and Groundwater Cleanup Target Levels

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Acenaphthene	83-32-9	20 Minimum Criteria Organoleptic	3 Toxicity Criteria	3 Toxicity Criteria	200	-Liver
Acenaphthylene	208-96-8	210 Minimum Criteria Systemic Toxicant	**	**	2100	-Body Weight -Liver
Acephate	30560-19-1	7.5 Minimum Criteria PQL	190 Toxicity Criteria	190 Toxicity Criteria	75	-Carcinogen -Neurological
Acetone	67-64-1	700 Minimum Criteria Systemic Toxicant	1692 Toxicity Criteria	1692 Toxicity Criteria	7000	-Kidney -Liver -Neurological
Acetonitrile	75-05-8	500 Minimum Criteria PQL	19983 Toxicity Criteria	19983 Toxicity Criteria	5000	-Blood -Liver
Acetophenone	98-86-2	700 Minimum Criteria Systemic Toxicant	7750 Toxicity Criteria	7750 Toxicity Criteria	7000	-None Specified
Acifluorfen, sodium [or Blazer]	62476-59-9	1 Minimum Criteria Health Advisory Level	190 Toxicity Criteria	190 Toxicity Criteria	10	-Kidney -Mortality
Acrolein	107-02-8	14 Minimum Criteria Systemic Toxicant	0.4 Toxicity Criteria	0.4 Toxicity Criteria	140	-Nasal
Acrylamide	79-06-1	1 Minimum Criteria PQL	5.98 Human Health	5.98 Human Health	10	-Carcinogen -Neurological
Acrylonitrile	107-13-1	1 Minimum Criteria PQL	49.9 Human Health	49.9 Human Health	10	-Carcinogen -Nasal -Reproductive
Alachlor	15972-60-8	* Primary Standard	0.596 Human Health	0.596 Human Health	***	-Blood -Carcinogen
Aldicarb [or Temik]	116-06-3	7 Minimum Criteria Systemic Toxicant	0.85 Toxicity Criteria	0.85 Toxicity Criteria	70	-Neurological
Aldicarb sulfone	1646-88-4	7 Minimum Criteria Systemic Toxicant	46 Toxicity Criteria	46 Toxicity Criteria	70	-Neurological
Aldicarb sulfoxide	1646-87-3	7 Minimum Criteria Health Advisory Level	4.2 Toxicity Criteria	4.2 Toxicity Criteria	70	-Neurological

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Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Aldrin	309-00-2	0.005 Minimum Criteria PQL	**	**	0.05	-Carcinogen -Liver
Allyl alcohol	107-18-6	250 Minimum Criteria PQL	5 Toxicity Criteria	5 Toxicity Criteria	2500	-Kidney -Liver
Allyl chloride	107-05-1	35 Minimum Criteria Systemic Toxicant	NA	NA	350	-Neurological
Aluminum	7429-90-5	* Secondary Standard	13 Toxicity Criteria	13 Toxicity Criteria	***	-Body Weight
Aluminum phosphide	20859-73-8	50 Minimum Criteria PQL	6.5 Toxicity Criteria	6.5 Toxicity Criteria	500	-Body Weight
Ametryn	834-12-8	63 Minimum Criteria Systemic Toxicant	6.2 Toxicity Criteria	6.2 Toxicity Criteria	630	-Liver
Ammonia	7664-41-7	2800 Minimum Criteria Systemic Toxicant	**	NA	28000	-Respiratory
Anilazine [or Dyrene]	101-05-3	2.8 Minimum Criteria Systemic Toxicant	NA	NA	28	-None Specified
Aniline	62-53-3	6.1 Minimum Criteria Carcinogen	4 Toxicity Criteria	4 Toxicity Criteria	61	-Blood -Carcinogen
Anthracene	120-12-7	2100 Minimum Criteria Systemic Toxicant	0.3 Toxicity Criteria	0.3 Toxicity Criteria	21000	-None Specified
Antimony	7440-36-0	* Primary Standard	**	**	***	-Blood -Mortality
Aramite	140-57-8	10 Minimum Criteria PQL	3 Toxicity Criteria	3 Toxicity Criteria	100	-Carcinogen
Arsenic	7440-38-2	* Primary Standard	**	**	***	-Carcinogen -Cardiovascular -Skin
Atrazine	1912-24-9	* Primary Standard	1.8 Human Health	1.8 Human Health	***	-Body Weight -Carcinogen

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Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Azobenzene	103-33-3	4 Minimum Criteria PQL	0.559 Human Health	0.559 Human Health	40	-Carcinogen
Barium	7440-39-3	* Primary Standard	# b	# b	***	-Cardiovascular
Bayleton	43121-43-3	210 Minimum Criteria Systemic Toxicant	500 Toxicity Criteria	500 Toxicity Criteria	2100	-Blood -Body Weight
Benomyl	17804-35-2	35 Minimum Criteria Systemic Toxicant	0.3 Toxicity Criteria	0.3 Toxicity Criteria	350	-Developmental
Bensulide	741-58-2	46.2 Minimum Criteria Systemic Toxicant	NA	NA	462	-None Specified
Bentazon	25057-89-0	210 Minimum Criteria Systemic Toxicant	NA	NA	2100	-Blood
Benzaldehyde	100-52-7	700 Minimum Criteria Systemic Toxicant	53.5 Toxicity Criteria	53.5 Toxicity Criteria	7000	-Gastrointestinal -Kidney
Benzene	71-43-2	* Primary Standard	**	**	***	-Carcinogen
Benzenethiol	108-98-5	20 Minimum Criteria PQL	NA	NA	200	-Liver
Benzidine	92-87-5	400 Minimum Criteria PQL	NA	NA	4000	-Carcinogen
Benzo(a)anthracene	56-55-3	0.2 Minimum Criteria PQL	**	**	2	-Carcinogen
Benzo(a)pyrene	50-32-8	* Primary Standard	**	**	***	-Carcinogen
Benzo(b)fluoranthene	205-99-2	0.2 Minimum Criteria PQL	**	**	2	-Carcinogen
Benzo(g,h,i)perylene	191-24-2	210 Minimum Criteria Systemic Toxicant	**	**	2100	-Neurological

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Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Benzo(k)fluoranthene	207-08-9	0.5 Minimum Criteria Carcinogen	**	**	5	-Carcinogen
Benzoic acid	65-85-0	28000 Minimum Criteria Systemic Toxicant	9000 Toxicity Criteria	9000 Toxicity Criteria	280000	-None Specified
Benzotrichloride	98-08-7	0.06 Minimum Criteria PQL	0.0029 Human Health	0.0029 Human Health	0.6	-Carcinogen
Benzyl alcohol	100-51-6	2100 Minimum Criteria Systemic Toxicant	500 Toxicity Criteria	500 Toxicity Criteria	21000	-Gastrointestinal
Benzyl chloride	100-44-7	0.5 Minimum Criteria PQL	2.95 Human Health	2.95 Human Health	5	-Carcinogen
Beryllium	7440-41-7	* Primary Standard	**	**	***	-Carcinogen -Gastrointestinal -Respiratory
Beta radiation		* Primary Standard	NA	NA	***	-Carcinogen
Bidrin [or Dicrotophos]	141-66-2	0.7 Minimum Criteria Systemic Toxicant	21.5 Toxicity Criteria	21.5 Toxicity Criteria	7	-Developmental
Bioallethrin	28057-48-9	35 Minimum Criteria Systemic Toxicant	NA	NA	350	-Liver
Biphenyl, 1,1- [or Diphenyl]	92-52-4	0.5 Minimum Criteria Organoleptic	18 Toxicity Criteria	18 Toxicity Criteria	5	-Kidney
Bis(2-chloroethyl)ether	111-44-4	4 Minimum Criteria PQL	9.99 Human Health	9.99 Human Health	40	-Carcinogen
Bis(2-chloroisopropyl)ether	108-60-1	10 Minimum Criteria PQL	0.5 Human Health	0.5 Human Health	100	-Blood -Carcinogen
Bis(2-ethylhexyl)adipate	103-23-1	* Primary Standard	33 Toxicity Criteria	33 Toxicity Criteria	***	-Carcinogen
Bis(2-ethylhexyl)phthalate [or DEHP]	117-81-7	* Primary Standard	0.02 Human Health	0.02 Human Health	***	-Carcinogen -Liver

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Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Bisphenol A	80-05-7	350 Minimum Criteria Systemic Toxicant	55 Toxicity Criteria	55 Toxicity Criteria	3500	-Body Weight
Boron	7440-42-8	630 Minimum Criteria Health Advisory Level	NA	NA	6300	-Reproductive -Respiratory
Bromacil	314-40-9	91 Minimum Criteria Health Advisory Level	97 Toxicity Criteria	97 Toxicity Criteria	910	-Body Weight
Bromochloromethane	74-97-5	91 Minimum Criteria Systemic Toxicant	NA	NA	910	-None Specified
Bromodichloromethane	75-27-4	0.6 Minimum Criteria Carcinogen	**	**	6	-Carcinogen -Kidney
Bromoform	75-25-2	4.4 Minimum Criteria Carcinogen	**	**	44	-Carcinogen -Liver
Bromomethane [or Methyl bromide]	74-83-9	9.8 Minimum Criteria Systemic Toxicant	35 Toxicity Criteria	35 Toxicity Criteria	98	-Gastrointestinal
Bromophenyl phenyl ether, 4-	101-55-3	406 Minimum Criteria Systemic Toxicant	NA	NA	4060	-None Specified
Bromoxynil	1689-84-5	140 Minimum Criteria Systemic Toxicant	NA	NA	1400	-None Specified
Bromoxynil octanoate	1689-99-2	140 Minimum Criteria Systemic Toxicant	NA	NA	1400	-Neurological
Butanol, 1-	71-36-3	700 Minimum Criteria Systemic Toxicant	25000 Toxicity Criteria	25000 Toxicity Criteria	7000	-Neurological
Butanone, 2- [or MEK]	78-93-3	4200 Minimum Criteria Systemic Toxicant	120000 Toxicity Criteria	120000 Toxicity Criteria	42000	-Developmental
Butyl acetate, n-	123-86-4	43 Minimum Criteria Organoleptic	1000 Toxicity Criteria	1000 Toxicity Criteria	430	-None Specified
Butyl benzyl phthalate, n-	85-68-7	140 Minimum Criteria Systemic Toxicant	25.5 Toxicity Criteria	25.5 Toxicity Criteria	1400	-Liver

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Butylate	2008-41-5	350 Minimum Criteria Systemic Toxicant	10.5 Toxicity Criteria	10.5 Toxicity Criteria	3500	-Liver
Butylphthalyl butylglycolate	85-70-1	7000 Minimum Criteria Systemic Toxicant	NA	NA	70000	-None Specified
Cacodylic acid (as Arsenic)	75-60-5	21 Minimum Criteria Systemic Toxicant	850 Toxicity Criteria	850 Toxicity Criteria	210	-Carcinogen -Cardiovascular -Skin
Cadmium	7440-43-9	* Primary Standard	a	**	***	-Carcinogen -Kidney
Calcium cyanide	592-01-8	280 Minimum Criteria Systemic Toxicant	NA	NA	2800	-Body Weight -Neurological -Thyroid
Captafol	2425-06-1	100 Minimum Criteria PQL	0.85 Toxicity Criteria	0.85 Toxicity Criteria	1000	-Carcinogen
Captan	133-06-2	250 Minimum Criteria PQL	1.9 Toxicity Criteria	1.9 Toxicity Criteria	2500	-Body Weight -Carcinogen
Carbaryl [or Sevin]	63-25-2	700 Minimum Criteria Systemic Toxicant	0.06 Toxicity Criteria	0.06 Toxicity Criteria	7000	-Kidney -Liver
Carbazole	86-74-8	4 Minimum Criteria PQL	46.5 Toxicity Criteria	46.5 Toxicity Criteria	40	-Carcinogen
Carbofuran	1563-66-2	* Primary Standard	0.1 Toxicity Criteria	0.1 Toxicity Criteria	***	-Neurological -Reproductive
Carbon disulfide	75-15-0	700 Minimum Criteria Systemic Toxicant	105 Toxicity Criteria	105 Toxicity Criteria	7000	-Developmental -Neurological
Carbon tetrachloride	56-23-5	* Primary Standard	**	**	***	-Carcinogen -Liver
Carbophenothion [or Trithion]	786-19-6	0.9 Minimum Criteria Systemic Toxicant	0.1 Toxicity Criteria	0.1 Toxicity Criteria	9	-Neurological
Carboxin	5234-68-4	700 Minimum Criteria Systemic Toxicant	60 Toxicity Criteria	60 Toxicity Criteria	7000	-Body Weight -Mortality

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Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Chloral	75-87-6	14 Minimum Criteria Systemic Toxicant	NA	NA	140	-Liver
Chloramben	133-90-4	105 Minimum Criteria Systemic Toxicant	NA	NA	1050	-Liver
Chlordane	57-74-9	* Primary Standard	**	**	***	-Carcinogen -Liver
Chloride	16887-00-6	* Secondary Standard	**	**	***	-None Specified
Chlorine	7782-50-5	700 Minimum Criteria Systemic Toxicant	**	**	7000	-Body Weight
Chlorine cyanide [or Cyanogen chloride]	506-77-4	350 Minimum Criteria Systemic Toxicant	1.45 Toxicity Criteria	1.45 Toxicity Criteria	3500	-Body Weight -Neurological -Thyroid
Chlorite, sodium	7758-19-2	100 Minimum Criteria PQL	29 Toxicity Criteria	29 Toxicity Criteria	1000	-None Specified
Chloro-1,3-butadiene [or Chloroprene]	126-99-8	140 Minimum Criteria Systemic Toxicant	NA	NA	1400	-Body Weight -Hair Loss -Nasal
Chloroacetic acid	79-11-8	14 Minimum Criteria Systemic Toxicant	NA	NA	140	-Cardiovascular
Chloroaniline, 4-	106-47-8	28 Minimum Criteria Systemic Toxicant	2.5 Toxicity Criteria	2.5 Toxicity Criteria	280	-Spleen
Chlorobenzene	108-90-7	* Primary Standard	17 Toxicity Criteria	17 Toxicity Criteria	***	-Liver
Chlorobenzilate	510-15-6	0.1 Minimum Criteria Carcinogen	0.09 Human Health	0.09 Human Health	1	-Body Weight -Carcinogen
Chloroethyl vinyl ether, 2-	110-75-8	175 Minimum Criteria Systemic Toxicant	NA	NA	1750	-None Specified
Chloroform	67-66-3	5.7 Minimum Criteria Carcinogen	**	**	57	-Carcinogen -Liver

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Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Chloro-m-cresol, p- [or 4-chloro-3-methylphenol]	59-50-7	63 Minimum Criteria Systemic Toxicant	100 Toxicity Criteria	100 Toxicity Criteria	630	-Body Weight
Chloromethane	74-87-3	2.7 Minimum Criteria Carcinogen	**	**	27	-Carcinogen
Chloronaphthalene, beta-	91-58-7	560 Minimum Criteria Systemic Toxicant	NA	NA	5600	-Liver -Respiratory
Chloronitrobenzene, p-	100-00-5	250 Minimum Criteria PQL	107 Toxicity Criteria	107 Toxicity Criteria	2500	-Carcinogen
Chlorophenol, 2-	95-57-8	35 Minimum Criteria Systemic Toxicant	130 Toxicity Criteria	130 Toxicity Criteria	350	-Reproductive
Chlorophenol, 3-	108-43-0	10 Minimum Criteria Organoleptic (PQL)	173.5 Toxicity Criteria	173.5 Toxicity Criteria	100	-None Specified
Chlorophenol, 4-	106-48-9	5.5 Minimum Criteria Organoleptic (PQL)	175 Toxicity Criteria	175 Toxicity Criteria	55	-None Specified
Chloropicrin	76-06-2	7.3 Minimum Criteria Organoleptic	NA	NA	73	-None Specified
Chlorothalonil [or Bravo]	1897-45-6	3.2 Minimum Criteria Carcinogen	0.8 Toxicity Criteria	0.8 Toxicity Criteria	32	-Carcinogen -Kidney
Chlorotoluene, o-	95-49-8	140 Minimum Criteria Systemic Toxicant	390 Toxicity Criteria	390 Toxicity Criteria	1400	-Body Weight
Chlorotoluene, p-	106-43-4	140 Minimum Criteria Health Advisory Level	NA	NA	1400	-None Specified
Chlorpropham	101-21-3	1400 Minimum Criteria Systemic Toxicant	190 Toxicity Criteria	190 Toxicity Criteria	14000	-Bone Marrow -Kidney -Liver -Spleen
Chlorpyrifos	2921-88-2	21 Minimum Criteria Systemic Toxicant	0.002 Toxicity Criteria	0.002 Toxicity Criteria	210	-Neurological
Chlorpyrifos, methyl	5598-13-0	70 Minimum Criteria Systemic Toxicant	0.035 Toxicity Criteria	0.035 Toxicity Criteria	700	-Reproductive

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Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Chlorsulfuron	64902-72-3	350 Minimum Criteria Systemic Toxicant	16 Toxicity Criteria	16 Toxicity Criteria	3500	-Body Weight
Chromium (hexavalent)	18540-29-9	* Primary Standard	**	**	***	-Carcinogen -Respiratory
Chromium (total)	NOCAS#	* Primary Standard	NA	NA	***	-Carcinogen
Chromium (trivalent)	16065-83-1	* Primary Standard	** Numerical a	515 Toxicity Criteria	***	-None Specified
Chrysene	218-01-9	4.8 Minimum Criteria Carcinogen	**	**	48	-Carcinogen
Cobalt	7440-48-4	420 Minimum Criteria Systemic Toxicant	NA	NA	4200	-Cardiovascular -Immunological -Neurological -Reproductive
Copper	7440-50-8	* Secondary Standard	a	**	***	-Gastrointestinal
Coumaphos	56-72-4	1.8 Minimum Criteria Systemic Toxicant	0.004 Toxicity Criteria	0.004 Toxicity Criteria	18	-Neurological
Crotonaldehyde	123-73-9	4000 Minimum Criteria Carcinogen	NA	NA	40000	-Carcinogen
Cumene [or Isopropyl benzene]	98-82-8	0.8 Minimum Criteria Organoleptic	255 Toxicity Criteria	255 Toxicity Criteria	8	-Adrenals -Kidney
Cyanazine	21725-46-2	0.1 Minimum Criteria PQL	5.5 Toxicity Criteria	5.5 Toxicity Criteria	1	-Carcinogen
Cyanide (potassium salt)	57-12-5	* Primary Standard	**	**	***	-Body Weight -Neurological -Thyroid
Cyanogen	460-19-5	10000 Minimum Criteria PQL	NA	NA	100000	-None Specified
Cycloate	1134-23-2	35 Minimum Criteria Systemic Toxicant	130 Toxicity Criteria	130 Toxicity Criteria	350	-Neurological

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Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Cyclohexanone	108-94-1	35000 Minimum Criteria Systemic Toxicant	26350 Toxicity Criteria	26350 Toxicity Criteria	350000	-Body Weight
Cyclohexylamine	108-91-8	5000 Minimum Criteria PQL	4000 Toxicity Criteria	4000 Toxicity Criteria	50000	-Body Weight -Reproductive
Cypermethrin	52315-07-8	7 Minimum Criteria Systemic Toxicant	0.0005 Toxicity Criteria	0.0005 Toxicity Criteria	70	-Gastrointestinal
Dacthal [or DCPA]	1861-32-1	70 Minimum Criteria Systemic Toxicant	310 Toxicity Criteria	310 Toxicity Criteria	700	-Kidney -Liver -Respiratory -Thyroid
Dalapon	75-99-0	* Primary Standard	5000 Toxicity Criteria	5000 Toxicity Criteria	***	-Kidney
DDD, 4,4'-	72-54-8	0.1 Minimum Criteria Carcinogen	0.003 Human Health	0.003 Human Health	1	-Carcinogen
DDE, 4,4'-	72-55-9	0.1 Minimum Criteria Carcinogen	0.0006 Human Health	0.0006 Human Health	1	-Carcinogen
DDT, 4,4'-	50-29-3	0.1 Minimum Criteria Carcinogen	**	**	1	-Carcinogen -Liver
DEET	134-62-3	6300 Minimum Criteria Systemic Toxicant	NA	NA	63000	-Body Weight
Demeton	8065-48-3	0.3 Minimum Criteria Systemic Toxicant	1.35 Toxicity Criteria	1.35 Toxicity Criteria	3	-Eye -Neurological
Diallate	2303-16-4	0.6 Minimum Criteria Carcinogen	NA	NA	6	-Carcinogen
Diazinon	333-41-5	0.63 Minimum Criteria Systemic Toxicant	0.002 Toxicity Criteria	0.002 Toxicity Criteria	6.3	-Neurological
Dibenz(a,h)anthracene	53-70-3	0.2 Minimum Criteria PQL	**	**	2	-Carcinogen
Dibenzofuran	132-64-9	28 Minimum Criteria Systemic Toxicant	67 Toxicity Criteria	67 Toxicity Criteria	280	-None Specified

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Dibromo-3-chloropropane, 1-2- [or DBCP]	96-12-8	* Primary Standard	NA	NA	***	-Carcinogen -Reproductive
Dibromoacetonitrile	3252-43-5	14 Minimum Criteria Health Advisory Level	NA	NA	140	-None Specified
Dibromochloromethane	124-48-1	0.4 Minimum Criteria Carcinogen	**	**	4	-Carcinogen -Liver
Dibromoethane, 1,2- [or EDB]	106-93-4	* Primary Standard	13 Toxicity Criteria	13 Toxicity Criteria	***	-Carcinogen -Reproductive
Dicamba	1918-00-9	210 Minimum Criteria Systemic Toxicant	195 Toxicity Criteria	195 Toxicity Criteria	2100	-Developmental
Dichloroacetic acid	79-43-6	28 Minimum Criteria Health Advisory Level	1150 Toxicity Criteria	1150 Toxicity Criteria	280	-None Specified
Dichloroacetonitrile	3018-12-0	5.6 Minimum Criteria Health Advisory Level	NA	NA	56	-None Specified
Dichlorobenzene, 1,2-	95-50-1	* Primary Standard	99 Toxicity Criteria	99 Toxicity Criteria	***	-Body Weight
Dichlorobenzene, 1,3-	541-73-1	10 Minimum Criteria Organoleptic (PQL)	85 Toxicity Criteria	85 Toxicity Criteria	100	-None Specified
Dichlorobenzene, 1,4-	106-46-7	* Primary Standard	100 Toxicity Criteria	100 Toxicity Criteria	***	-Carcinogen -Liver
Dichlorobenzidine, 3,3'-	91-94-1	12 Minimum Criteria PQL	0.06 Human Health	0.06 Human Health	120	-Carcinogen
Dichlorodifluoromethane	75-71-8	1400 Minimum Criteria Systemic Toxicant	NA	NA	14000	-Body Weight -Liver
Dichloroethane, 1,1-	75-34-3	70 Minimum Criteria Systemic Toxicant	NA	NA	700	-Kidney
Dichloroethane, 1,2- [or EDC]	107-06-2	* Primary Standard	5 Human Health	5 Human Health	***	-Carcinogen

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Dichloroethene, 1,1-	75-35-4	* Primary Standard	**	**	***	-Carcinogen -Liver
Dichloroethene, 1,2- (mixture)	540-59-0	63 Minimum Criteria Systemic Toxicant	7000 Toxicity Criteria	7000 Toxicity Criteria	630	-Blood -Liver
Dichloroethene, cis-1,2-	156-59-2	* Primary Standard	NA	NA	***	-Blood
Dichloroethene, trans-1,2-	156-60-5	* Primary Standard	11000 Toxicity Criteria	11000 Toxicity Criteria	***	-Blood -Liver
Dichlorophenol, 2,3-	576-24-9	10 Minimum Criteria PQL	56 Toxicity Criteria	56 Toxicity Criteria	100	-None Specified
Dichlorophenol, 2,4-	120-83-2	0.5 Minimum Criteria PQL	13 Toxicity Criteria	13 Toxicity Criteria	5	-Immunological
Dichlorophenol, 2,5-	583-78-8	10 Minimum Criteria PQL	90 Toxicity Criteria	90 Toxicity Criteria	100	-None Specified
Dichlorophenol, 2,6-	87-65-0	4 Minimum Criteria PQL	73 Toxicity Criteria	73 Toxicity Criteria	40	-None Specified
Dichlorophenol, 3,4-	95-77-2	0.5 Minimum Criteria PQL	61 Toxicity Criteria	61 Toxicity Criteria	5	-None Specified
Dichlorophenoxy acetic acid, 2,4-	94-75-7	* Primary Standard	80 Toxicity Criteria	80 Toxicity Criteria	***	-Kidney -Liver
Dichlorophenoxy butyric acid, 2,4- [or 2,4-DB]	94-82-6	56 Minimum Criteria Systemic Toxicant	NA	NA	560	-Blood -Cardiovascular -Mortality
Dichloropropane, 1,2-	78-87-5	* Primary Standard	2600 Toxicity Criteria	2600 Toxicity Criteria	***	-Carcinogen -Nasal
Dichloropropene, 1,3-	542-75-6	0.2 Minimum Criteria Carcinogen	12 Toxicity Criteria	12 Toxicity Criteria	2	-Carcinogen -Kidney -Nasal
Dichlorprop	120-36-5	35 Minimum Criteria Systemic Toxicant	42 Toxicity Criteria	42 Toxicity Criteria	350	-None Specified

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Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Dichlorvos	62-73-7	0.1 Minimum Criteria Carcinogen	0.005 Toxicity Criteria	0.005 Toxicity Criteria	1	-Carcinogen -Neurological
Dicofol [or Kelthane]	115-32-2	0.4 Minimum Criteria PQL	0.003 Human Health	0.003 Human Health	4	-Adrenals -Carcinogen
Dieldrin	60-57-1	0.005 Minimum Criteria PQL	**	**	0.05	-Carcinogen -Liver
Diethylphthalate	84-66-2	5600 Minimum Criteria Systemic Toxicant	380 Toxicity Criteria	380 Toxicity Criteria	56000	-Body Weight
Diethylstilbestrol	56-53-1	100 Minimum Criteria PQL	NA	NA	1000	-Carcinogen
Dimethoate	60-51-5	0.1 Minimum Criteria Systemic Toxicant	0.1 Toxicity Criteria	0.1 Toxicity Criteria	1	-Neurological
Dimethoxybenzidine, 3,3'-	119-90-4	250 Minimum Criteria PQL	NA	NA	2500	-Carcinogen
Dimethrin	70-38-2	2100 Minimum Criteria Health Advisory Level	1.1 Toxicity Criteria	1.1 Toxicity Criteria	21000	-Liver
Dimethylaniline, N,N-	121-69-7	50 Minimum Criteria PQL	1650 Toxicity Criteria	1650 Toxicity Criteria	500	-Spleen
Dimethylbenzidine, 3,3'-	119-93-7	160 Minimum Criteria PQL	NA	NA	1600	-Carcinogen
Dimethylformamide, N,N-	68-12-2	700 Minimum Criteria Systemic Toxicant	50000 Toxicity Criteria	50000 Toxicity Criteria	7000	-Gastrointestinal -Liver
Dimethylphenol, 2,4-	105-67-9	140 Minimum Criteria Systemic Toxicant	261 Human Health	261 Human Health	1400	-Blood -Neurological
Dimethylphthalate	131-11-3	70000 Minimum Criteria Systemic Toxicant	1450 Toxicity Criteria	1450 Toxicity Criteria	700000	-Kidney
Di-n-butylphthalate	84-74-2	700 Minimum Criteria Systemic Toxicant	23 Toxicity Criteria	23 Toxicity Criteria	7000	-Mortality

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Dinitrobenzene, 1,2- (o)	528-29-0	200 Minimum Criteria PQL	30 Toxicity Criteria	30 Toxicity Criteria	2000	-Spleen
Dinitrobenzene, 1,3- (m)	99-65-0	8 Minimum Criteria PQL	72 Toxicity Criteria	72 Toxicity Criteria	80	-Spleen
Dinitrobenzene, 1,4- (p)	100-25-4	50 Minimum Criteria PQL	30 Toxicity Criteria	30 Toxicity Criteria	500	-Spleen
Dinitro-o-cyclohexylphenol	131-89-5	100 Minimum Criteria PQL	NA	NA	1000	-Eye
Dinitrophenol, 2,4-	51-28-5	14 Minimum Criteria Systemic Toxicant	3 Toxicity Criteria	3 Toxicity Criteria	140	-Eye
Dinitrotoluene (mixture)	NOCAS#	0.2 Minimum Criteria PQL	NA	NA	2	-Carcinogen
Dinitrotoluene, 2,4-	121-14-2	0.1 Minimum Criteria PQL	**	**	1	-Carcinogen -Liver -Neurological
Dinitrotoluene, 2,6-	606-20-2	0.1 Minimum Criteria PQL	4 Human Health	4 Human Health	1	-Blood -Carcinogen -Kidney -Mortality -Neurological
Di-n-octylphthalate	117-84-0	140 Minimum Criteria Systemic Toxicant	NA	NA	1400	-Kidney -Liver
Dinoseb	88-85-7	* Primary Standard	5.9 Toxicity Criteria	5.9 Toxicity Criteria	***	-Developmental
Dioxane, 1,4-	123-91-1	5 Minimum Criteria PQL	245 Human Health	245 Human Health	50	-Carcinogen
Dioxin [or 2,3,7,8-TCDD]	1746-01-6	* Primary Standard	**	**	***	-Carcinogen
Diphenamid	957-51-7	210 Minimum Criteria Systemic Toxicant	1600 Toxicity Criteria	1600 Toxicity Criteria	2100	-Liver
Diphenylamine, N,N-	122-39-4	175 Minimum Criteria Systemic Toxicant	NA	NA	1750	-Body Weight -Kidney -Liver

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Diphenylhydrazine, 1,2-	122-66-7	10 Minimum Criteria PQL	0.38 Human Health	0.38 Human Health	100	-Carcinogen
Diquat	85-00-7	* Primary Standard	1.5 Toxicity Criteria	1.5 Toxicity Criteria	***	-Eye
Disulfoton	298-04-4	0.3 Minimum Criteria Systemic Toxicant	0.3 Toxicity Criteria	0.3 Toxicity Criteria	3	-Neurological
Diuron	330-54-1	14 Minimum Criteria Systemic Toxicant	8 Toxicity Criteria	8 Toxicity Criteria	140	-Blood
Endosulfan	115-29-7	42 Minimum Criteria Systemic Toxicant	**	**	420	-Body Weight -Cardiovascular -Kidney
Endothall	145-73-3	* Primary Standard	105 Toxicity Criteria	105 Toxicity Criteria	***	-Gastrointestinal
Endrin	72-20-8	* Primary Standard	**	**	***	-Liver
Epichlorohydrin	106-89-8	3.5 Minimum Criteria Carcinogen	272 Human Health	272 Human Health	35	-Carcinogen -Kidney -Nasal
Ethion	563-12-2	3.5 Minimum Criteria Systemic Toxicant	0.007 Toxicity Criteria	0.007 Toxicity Criteria	35	-Neurological
Ethoprop	13194-48-4	0.7 Minimum Criteria Systemic Toxicant	0.315 Toxicity Criteria	0.315 Toxicity Criteria	7	-Neurological
Ethoxyethanol, 2-	110-80-5	25000 Minimum Criteria PQL	NA	NA	250000	-Body Weight -Reproductive
Ethyl acetate	141-78-6	6300 Minimum Criteria Systemic Toxicant	6250 Toxicity Criteria	6250 Toxicity Criteria	63000	-Body Weight -Mortality
Ethyl acrylate	140-88-5	5000 Minimum Criteria PQL	125 Toxicity Criteria	125 Toxicity Criteria	50000	-Carcinogen
Ethyl chloride [or Chloroethane]	75-00-3	12 Minimum Criteria Carcinogen	NA	NA	120	-Carcinogen -Developmental

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Ethyl dipropylthiocarbamate, S- [or EPTC]	759-94-4	175 Minimum Criteria Systemic Toxicant	235 Toxicity Criteria	235 Toxicity Criteria	1750	-Cardiovascular
Ethyl ether	60-29-7	750 Minimum Criteria Organoleptic	128000 Toxicity Criteria	128000 Toxicity Criteria	7500	-Body Weight
Ethyl methacrylate	97-63-2	630 Minimum Criteria Systemic Toxicant	NA	NA	6300	-Kidney
Ethyl p-nitrophenyl phenylphosphorothioate [or EPN]	2104-64-5	0.2 Minimum Criteria PQL	0.015 Toxicity Criteria	0.015 Toxicity Criteria	2	-Neurological
Ethylbenzene	100-41-4	* Secondary Standard	605 Toxicity Criteria	605 Toxicity Criteria	***	-Developmental -Kidney -Liver
Ethylene diamine	107-15-3	10000 Minimum Criteria PQL	800 Toxicity Criteria	800 Toxicity Criteria	100000	-Blood -Cardiovascular
Ethylene glycol	107-21-1	14000 Minimum Criteria Systemic Toxicant	16300 Toxicity Criteria	16300 Toxicity Criteria	140000	-Kidney
Ethylene oxide	75-21-8	10 Minimum Criteria PQL	4200 Toxicity Criteria	4200 Toxicity Criteria	100	-Carcinogen
Ethylene thiourea [or ETU]	96-45-7	5 Minimum Criteria PQL	1320 Toxicity Criteria	1320 Toxicity Criteria	50	-Carcinogen
Ethylphthalyl ethylglycolate [or EPEG]	84-72-0	21000 Minimum Criteria Systemic Toxicant	NA	NA	210000	-Kidney -Mortality
Famphur	52-85-7	3.5 Minimum Criteria Systemic Toxicant	NA	NA	35	-Blood
Fenamiphos	22224-92-6	1.8 Minimum Criteria Systemic Toxicant	0.225 Toxicity Criteria	0.225 Toxicity Criteria	18	-Neurological
Fensulfothion	115-90-2	1.8 Minimum Criteria Systemic Toxicant	0.5 Toxicity Criteria	0.5 Toxicity Criteria	18	-Neurological
Fluometuron	2164-17-2	91 Minimum Criteria Systemic Toxicant	190 Toxicity Criteria	190 Toxicity Criteria	910	-None Specified

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Fluoranthene	206-44-0	280 Minimum Criteria Systemic Toxicant	0.3 Toxicity Criteria	0.3 Toxicity Criteria	2800	-Blood -Kidney -Liver
Fluorene	86-73-7	280 Minimum Criteria Systemic Toxicant	30 Toxicity Criteria	30 Toxicity Criteria	2800	-Blood
Fluoride	7782-41-4	* Secondary Standard	**	**	***	-Teeth
Fluoridone	59756-60-4	560 Minimum Criteria Systemic Toxicant	105 Toxicity Criteria	105 Toxicity Criteria	5600	-Body Weight -Kidney -Reproductive
Fonofos	944-22-9	14 Minimum Criteria Systemic Toxicant	0.095 Toxicity Criteria	0.095 Toxicity Criteria	140	-Liver -Neurological
Formaldehyde	50-00-0	600 Minimum Criteria Organoleptic	105 Toxicity Criteria	105 Toxicity Criteria	6000	-Body Weight -Carcinogen -Gastrointestinal
Formic acid	64-18-6	14000 Minimum Criteria Systemic Toxicant	4500 Toxicity Criteria	4500 Toxicity Criteria	140000	-Body Weight
Furfural	98-01-1	250 Minimum Criteria PQL	650 Toxicity Criteria	650 Toxicity Criteria	2500	-Liver -Nasal
Glyphosate [or Roundup]	1071-83-6	* Primary Standard	115 Toxicity Criteria	115 Toxicity Criteria	***	-Kidney
Gross alpha radiation	14127-62-9	* Primary Standard	**	**	***	-Carcinogen
Guthion [or Azinphos, methyl]	86-50-0	10.5 Minimum Criteria Systemic Toxicant	**	**	105	-Neurological
Heptachlor	76-44-8	* Primary Standard	**	**	***	-Carcinogen -Liver
Heptachlor epoxide	1024-57-3	* Primary Standard	0.002 Toxicity Criteria	0.002 Toxicity Criteria	***	-Carcinogen -Liver
Hexachloro-1,3-butadiene	87-68-3	0.5 Minimum Criteria Carcinogen	**	**	5	-Carcinogen -Kidney

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Hexachlorobenzene	118-74-1	* Primary Standard	0.00036 Human Health	0.00036 Human Health	***	-Carcinogen -Liver
Hexachlorocyclohexane [technical or BHC]	608-73-1	0.02 Minimum Criteria Carcinogen	0.017 Toxicity Criteria	0.017 Toxicity Criteria	0.2	-Carcinogen
Hexachlorocyclohexane, alpha-	319-84-6	0.006 Minimum Criteria Carcinogen	0.0116 Human Health	0.0116 Human Health	0.06	-Carcinogen
Hexachlorocyclohexane, beta-	319-85-7	0.02 Minimum Criteria Carcinogen	**	**	0.2	-Carcinogen
Hexachlorocyclohexane, delta-	319-86-8	2.1 Minimum Criteria Systemic (b)	NA	NA	21	-Kidney -Liver
Hexachlorocyclohexane, gamma- [or Lindane]	58-89-9	* Primary Standard	**	**	***	-Carcinogen -Kidney -Liver
Hexachlorocyclopentadiene	77-47-4	* Primary Standard	2.95 Toxicity Criteria	2.95 Toxicity Criteria	***	-Gastrointestinal
Hexachlorodibenzo-p-dioxin (mixture)	19408-74-3	0.00025 Minimum Criteria PQL	NA	NA	0.0025	-Carcinogen
Hexachloroethane	67-72-1	2.5 Minimum Criteria Carcinogen	1.1 Human Health	1.1 Human Health	25	-Carcinogen -Kidney
Hexachlorophene	70-30-4	6 Minimum Criteria PQL	1.05 Toxicity Criteria	1.05 Toxicity Criteria	60	-Neurological
Hexahydro-1,3,5-trinitro-1,3,5-triazine [or RDX]	121-82-4	1 Minimum Criteria PQL	180 Toxicity Criteria	180 Toxicity Criteria	10	-Carcinogen -Reproductive
Hexane, n-	110-54-3	10 Minimum Criteria PQL	3400 Toxicity Criteria	3400 Toxicity Criteria	100	-Neurological
Hexanone, 2- [or Methyl butyl ketone]	591-78-6	280 Minimum Criteria Systemic Toxicant	NA	NA	2800	-None Specified
Hexazinone	51235-04-2	231 Minimum Criteria Systemic Toxicant	1020 Human Health	1020 Human Health	2310	-Body Weight

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Hydrogen cyanide (as Cyanide)	74-90-8	140 Minimum Criteria Systemic Toxicant	3.45 Toxicity Criteria	3.45 Toxicity Criteria	1400	-Body Weight -Neurological -Thyroid
Hydrogen sulfide (as Sulfur)	7783-06-4	100 Minimum Criteria PQL	0.1 Toxicity Criteria	0.1 Toxicity Criteria	1000	-Gastrointestinal
Hydroquinone	123-31-9	280 Minimum Criteria Systemic Toxicant	4.5 Toxicity Criteria	4.5 Toxicity Criteria	2800	-Blood
Indeno(1,2,3-cd)pyrene	193-39-5	0.2 Minimum Criteria PQL	**	**	2	-Carcinogen
Iprodione	36734-19-7	280 Minimum Criteria Systemic Toxicant	153 Toxicity Criteria	153 Toxicity Criteria	2800	-Blood
Iron	7439-89-6	* Secondary Standard	**	**	***	-Blood -Gastrointestinal
Isobutyl alcohol	78-83-1	2100 Minimum Criteria Systemic Toxicant	47450 Toxicity Criteria	47450 Toxicity Criteria	21000	-Neurological
Isophorone	78-59-1	37 Minimum Criteria Carcinogen	645 Toxicity Criteria	645 Toxicity Criteria	370	-Carcinogen
Kepone	143-50-0	20 Minimum Criteria PQL	NA	NA	200	-Carcinogen
Lead	7439-92-1	* Primary Standard	a	**	***	-Neurological
Linuron	330-55-2	1.4 Minimum Criteria Systemic Toxicant	44.5 Toxicity Criteria	44.5 Toxicity Criteria	14	-Blood
Lithium	7439-93-32	140 Minimum Criteria Systemic Toxicant	NA	NA	1400	-None Specified
Malathion	121-75-5	140 Minimum Criteria Systemic Toxicant	**	**	1400	-Neurological
Mancozeb	8018-01-7	210 Minimum Criteria Systemic Toxicant	3.5 Toxicity Criteria	3.5 Toxicity Criteria	2100	-Thyroid

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Maneb	12427-38-2	75 Minimum Criteria PQL	5.5 Toxicity Criteria	5.5 Toxicity Criteria	750	-Thyroid
Manganese	7439-96-5	* Secondary Standard	NA	NA	***	-Neurological
Mercuric chloride (as Mercury)	7487-94-7	0.2 Minimum Criteria Systemic Toxicant	0.05 Toxicity Criteria	0.05 Toxicity Criteria	2	-Immunological -Kidney
Mercury	7439-97-6	* Primary Standard	**	**	***	-Neurological
Mercury, methyl	22967-92-6	0.07 Minimum Criteria Systemic Toxicant	NA	NA	0.7	-Neurological
Merphos	150-50-5	0.2 Minimum Criteria Systemic Toxicant	NA	NA	2	-Body Weight -Neurological
Metalaxyl	57837-19-1	420 Minimum Criteria Systemic Toxicant	36.5 Toxicity Criteria	36.5 Toxicity Criteria	4200	-Blood -Liver -Neurological
Methacrylonitrile	126-98-7	5 Minimum Criteria PQL	NA	NA	50	-Liver
Methamidophos	10265-92-6	5 Minimum Criteria PQL	0.000011 Toxicity Criteria	0.000011 Toxicity Criteria	50	-Neurological
Methanol	67-56-1	5000 Minimum Criteria PQL	45037 Toxicity Criteria	45037 Toxicity Criteria	50000	-Liver -Neurological
Methidathion	950-37-8	0.7 Minimum Criteria Systemic Toxicant	0.03 Toxicity Criteria	0.03 Toxicity Criteria	7	-Liver
Methomyl	16752-77-5	175 Minimum Criteria Systemic Toxicant	0.95 Toxicity Criteria	0.95 Toxicity Criteria	1750	-Kidney -Spleen
Methoxy-5-nitroaniline, 2-	99-59-2	50 Minimum Criteria PQL	NA	NA	500	-Carcinogen
Methoxychlor	72-43-5	* Primary Standard	**	**	***	-Developmental -Reproductive

Table I
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Methoxyethanol, 2-	109-86-4	100000 Minimum Criteria PQL	NA	NA	1000000	-Reproductive
Methyl acetate	79-20-9	5000 Minimum Criteria PQL	NA	NA	50000	-Liver
Methyl acrylate	96-33-3	210 Minimum Criteria Systemic Toxicant	NA	NA	2100	-None Specified
Methyl isobutyl ketone [or MIBK]	108-10-1	560 Minimum Criteria Systemic Toxicant	23000 Toxicity Criteria	23000 Toxicity Criteria	5600	-Kidney -Liver
Methyl methacrylate	80-62-6	25 Minimum Criteria Organoleptic	6500 Toxicity Criteria	6500 Toxicity Criteria	250	-Nasal
Methyl parathion [or Parathion, methyl]	298-00-0	1.8 Minimum Criteria Systemic Toxicant	0.01 Toxicity Criteria	0.01 Toxicity Criteria	18	-Blood -Neurological
Methyl tert-butyl ether [or MTBE]	1634-04-4	50 Minimum Criteria Organoleptic	33600 Toxicity Criteria	33600 Toxicity Criteria	500	-Eye -Kidney -Liver
Methyl(1,4-chlorophenoxy)propionic acid	7085-19-0	7 Minimum Criteria Systemic Toxicant	NA	NA	70	-None Specified
Methyl-4-chlorophenoxy acetic acid, 2-	94-74-6	3.5 Minimum Criteria Systemic Toxicant	72 Toxicity Criteria	72 Toxicity Criteria	35	-Kidney -Liver
Methyl-5-nitroaniline, 2-	99-55-8	10 Minimum Criteria PQL	NA	NA	100	-Carcinogen
Methylaniline, 2-	95-53-4	50 Minimum Criteria PQL	26 Toxicity Criteria	26 Toxicity Criteria	500	-Carcinogen
Methylene bis(2-chloroaniline), 4,4-	101-14-4	50 Minimum Criteria PQL	NA	NA	500	-Carcinogen -Liver -Bladder
Methylene bromide	74-95-3	70 Minimum Criteria Systemic Toxicant	NA	NA	700	-Blood
Methylene chloride	75-09-2	* Primary Standard	**	**	***	-Carcinogen -Liver

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Methylnaphthalene, 1-	90-12-0	20 Minimum Criteria Organoleptic	95 Toxicity Criteria	95 Toxicity Criteria	200	-Body Weight -Nasal
Methylnaphthalene, 2-	91-57-6	20 Minimum Criteria Organoleptic	30 Toxicity Criteria	30 Toxicity Criteria	200	-Body Weight -Nasal
Methylphenol, 2- [or o-Cresol]	95-48-7	35 Minimum Criteria Systemic Toxicant	250 Toxicity Criteria	250 Toxicity Criteria	350	-Body Weight -Neurological
Methylphenol, 3- [or m-Cresol]	108-39-4	35 Minimum Criteria Systemic Toxicant	445 Toxicity Criteria	445 Toxicity Criteria	350	-Body Weight -Neurological
Methylphenol, 4- [or p-Cresol]	106-44-5	4 Minimum Criteria PQL	70 Toxicity Criteria	70 Toxicity Criteria	40	-Maternal Death -Neurological -Respiratory
Metolachlor	51218-45-2	105 Minimum Criteria Systemic Toxicant	1.08 Toxicity Criteria	1.08 Toxicity Criteria	1050	-Body Weight
Metribuzin	21087-64-9	175 Minimum Criteria Systemic Toxicant	64 Toxicity Criteria	64 Toxicity Criteria	1750	-Body Weight -Kidney -Liver -Mortality
Metsulfuron, methyl [or Ally]	74223-64-6	1750 Minimum Criteria Systemic Toxicant	NA	NA	17500	-Body Weight
Mevinphos	7786-34-7	1.8 Minimum Criteria Systemic Toxicant	0.0475 Toxicity Criteria	0.0475 Toxicity Criteria	18	-Neurological
Mirex	2385-85-5	1.4 Minimum Criteria Systemic Toxicant	**	**	14	-Liver -Thyroid
Molinate	2212-67-1	14 Minimum Criteria Systemic Toxicant	17 Toxicity Criteria	17 Toxicity Criteria	140	-Reproductive
Molybdenum	7439-98-7	35 Minimum Criteria Systemic Toxicant	NA	NA	350	-Gout
Naled	300-76-5	14 Minimum Criteria Systemic Toxicant	0.018 Toxicity Criteria	0.018 Toxicity Criteria	140	-Neurological
Naphthalene	91-20-3	20 Minimum Criteria Organoleptic	26 Toxicity Criteria	26 Toxicity Criteria	200	-Body Weight -Nasal

Table I
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Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Naphthylamine, 2-	91-59-8	10 Minimum Criteria PQL	NA	NA	100	-Carcinogen
Napropamide	15299-99-7	700 Minimum Criteria Systemic Toxicant	210 Toxicity Criteria	210 Toxicity Criteria	7000	-Body Weight
Nickel	7440-02-0	* Primary Standard	a	**	***	-Body Weight
Nitrate	14797-55-8	* Primary Standard	**	**	***	-Blood
Nitrate+Nitrite	NOCAS#	* Primary Standard	**	**	***	-Blood
Nitrite	14797-65-0	* Primary Standard	**	**	***	-Blood
Nitroaniline, m-	99-09-2	50 Minimum Criteria PQL	NA	NA	500	-None Specified
Nitroaniline, o-	88-74-4	50 Minimum Criteria PQL	NA	NA	500	-Blood
Nitroaniline, p-	100-01-6	21 Minimum Criteria Systemic Toxicant	1200 Toxicity Criteria	1200 Toxicity Criteria	210	-None Specified
Nitrobenzene	98-95-3	4 Minimum Criteria PQL	90 Toxicity Criteria	90 Toxicity Criteria	40	-Adrenals -Blood -Kidney -Liver
Nitrophenol, 4-	100-02-7	56 Minimum Criteria Systemic Toxicant	55 Toxicity Criteria	55 Toxicity Criteria	560	-None Specified
Nitroso-di-ethylamine, N-	55-18-5	4 Minimum Criteria PQL	0.18 Human Health	0.18 Human Health	40	-Carcinogen
Nitroso-dimethylamine, N-	62-75-9	2 Minimum Criteria PQL	0.53 Human Health	0.53 Human Health	20	-Carcinogen
Nitroso-di-n-butylamine, N-	924-16-3	4 Minimum Criteria PQL	0.16 Human Health	0.16 Human Health	40	-Carcinogen

Table I
Groundwater and Surface Water Cleanup Target Levels

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Nitroso-di-n-propylamine, N-	621-64-7	4 Minimum Criteria PQL	0.83 Human Health	0.83 Human Health	40	-Carcinogen
Nitroso-diphenylamine, N-	86-30-6	7.1 Minimum Criteria Carcinogen	44 Human Health	44 Human Health	71	-Carcinogen
Nitroso-N-methylethylamine, N-	10595-95-6	8 Minimum Criteria PQL	1.22 Human Health	1.22 Human Health	80	-Carcinogen
Nitrosopyrrolidine, N-	930-55-2	8 Minimum Criteria PQL	NA	NA	80	-Carcinogen
Nitrotoluene, m-	99-08-1	250 Minimum Criteria PQL	375 Toxicity Criteria	375 Toxicity Criteria	2500	-Spleen
Nitrotoluene, o-	88-72-2	250 Minimum Criteria PQL	550 Toxicity Criteria	550 Toxicity Criteria	2500	-Spleen
Nitrotoluene, p-	99-99-0	250 Minimum Criteria PQL	550 Toxicity Criteria	550 Toxicity Criteria	2500	-Spleen
Norflurazon	27314-13-2	280 Minimum Criteria Systemic Toxicant	NA	NA	2800	-Kidney -Liver -Thyroid
Octahydro-1,3,5,7-tetranitro-tetrazocine [or HMX]	2691-41-0	350 Minimum Criteria Systemic Toxicant	1250 Toxicity Criteria	1250 Toxicity Criteria	3500	-Blood
Octamethylpyrophosphoramide	152-16-9	1000 Minimum Criteria PQL	NA	NA	10000	-Neurological
Oryzalin	19044-88-3	350 Minimum Criteria Systemic Toxicant	NA	NA	3500	-Blood -Kidney -Liver
Oxadiazon	19666-30-9	35 Minimum Criteria Systemic Toxicant	44 Toxicity Criteria	44 Toxicity Criteria	350	-Liver
Oxamyl	23135-22-0	* Primary Standard	8.5 Toxicity Criteria	8.5 Toxicity Criteria	***	-Body Weight
Paraquat	1910-42-5	31.5 Minimum Criteria Systemic Toxicant	47 Toxicity Criteria	47 Toxicity Criteria	315	-Respiratory

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Parathion	56-38-2	42 Minimum Criteria Systemic Toxicant	**	**	420	-Neurological
PCBs [Aroclor miture]	1336-36-3	* Primary Standard	**	**	***	-Carcinogen -Immunological
Pebulate	1114-71-2	350 Minimum Criteria Systemic Toxicant	305 Toxicity Criteria	305 Toxicity Criteria	3500	-Blood
Pendimethalin	40487-42-1	280 Minimum Criteria Systemic Toxicant	10 Toxicity Criteria	10 Toxicity Criteria	2800	-Liver
Pentachlorobenzene	608-93-5	5.6 Minimum Criteria Systemic Toxicant	1.7 Human Health	1.7 Human Health	56	-Kidney -Liver
Pentachloronitrobenzene	82-68-8	0.5 Minimum Criteria PQL	0.04 Human Health	0.04 Human Health	5	-Carcinogen -Liver
Pentachlorophenol	87-86-5	* Primary Standard	**	**	***	-Carcinogen -Kidney -Liver
Permethrin	52645-53-1	350 Minimum Criteria Systemic Toxicant	0.001 Toxicity Criteria	0.001 Toxicity Criteria	3500	-Liver
Phenanthrene	85-01-8	210 Minimum Criteria Systemic (a)	**	**	2100	-Kidney
Phenol	108-95-2	10 Minimum Criteria Organoleptic	6.5 Toxicity Criteria	6.5 Toxicity Criteria	100	-Developmental
Phenylenediamine, p-	106-50-3	1330 Minimum Criteria Systemic Toxicant	NA	NA	13300	-Whole Body
Phenylphenol, 2-	90-43-7	18 Minimum Criteria Carcinogen	35.5 Toxicity Criteria	35.5 Toxicity Criteria	180	-Carcinogen
Phorate	298-02-2	1.4 Minimum Criteria Systemic Toxicant	0.0055 Toxicity Criteria	0.0055 Toxicity Criteria	14	-Neurological
Phosmet	732-11-6	140 Minimum Criteria Systemic Toxicant	0.1 Toxicity Criteria	0.1 Toxicity Criteria	1400	-Body Weight -Liver -Neurological

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Phosphine	7803-51-2	125 Minimum Criteria PQL	NA	NA	1250	-Body Weight
Phthalic anhydride	85-44-9	14000 Minimum Criteria Systemic Toxicant	NA	NA	140000	-Kidney -Nasal -Respiratory
Picloram	1918-02-1	* Primary Standard	70 Toxicity Criteria	70 Toxicity Criteria	***	-Liver
Potassium cyanide	151-50-8	350 Minimum Criteria Systemic Toxicant	5.5 Toxicity Criteria	5.5 Toxicity Criteria	3500	-Body Weight -Neurological -Thyroid
Profluralin	26399-36-0	42 Minimum Criteria Systemic Toxicant	NA	NA	420	-None Specified
Prometon	1610-18-0	105 Minimum Criteria Systemic Toxicant	600 Toxicity Criteria	600 Toxicity Criteria	1050	-None Specified
Prometryn	7287-19-6	28 Minimum Criteria Systemic Toxicant	21 Toxicity Criteria	21 Toxicity Criteria	280	-Bone Marrow -Kidney -Liver
Pronamide	23950-58-5	53 Minimum Criteria Systemic Toxicant	NA	NA	530	-None Specified
Propachlor	1918-16-7	91 Minimum Criteria Systemic Toxicant	11.5 Toxicity Criteria	11.5 Toxicity Criteria	910	-Body Weight -Liver
Propanil	709-98-8	35 Minimum Criteria Systemic Toxicant	20 Toxicity Criteria	20 Toxicity Criteria	350	-Spleen
Propargite	2312-35-8	140 Minimum Criteria Systemic Toxicant	1.55 Toxicity Criteria	1.55 Toxicity Criteria	1400	-None Specified
Propazine	139-40-2	14 Minimum Criteria Systemic Toxicant	185 Toxicity Criteria	185 Toxicity Criteria	140	-Body Weight
Propham	122-42-9	140 Minimum Criteria Systemic Toxicant	500 Toxicity Criteria	500 Toxicity Criteria	1400	-Neurological
Propiconazole	60207-90-1	90 Minimum Criteria Systemic Toxicant	25.5 Toxicity Criteria	25.5 Toxicity Criteria	900	-Gastrointestinal

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Propoxur [or Baygon]	114-26-1	2.8 Minimum Criteria Systemic Toxicant	0.35 Toxicity Criteria	0.35 Toxicity Criteria	28	-Blood -Neurological
Propylene glycol	57-55-6	140000 Minimum Criteria Systemic Toxicant	35500 Toxicity Criteria	35500 Toxicity Criteria	1400000	-Blood -Bone Marrow
Propylene oxide	75-56-9	5000 Minimum Criteria PQL	NA	NA	50000	-Carcinogen -Nasal -Respiratory
Pydrin [or Fenvalerate]	51630-58-1	1750 Minimum Criteria Systemic Toxicant	0.00035 Toxicity Criteria	0.00035 Toxicity Criteria	17500	-Neurological
Pyrene	129-00-0	210 Minimum Criteria Systemic Toxicant	0.3 Toxicity Criteria	0.3 Toxicity Criteria	2100	-Kidney
Pyridine	110-86-1	7 Minimum Criteria PQL	1300 Toxicity Criteria	1300 Toxicity Criteria	70	-Liver
Radium, 226 and 228 (combined)	7440-14-4	* Primary Standard	**	**	***	-Carcinogen
Resmethrin	10453-86-8	210 Minimum Criteria Systemic Toxicant	0.0026 Toxicity Criteria	0.0026 Toxicity Criteria	2100	-Reproductive
Ronnel	299-84-3	350 Minimum Criteria Systemic Toxicant	0.061 Toxicity Criteria	0.061 Toxicity Criteria	3500	-Liver
Rotenone	83-79-4	28 Minimum Criteria Systemic Toxicant	0.115 Toxicity Criteria	0.115 Toxicity Criteria	280	-Developmental
Selenious acid (as Selenium)	7783-00-8	35 Minimum Criteria Systemic Toxicant	40 Toxicity Criteria	40 Toxicity Criteria	350	-Hair Loss -Neurological -Skin
Selenium	7782-49-2	* Primary Standard	**	**	***	-Hair Loss -Neurological -Skin
Silver	7440-22-4	* Secondary Standard	**	0.35 Toxicity Criteria	***	-Skin
Simazine	122-34-9	* Primary Standard	5.8 Human Health	5.8 Human Health	***	-Blood -Body Weight -Carcinogen

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Sodium	7440-23-5	* Primary Standard	c	NA	***	-None Specified
Sodium cyanide (as Cyanide)	143-33-9	280 Minimum Criteria Systemic Toxicant	3.79 Toxicity Criteria	3.79 Toxicity Criteria	2800	-Neurological
Strontium	7440-24-6	4200 Minimum Criteria Systemic Toxicant	NA	NA	42000	-Bone
Strychnine	57-24-9	100 Minimum Criteria PQL	38 Toxicity Criteria	38 Toxicity Criteria	1000	-Mortality
Styrene	100-42-5	* Primary Standard	455 Toxicity Criteria	455 Toxicity Criteria	***	-Blood -Liver -Neurological
Sulfate	14808-79-8	* Secondary Standard	b	b	***	-None Specified
Tebuthiuron	34014-18-1	490 Minimum Criteria Systemic Toxicant	307 Toxicity Criteria	307 Toxicity Criteria	4900	-Body Weight
Temephos	3383-96-8	140 Minimum Criteria Systemic Toxicant	0.002 Toxicity Criteria	0.002 Toxicity Criteria	1400	-None Specified
Terbacil	5902-51-2	91 Minimum Criteria Systemic Toxicant	2450 Toxicity Criteria	2450 Toxicity Criteria	910	-Liver -Thyroid
Terbufos	13071-79-9	0.2 Minimum Criteria Systemic Toxicant	0.01 Toxicity Criteria	0.01 Toxicity Criteria	2	-Neurological
Terbutryn	886-50-0	330 Minimum Criteria PQL	3.1 Toxicity Criteria	3.1 Toxicity Criteria	3300	-Blood
Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.1 Minimum Criteria Systemic Toxicant	2.3 Human Health	2.3 Human Health	21	-Kidney
Tetrachloroethane, 1,1,1,2-	630-20-6	1.3 Minimum Criteria Carcinogen	NA	NA	13	-Carcinogen -Kidney -Liver
Tetrachloroethane, 1,1,2,2-	79-34-5	0.2 Minimum Criteria Carcinogen	**	**	2	-Carcinogen

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Tetrachloroethene [or PCE]	127-18-4	* Primary Standard	**	**	***	-Body Weight -Carcinogen -Liver
Tetrachlorophenol, 2,3,4,6-	58-90-2	210 Minimum Criteria Systemic Toxicant	4.5 Toxicity Criteria	4.5 Toxicity Criteria	2100	-Liver
Tetraethyl dithiopyrophosphate	3689-24-5	3.5 Minimum Criteria PQL	0.0115 Toxicity Criteria	0.0115 Toxicity Criteria	35	-Bone Marrow -Neurological
Thallium	7440-28-0	* Primary Standard	**	**	***	-Blood -Hair Loss -Liver
Thiocyanomethylthio-benzothiazole, 2-	21564-17-0	210 Minimum Criteria Systemic Toxicant	0.435 Toxicity Criteria	0.435 Toxicity Criteria	2100	-Gastrointestinal
Thiram	137-26-8	35 Minimum Criteria Systemic Toxicant	0.168 Toxicity Criteria	0.168 Toxicity Criteria	350	-Neurological
Tin	7440-31-5	4200 Minimum Criteria Systemic Toxicant	NA	NA	42000	-Kidney -Liver
Toluene	108-88-3	* Secondary Standard	475 Toxicity Criteria	475 Toxicity Criteria	***	-Kidney -Liver -Neurological
Toluene-2,4-diamine	95-80-7	100 Minimum Criteria PQL	NA	NA	1000	-Carcinogen
Toluidine, p-	106-49-0	150 Minimum Criteria PQL	NA	NA	1500	-Carcinogen
Total dissolved solids [or TDS]	C-010	* Secondary Standard	NA	NA	***	-None Specified
Toxaphene	8001-35-2	* Primary Standard	**	**	***	-Carcinogen -Developmental
Triallate	2303-17-5	91 Minimum Criteria Systemic Toxicant	65 Toxicity Criteria	65 Toxicity Criteria	910	-Liver -Spleen
Tributyltin oxide	56-35-9	10 Minimum Criteria PQL	0.05 Toxicity Criteria	0.05 Toxicity Criteria	100	-Immunological

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Trichloro-1,2,2-trifluoroethane, 1,1,2- [or CFC 113]	76-13-1	500000 Minimum Criteria PQL	NA	NA	5000000	-Body Weight -Neurological
Trichloroacetic acid	76-03-9	300 Minimum Criteria Health Advisory Level	100000 Toxicity Criteria	100000 Toxicity Criteria	3000	-None Specified
Trichlorobenzene, 1,2,3-	87-61-6	70 Minimum Criteria Systemic (c)	85 Toxicity Criteria	85 Toxicity Criteria	700	-Adrenals -Body Weight
Trichlorobenzene, 1,2,4-	120-82-1	* Primary Standard	22.5 Toxicity Criteria	22.5 Toxicity Criteria	***	-Adrenals -Body Weight
Trichlorobenzene, 1,3,5-	108-70-3	40 Minimum Criteria Systemic Toxicant	NA	NA	400	-None Specified
Trichloroethane, 1,1,1- [or Methyl chloroform]	71-55-6	* Primary Standard	270 Toxicity Criteria	270 Toxicity Criteria	***	-None Specified
Trichloroethane, 1,1,2-	79-00-5	* Primary Standard	28.5 Human Health	28.5 Human Health	***	-Carcinogen -Liver
Trichloroethene [or TCE]	79-01-6	* Primary Standard	**	**	***	-Carcinogen
Trichlorofluoromethane	75-69-4	2100 Minimum Criteria Systemic Toxicant	NA	NA	21000	-Cardiovascular -Kidney -Mortality -Respiratory
Trichlorophenol, 2,4,5-	95-95-4	4 Minimum Criteria Organoleptic	22.5 Toxicity Criteria	22.5 Toxicity Criteria	40	-Kidney -Liver
Trichlorophenol, 2,4,6-	88-06-2	3.2 Minimum Criteria Carcinogen	**	**	32	-Carcinogen
Trichlorophenoxy acetic acid, 2,4,5-	93-76-5	70 Minimum Criteria Systemic Toxicant	145 Toxicity Criteria	145 Toxicity Criteria	700	-Kidney
Trichlorophenoxy propionic acid [or Silvex]	93-72-1	* Primary Standard	NA	NA	***	-Liver
Trichloropropane, 1,2,3-	96-18-4	0.2 Minimum Criteria PQL	0.26 Human Health	0.26 Human Health	2	-Body Weight -Carcinogen -Kidney -Liver -Mortality

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Trifluralin	1582-09-8	4.5 Minimum Criteria Carcinogen	0.78 Human Health	0.78 Human Health	45	-Blood -Carcinogen -Liver
Trimethyl phosphate	512-56-1	50 Minimum Criteria PQL	NA	NA	500	-Carcinogen
Trimethylbenzene, 1,2,3-	526-73-8	10 Minimum Criteria Organoleptic	NA	NA	100	-None Specified
Trimethylbenzene, 1,2,4-	95-63-6	10 Minimum Criteria Organoleptic	217.5 Toxicity Criteria	217.5 Toxicity Criteria	100	-None Specified
Trimethylbenzene, 1,3,5-	108-67-8	10 Minimum Criteria Organoleptic	215 Toxicity Criteria	215 Toxicity Criteria	100	-None Specified
Trinitrobenzene, 1,3,5-	99-35-4	210 Minimum Criteria Systemic Toxicant	19 Toxicity Criteria	19 Toxicity Criteria	2100	-Blood -Spleen
Trinitrotoluene, 2,4,6-	118-96-7	10 Minimum Criteria PQL	49 Toxicity Criteria	49 Toxicity Criteria	100	-Carcinogen -Liver
TRPH	NOCAS#	5000 Minimum Criteria ##	**	**	50000	-Multiple Endpoints Mixed Contaminants
Uranium, natural	7440-61-1	21 Minimum Criteria Systemic Toxicant	NA	NA	210	-None Specified
Vanadium	7440-62-2	49 Minimum Criteria Systemic Toxicant	NA	NA	490	-None Specified
Vernam	1929-77-7	7 Minimum Criteria Systemic Toxicant	11.5 Toxicity Criteria	11.5 Toxicity Criteria	70	-Body Weight
Vinyl acetate	108-05-4	88 Minimum Criteria Organoleptic	700 Toxicity Criteria	700 Toxicity Criteria	880	-Body Weight -Kidney -Nasal
Vinyl chloride	75-01-4	* Primary Standard	NA	NA	***	-Carcinogen
Xylenes, total	1330-20-7	* Secondary Standard	370 Toxicity Criteria	370 Toxicity Criteria	***	-Body Weight -Mortality -Neurological

Table I
Groundwater and Surface Water Cleanup Target Levels

Contaminant	CAS #	Groundwater Criteria (ug/L)	Freshwater Surface Water Criteria (ug/L)	Marine Surface Water Criteria (ug/L)	Groundwater of Low Yield/Poor Quality Criteria (ug/L)	Target Organ/System or Effect
Zinc	7440-66-6	* Secondary Standard	**	**	***	-Blood
Zinc chloride	7646-85-7	2100 Minimum Criteria Systemic Toxicant	1.5 Toxicity Criteria	1.5 Toxicity Criteria	21000	-Blood
Zinc phosphide	1314-84-7	2.1 Minimum Criteria Systemic Toxicant	NA	NA	21	-Body Weight
Zineb	12122-67-7	350 Minimum Criteria Systemic Toxicant	13.5 Toxicity Criteria	13.5 Toxicity Criteria	3500	-Thyroid

* = As provided in Chapters 62-550 and 62-520, F.A.C.
** = As provided in Chapter 62-302, F.A.C.
*** = Equal to 10 times the value provided in Chapters 62-550 and 62-520, F.A.C.

a = Hardness-dependent per Chapter 62-302, F.A.C.

b = Not greater than 10% above background.

c = Shall not be increased more than 50% above background or to 1275, whichever is greater (per Chapter 62-302, F.A.C.).

PQL = Practical Quantitation Limit.
MRL = Minimum Risk Level from ATSDR Toxicant Profile.
Toxicity Criteria = 1/20 of applicable LC50 data.
NA = Not Available at time of Rule adoption.

Surrogate (a): Surrogate RfD based on other non-carcinogenic PAHs (e.g., pyrene).
Surrogate (b): Surrogate RfD based on oral RfD for HCH-gamma (lindane).
Surrogate (c): Surrogate RfD based on Primary Groundwater Standard for 1,2,4-trichlorobenzene.

= Based on similarity to chloride considerations as provided in Chapter 62-302, F.A.C.

= Based on similarity to oil and grease standard as provided in Chapter 62-302, F.A.C.

62-302 = As provided in Chapter 62-302, F.A.C. If the PQL using the most sensitive and currently available technology is higher than the specified criterion, the PQL shall be used.

Note: Freshwater and Marine Surface Waters shall pass Toxicity Bioassay Tests; "pass test" shall mean mortality less than 50% in a 96-hour acute toxicity test performed, in predominantly fresh waters, on both Cyprinella leedsi (bannerfin shiner) and Ceriodaphnia dubia (water flea), and in predominantly marine waters, on both Menidia beryllina (inland silversides) and Americamysis bahia (possum shrimp).

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Acenaphthene	83-32-9	1900	18000	2.1	0.7	0.7	21	-Liver
Acenaphthylene	208-96-8	1100	11000	27	0.7	0.7	270	-Body Weight -Liver
Acephate	30560-19-1	64	130	0.03	0.8	0.8	0.3	-Carcinogen -Neurological
Acetone	67-64-1	780	5500	2.8	6.8	6.8	28	-Kidney -Liver -Neurological
Acetonitrile	75-05-8	120	960	2	80	80	20	-Blood -Liver
Acetophenone	98-86-2	2700	24000	3.9	44	44	39	-None Specified
Acrolein	107-02-8	0.04	0.3	0.06	0.002	0.002	0.6	-Nasal
Acrylamide	79-06-1	0.1	0.3	0.004	0.02	0.02	0.04	-Carcinogen -Neurological
Acrylonitrile	107-13-1	0.3	0.5	0.004	0.2	0.2	0.04	-Carcinogen -Nasal -Reproductive
Alachlor	15972-60-8	12	36	0.02	0.006	0.006	0.2	-Blood -Carcinogen
Aldicarb [or Temik]	116-06-3	56	760	0.03	0.004	0.004	0.3	-Neurological
Aldrin	309-00-2	0.07	0.3	0.5	0.01	0.01	5	-Carcinogen -Liver
Allyl alcohol	107-18-6	62	460	1	0.02	0.02	10	-Kidney -Liver
Aluminum	7429-90-5	72000	*	***	***	***	***	-Body Weight
Aluminum phosphide	20859-73-8	31	730	***	***	***	***	-Body Weight
Ametryn	834-12-8	590	9300	0.8	0.08	0.08	8	-Liver
Ammonia **(a)**	7664-41-7	550	3700	570	4	NA	5700	-Respiratory
Aniline	62-53-3	14	100	0.03	0.02	0.02	0.3	-Blood -Carcinogen
Anthracene	120-12-7	18000	260000	2500	0.7	0.7	25000	-None Specified

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Antimony (b)	7440-36-0	26	240	5	***	***	50	-Blood -Mortality
Arsenic (b)	7440-38-2	0.8	3.7	29	***	***	290	-Carcinogen -Cardiovascular -Skin
Atrazine	1912-24-9	4	12	0.06	0.04	0.04	0.6	-Body Weight -Carcinogen
Azobenzene	103-33-3	8.2	24	0.4	0.06	0.06	4	-Carcinogen
Barium (b)	7440-39-3	110**	87000	1600	***	***	16000	-Cardiovascular
Bayleton	43121-43-3	2000	29000	4.8	11	11	48	-Blood -Body Weight
Benomyl	17804-35-2	3600	64000	3.1	0.03	0.03	31	-Developmental
Bentazon	25057-89-0	1500	18000	1.2	NA	NA	12	-Blood
Benzaldehyde	100-52-7	2200	18000	4.8	0.4	0.4	48	-Gastrointestinal -Kidney
Benzene	71-43-2	1.1	1.6	0.007	0.5	0.5	0.07	-Carcinogen
Benzenethiol	108-98-5	0.1	1	0.3	NA	NA	3	-Liver
Benzo(a)anthracene	56-55-3	1.4	5	3.2	0.7	0.7	32	-Carcinogen
Benzo(a)pyrene	50-32-8	0.1	0.5	8	1.2	1.2	80	-Carcinogen
Benzo(b)fluoranthene	205-99-2	1.4	4.8	10	1.6	1.6	100	-Carcinogen
Benzo(g,h,i)perylene	191-24-2	2300	41000	32000	4.8	4.8	320000	-Neurological
Benzo(k)fluoranthene	207-08-9	15	52	25	1.6	1.6	250	-Carcinogen
Benzoic acid	65-85-0	150000	*	110	36	36	1100	-None Specified
Benzotrichloride	98-08-7	0.04	0.07	0.003	0.0002	0.0002	0.03	-Carcinogen
Benzyl alcohol	100-51-6	23000	610000	9.5	2.3	2.3	95	-Gastrointestinal

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Benzyl chloride	100-44-7	0.8	1.2	0.006	0.03	0.03	0.06	-Carcinogen
Beryllium (b)(c)	7440-41-7	120	800	63	***	***	630	-Carcinogen -Gastrointestinal -Respiratory
Bidrin [or Dicrotophos]	141-66-2	5.5	67	0.005	0.1	0.1	0.05	-Developmental
Biphenyl, 1,1- [or Diphenyl]	92-52-4	2300	26000	0.2	5.8	5.8	2	-Kidney
Bis(2-chloroethyl)ether	111-44-4	0.3	0.4	0.02	0.05	0.05	0.2	-Carcinogen
Bis(2-chloroisopropyl)ether	108-60-1	4.4	7.3	0.07	0.003	0.003	0.7	-Blood -Carcinogen
Bis(2-ethylhexyl)phthalate [or DEHP]	117-81-7	76	280	3600	12	12	36000	-Carcinogen -Liver
Bisphenol A	80-05-7	3300	51000	11	1.7	1.7	110	-Body Weight
Boron	7440-42-8	7000	160000	***	NA	NA	***	-Reproductive -Respiratory
Bromacil	314-40-9	5700	72000	0.6	0.6	0.6	6	-Body Weight
Bromochloromethane	74-97-5	57	390	0.6	NA	NA	6	-None Specified
Bromodichloromethane	75-27-4	1.4	2	0.004	0.1	0.1	0.04	-Carcinogen -Kidney
Bromoform	75-25-2	48	84	0.03	2.7	2.7	0.3	-Carcinogen -Liver
Bromomethane [or Methyl bromide]	74-83-9	2.2	15	0.05	0.2	0.2	0.5	-Gastrointestinal
Butanol, 1-	71-36-3	1300	10000	3	110	110	30	-Neurological
Butanone, 2- [or MEK]	78-93-3	3100	21000	17	490	490	170	-Developmental
Butyl benzyl phthalate, n-	85-68-7	15000	320000	310	56	56	3100	-Liver
Butylate	2008-41-5	2100	22000	5.2	0.2	0.2	52	-Liver
Butylphthalyl butylglycolate	85-70-1	74000	*	4200	NA	NA	42000	-None Specified

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Cadmium (b)	7440-43-9	75**	1300	8	***	***	80	-Carcinogen -Kidney
Calcium cyanide	592-01-8	3100	73000	***	NA	NA	***	-Body Weight -Neurological -Thyroid
Captan	133-06-2	190	410	3.6	0.03	0.03	36	-Body Weight -Carcinogen
Carbaryl [or Sevin]	63-25-2	6800	120000	8.7	0.0007	0.0007	87	-Kidney -Liver
Carbazole	86-74-8	53	190	0.6	6.5	6.5	6	-Carcinogen
Carbofuran	1563-66-2	58	430	0.2	0.0006	0.0006	2	-Neurological -Reproductive
Carbon disulfide	75-15-0	200	1400	5.6	0.8	0.8	56	-Developmental -Neurological
Carbon tetrachloride	56-23-5	0.4	0.6	0.04	0.06	0.06	0.4	-Carcinogen -Liver
Carbophenothion [or Trithion]	786-19-6	9.8	180	13	1.5	1.5	130	-Neurological
Chlordane	57-74-9	3.1	12	9.6	0.003	0.003	96	-Carcinogen -Liver
Chlorine	7782-50-5	7800	200000	***	***	***	***	-Body Weight
Chlorine cyanide [or Cyanogen chloride]	506-77-4	910	7200	71	0.3	0.3	710	-Body Weight -Neurological -Thyroid
Chloro-1,3-butadiene [or Chloroprene]	126-99-8	2.6	17	1.5	NA	NA	15	-Body Weight -Hair Loss -Nasal
Chloroacetic acid	79-11-8	87	920	0.07	NA	NA	0.7	-Cardiovascular
Chloroaniline, 4-	106-47-8	190	2000	0.2	0.02	0.02	2	-Spleen
Chlorobenzene	108-90-7	30	200	1.3	0.2	0.2	13	-Liver
Chlorobenzilate	510-15-6	3.9	14	0.08	0.07	0.07	0.8	-Body Weight -Carcinogen
Chloroform	67-66-3	0.4	0.5	0.03	2.8	2.8	0.3	-Carcinogen -Liver
Chloro-m-cresol, p- [or 4-chloro-3-methylphenol]	59-50-7	410	4400	0.4	0.6	0.6	4	-Body Weight

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Chloromethane	74-87-3	1.7	2.3	0.01	2.3	2.3	0.1	-Carcinogen
Chloronaphthalene, beta-	91-58-7	4000	49000	260	NA	NA	2600	-Liver -Respiratory
Chloronitrobenzene, p-	100-00-5	28	55	3.7	1.6	1.6	37	-Carcinogen
Chlorophenol, 2-	95-57-8	82	640	0.7	2.5	2.5	7	-Reproductive
Chlorophenol, 3-	108-43-0	280	3400	0.2	3.1	3.1	2	-None Specified
Chlorophenol, 4-	106-48-9	220	2400	0.04	1.2	1.2	0.4	-None Specified
Chlorothalonil [or Bravo]	1897-45-6	88	280	0.2	0.06	0.06	2	-Carcinogen -Kidney
Chlorotoluene, o-	95-49-8	120	850	2.8	7.7	7.7	28	-Body Weight
Chlorotoluene, p-	106-43-4	100	730	2.5	NA	NA	25	-None Specified
Chlorpropham	101-21-3	13000	200000	51	7	7	510	-Bone Marrow -Kidney -Liver -Spleen
Chlorpyrifos	2921-88-2	220	4200	15	0.001	0.001	150	-Neurological
Chromium (hexavalent) **(b)**	18540-29-9	210	420	38	***	***	380	-Carcinogen -Respiratory
Chrysene	218-01-9	140	450	77	0.7	0.7	770	-Carcinogen
Cobalt	7440-48-4	4700	110000	***	NA	NA	***	-Cardiovascular -Immunological -Neurological -Reproductive
Copper	7440-50-8	110**	76000	***	***	***	***	-Gastrointestinal
Coumaphos	56-72-4	18	300	0.3	0.0007	0.0007	3	-Neurological
Crotonaldehyde	123-73-9	0.07	0.1	17	NA	NA	170	-Carcinogen
Cumene [or Isopropyl benzene]	98-82-8	160	1100	0.2	56	56	2	-Adrenals -Kidney
Cyanide (potassium salt) **(b)**	57-12-5	30**	39000	40	***	***	400	-Body Weight -Neurological -Thyroid

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Cyanogen	460-19-5	340	2500	2000	NA	NA	20000	-None Specified
Cycloate	1134-23-2	240	2600	0.7	2.5	2.5	7	-Neurological
Cyclohexanone	108-94-1	68000	510000	150	110	110	1500	-Body Weight
Cypermethrin	52315-07-8	750	14000	70	0.005	0.005	700	-Gastrointestinal
DDD, 4,4'-	72-54-8	4.6	18	4	0.1	0.1	40	-Carcinogen
DDE, 4,4'-	72-55-9	3.3	13	18	0.1	0.1	180	-Carcinogen
DDT, 4,4'-	50-29-3	3.3	13	11	0.06	0.06	110	-Carcinogen -Liver
Diallate	2303-16-4	17	56	0.6	NA	NA	6	-Carcinogen
Diazinon	333-41-5	55	760	0.02	0.00005	0.00005	0.2	-Neurological
Dibenz(a,h)anthracene	53-70-3	0.1	0.5	30	4.7	4.7	300	-Carcinogen
Dibenzofuran	132-64-9	280	5000	15	36	36	150	-None Specified
Dibromo-3-chloropropane, 1-2- [or DBCP]	96-12-8	0.8	2.7	0.001	NA	NA	0.01	-Carcinogen -Reproductive
Dibromochloromethane	124-48-1	1.4	2.1	0.003	0.2	0.2	0.03	-Carcinogen -Liver
Dibromoethane, 1,2- [or EDB]	106-93-4	0.01	0.04	0.0001	0.07	0.07	0.001	-Carcinogen -Reproductive
Dicamba	1918-00-9	1800	24000	2.6	2.4	2.4	26	-Developmental
Dichloroacetic acid	79-43-6	200	2300	0.2	8.1	8.1	2	-None Specified
Dichloroacetonitrile	3018-12-0	170	1400	0.03	NA	NA	0.3	-None Specified
Dichlorobenzene, 1,2-	95-50-1	650	4600	17	2.8	2.8	170	-Body Weight
Dichlorobenzene, 1,3-	541-73-1	27	180	0.3	2.8	2.8	3	-None Specified

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Dichlorobenzene, 1,4-	106-46-7	6	9	2.2	2.9	2.9	22	-Carcinogen -Liver
Dichlorobenzidine, 3,3'-	91-94-1	2.1	6.3	0.4	0.002	0.002	4	-Carcinogen
Dichlorodifluoromethane	75-71-8	56	370	44	NA	NA	440	-Body Weight -Liver
Dichloroethane, 1,1-	75-34-3	290	2000	0.4	NA	NA	4	-Kidney
Dichloroethane, 1,2- [or EDC]	107-06-2	0.5	0.7	0.01	0.02	0.02	0.1	-Carcinogen
Dichloroethene, 1,1-	75-35-4	0.09	0.1	0.06	0.03	0.03	0.6	-Carcinogen -Liver
Dichloroethene, cis-1,2-	156-59-2	19	130	0.4	NA	NA	4	-Blood
Dichloroethene, trans-1,2-	156-60-5	31	210	0.7	75	75	7	-Blood -Liver
Dichlorophenol, 2,3-	576-24-9	180	2500	0.2	1.2	1.2	2	-None Specified
Dichlorophenol, 2,4-	120-83-2	130	1300	0.005	0.1	0.1	0.05	-Immunological
Dichlorophenol, 2,5-	583-78-8	200	3000	0.5	4.3	4.3	5	-None Specified
Dichlorophenol, 2,6-	87-65-0	170	2200	0.1	2.5	2.5	1	-None Specified
Dichlorophenol, 3,4-	95-77-2	200	3100	0.03	3.9	3.9	0.3	-None Specified
Dichlorophenoxy acetic acid, 2,4-	94-75-7	670	11000	0.7	0.9	0.9	7	-Kidney -Liver
Dichloropropane, 1,2-	78-87-5	0.6	0.8	0.03	15	15	0.3	-Carcinogen -Nasal
Dichloropropene, 1,3-	542-75-6	0.2	0.2	0.001	0.09	0.09	0.01	-Carcinogen -Kidney -Nasal
Dichlorprop	120-36-5	270	3300	0.3	0.3	0.3	3	-None Specified
Dichlorvos	62-73-7	0.2	0.3	0.0005	0.00002	0.00002	0.005	-Carcinogen -Neurological
Dicofol [or Kelthane]	115-32-2	2.3	7.6	0.05	0.0004	0.0004	0.5	-Adrenals -Carcinogen

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Dieldrin	60-57-1	0.07	0.3	0.004	0.0001	0.0001	0.04	-Carcinogen -Liver
Diethylphthalate	84-66-2	54000	920000	86	5.9	5.9	860	-Body Weight
Dimethoate	60-51-5	8.4	86	0.0004	0.0004	0.0004	0.004	-Neurological
Dimethrin	70-38-2	19000	270000	2500	1.3	1.3	25000	-Liver
Dimethylformamide, N,N-	68-12-2	1100	7800	3	210	210	30	-Gastrointestinal -Liver
Dimethylphenol, 2,4-	105-67-9	910	9800	1.7	3.2	3.2	17	-Blood -Neurological
Dimethylphthalate	131-11-3	590000	*	380	7.8	7.8	3800	-Kidney
Di-n-butylphthalate	84-74-2	7300	140000	47	1.5	1.5	470	-Mortality
Dinitrobenzene, 1,2- (o)	528-29-0	13	130	1	0.2	0.2	10	-Spleen
Dinitrobenzene, 1,3- (m)	99-65-0	3.5	33	0.04	0.4	0.4	0.4	-Spleen
Dinitrophenol, 2,4-	51-28-5	66	620	0.06	0.01	0.01	0.6	-Eye
Dinitrotoluene, 2,4-	121-14-2	1.3	3.7	0.0008	0.07	0.07	0.008	-Carcinogen -Liver -Neurological
Dinitrotoluene, 2,6-	606-20-2	1	2.1	0.0007	0.03	0.03	0.007	-Blood -Carcinogen -Kidney -Mortality -Neurological
Di-n-octylphthalate	117-84-0	1500	27000	480000	NA	NA	4800000	-Kidney -Liver
Dinoseb	88-85-7	55	740	0.03	0.03	0.03	0.3	-Developmental
Dioxane, 1,4-	123-91-1	12	18	0.02	1	1	0.2	-Carcinogen
Dioxin [or 2,3,7,8-TCDD]	1746-01-6	0.000007	0.00003	0.003	0.000001	0.000001	0.03	-Carcinogen
Diphenamid	957-51-7	1800	25000	2.6	20	20	26	-Liver
Diphenylhydrazine, 1,2-	122-66-7	1.2	3.7	0.4	0.01	0.01	4	-Carcinogen

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Disulfoton	298-04-4	2.9	56	0.1	0.1	0.1	1	-Neurological
Diuron	330-54-1	130	2000	0.3	0.2	0.2	3	-Blood
Endosulfan	115-29-7	410	6700	3.8	0.005	0.0008	38	-Body Weight -Cardiovascular -Kidney
Endothall	145-73-3	780	7800	0.4	0.4	0.4	4	-Gastrointestinal
Endrin	72-20-8	21	340	1	0.001	0.001	10	-Liver
Epichlorohydrin	106-89-8	11	74	0.03	2.4	2.4	0.3	-Carcinogen -Kidney -Nasal
Ethion	563-12-2	38	780	1.7	0.003	0.003	17	-Neurological
Ethoprop	13194-48-4	5.5	69	0.005	0.002	0.002	0.05	-Neurological
Ethoxyethanol, 2-	110-80-5	8100	65000	120	NA	NA	1200	-Body Weight -Reproductive
Ethyl acetate	141-78-6	5500	39000	26	26	26	260	-Body Weight -Mortality
Ethyl acrylate	140-88-5	1.6	2.2	25	0.6	0.6	250	-Carcinogen
Ethyl chloride [or Chloroethane]	75-00-3	2.9	4	0.06	NA	NA	0.6	-Carcinogen -Developmental
Ethyl dipropylthiocarbamate, S- [or EPTC]	759-94-4	1100	13000	11	15	15	110	-Cardiovascular
Ethyl ether	60-29-7	150	1000	5	850	850	50	-Body Weight
Ethyl methacrylate	97-63-2	380	2600	3.5	NA	NA	35	-Kidney
Ethyl p-nitrophenyl phenylphosphorothioate [or EPN]	2104-64-5	0.7	15	0.04	0.003	0.003	0.4	-Neurological
Ethylbenzene	100-41-4	1100	8400	0.6	12	12	6	-Developmental -Kidney -Liver
Ethylene diamine	107-15-3	610	5500	40	3.2	3.2	400	-Blood -Cardiovascular
Ethylene glycol	107-21-1	24000	180000	56	65	65	560	-Kidney

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Ethylene oxide	75-21-8	0.3	0.4	0.05	20	20	0.5	-Carcinogen
Fenamiphos	22224-92-6	15	210	0.02	0.003	0.003	0.2	-Neurological
Fensulfothion	115-90-2	14	180	0.01	0.004	0.004	0.1	-Neurological
Fluometuron	2164-17-2	750	9700	0.9	1.8	1.8	9	-None Specified
Fluoranthene	206-44-0	2900	48000	1200	1.3	1.3	12000	-Blood -Kidney -Liver
Fluorene	86-73-7	2200	28000	160	17	17	1600	-Blood
Fluoride	7782-41-4	500**	120000	***	***	***	***	-Teeth
Fonofos	944-22-9	120	1800	0.4	0.003	0.003	4	-Liver -Neurological
Formaldehyde	50-00-0	21	29	2.4	0.4	0.4	24	-Body Weight -Carcinogen -Gastrointestinal
Furfural	98-01-1	160	2000	1	2.7	2.7	10	-Liver -Nasal
Guthion [or Azinphos, methyl]	86-50-0	110	2000	0.2	0.0002	0.0002	2	-Neurological
Heptachlor	76-44-8	0.2	0.9	23	0.1	0.1	230	-Carcinogen -Liver
Heptachlor epoxide	1024-57-3	0.1	0.4	0.6	0.006	0.006	6	-Carcinogen -Liver
Hexachloro-1,3-butadiene	87-68-3	6.3	12	1.1	110	110	11	-Carcinogen -Kidney
Hexachlorobenzene	118-74-1	0.5	1.1	2.2	0.0008	0.0008	22	-Carcinogen -Liver
Hexachlorocyclohexane, alpha-	319-84-6	0.2	0.5	0.0003	0.0006	0.0006	0.003	-Carcinogen
Hexachlorocyclohexane, beta-	319-85-7	0.6	2.1	0.001	0.003	0.003	0.01	-Carcinogen
Hexachlorocyclohexane, delta-	319-86-8	22	420	0.2	NA	NA	2	-Kidney -Liver
Hexachlorocyclohexane, gamma- [or Lindane]	58-89-9	0.7	2.2	0.009	0.003	0.003	0.09	-Carcinogen -Kidney -Liver

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Hexachlorocyclopentadiene	77-47-4	2.4	16	400	24	24	4000	-Gastrointestinal
Hexachloroethane	67-72-1	34	78	0.2	0.08	0.08	2	-Carcinogen -Kidney
Hexahydro-1,3,5-trinitro-1,3,5-triazine [or RDX]	121-82-4	6.7	16	0.007	1.3	1.3	0.07	-Carcinogen -Reproductive
Hexane, n-	110-54-3	500	3600	3.5	1200	1200	35	-Neurological
Hexanone, 2- [or Methyl butyl ketone]	591-78-6	5.1	34	1.4	NA	NA	14	-None Specified
Hexazinone	51235-04-2	1600	18000	1.1	5	5	11	-Body Weight
Hydroquinone	123-31-9	1800	19000	1.4	0.02	0.02	14	-Blood
Indeno(1,2,3-cd)pyrene	193-39-5	1.5	5.3	28	4.3	4.3	280	-Carcinogen
Iron	7439-89-6	23000	480000	***	***	***	***	-Blood -Gastrointestinal
Isobutyl alcohol	78-83-1	4100	31000	8.9	200	200	89	-Neurological
Isophorone	78-59-1	340	580	0.2	3.8	3.8	2	-Carcinogen
Lead (d)	7439-92-1	400	920	***	***	***	***	-Neurological
Linuron	330-55-2	130	2000	0.04	1.4	1.4	0.4	-Blood
Lithium	7439-93-32	1600	40000	***	NA	NA	***	-None Specified
Malathion	121-75-5	1300	20000	4.2	0.003	0.003	42	-Neurological
Maneb	12427-38-2	350	5500	6.3	0.5	0.5	63	-Thyroid
Manganese	7439-96-5	1600	22000	***	NA	NA	***	-Neurological
Mercury	7439-97-6	3.4	26	2.1	0.01	0.01	21	-Neurological
Mercury, methyl	22967-92-6	0.8	5.4	0.002	NA	NA	0.02	-Neurological

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Merphos	150-50-5	2.2	41	0.5	NA	NA	5	-Body Weight -Neurological
Methacrylonitrile	126-98-7	0.8	5.4	0.02	NA	NA	0.2	-Liver
Methamidophos	10265-92-6	1.9	19	0.02	0	0	0.2	-Neurological
Methanol	67-56-1	5800	43000	20	180	180	200	-Liver -Neurological
Methidathion	950-37-8	47	530	0.003	0.0001	0.0001	0.03	-Liver
Methomyl	16752-77-5	22	150	1.2	0.007	0.007	12	-Kidney -Spleen
Methoxy-5-nitroaniline, 2-	99-59-2	17	41	0.4	NA	NA	4	-Carcinogen
Methoxychlor	72-43-5	370	7500	160	0.1	0.1	1600	-Developmental -Reproductive
Methyl acetate	79-20-9	4100	28000	26	NA	NA	260	-Liver
Methyl acrylate	96-33-3	99	680	0.9	NA	NA	9	-None Specified
Methyl isobutyl ketone [or MIBK]	108-10-1	220	1500	2.6	110	110	26	-Kidney -Liver
Methyl methacrylate	80-62-6	1400	9400	0.1	32	32	1	-Nasal
Methyl parathion [or Parathion, methyl]	298-00-0	18	310	0.06	0.0003	0.0003	0.6	-Blood -Neurological
Methyl tert-butyl ether [or MTBE]	1634-04-4	3200	22000	0.2	150	150	2	-Eye -Kidney -Liver
Methyl-4-chlorophenoxy acetic acid, 2-	94-74-6	30	440	0.02	0.4	0.4	0.2	-Kidney -Liver
Methylaniline, 2-	95-53-4	1.8	3.3	0.3	0.2	0.2	3	-Carcinogen
Methylene bis(2-chloroaniline), 4,4-	101-14-4	6.4	17	0.2	NA	NA	2	-Carcinogen -Liver -Bladder
Methylene bromide	74-95-3	58	400	0.3	NA	NA	3	-Blood
Methylene chloride	75-09-2	16	23	0.02	7.3	7.3	0.2	-Carcinogen -Liver

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Methylnaphthalene, 1-	90-12-0	68	470	2.2	10	10	22	-Body Weight -Nasal
Methylnaphthalene, 2-	91-57-6	80	560	6.1	9.1	9.1	61	-Body Weight -Nasal
Methylphenol, 2- [or o-Cresol]	95-48-7	2400	28000	0.3	1.9	1.9	3	-Body Weight -Neurological
Methylphenol, 3- [or m-Cresol]	108-39-4	2500	29000	0.3	3.3	3.3	3	-Body Weight -Neurological
Methylphenol, 4- [or p-Cresol]	106-44-5	250	3000	0.03	0.5	0.5	0.3	-Maternal Death -Neurological -Respiratory
Metolachlor	51218-45-2	9100	120000	1.2	0.01	0.01	12	-Body Weight
Metribuzin	21087-64-9	32	210	2.2	0.8	0.8	22	-Body Weight -Kidney -Liver -Mortality
Mevinphos	7786-34-7	16	240	0.01	0.0003	0.0003	0.1	-Neurological
Molinate	2212-67-1	100	1200	0.1	0.1	0.1	1	-Reproductive
Molybdenum	7439-98-7	390	9700	***	NA	NA	***	-Gout
Naled	300-76-5	130	2100	0.1	0.0002	0.0002	1	-Neurological
Naphthalene	91-20-3	40	270	1.7	2.2	2.2	17	-Body Weight -Nasal
Nickel **(b)**	7440-02-0	110**	28000	130	***	***	1300	-Body Weight
Nitrate	14797-55-8	120000	*	***	***	***	***	-Blood
Nitrite	14797-65-0	7800	180000	***	***	***	***	-Blood
Nitroaniline, o-	88-74-4	5.7	66	0.3	NA	NA	3	-Blood
Nitroaniline, p-	100-01-6	5.2	56	0.1	5.9	5.9	1	-None Specified
Nitrobenzene	98-95-3	14	120	0.03	0.6	0.6	0.3	-Adrenals -Blood -Kidney -Liver
Nitrophenol, 4-	100-02-7	390	4400	0.3	0.3	0.3	3	-None Specified

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Nitroso-di-ethylamine, N-	55-18-5	0.003	0.005	0.02	0.0007	0.0007	0.2	-Carcinogen
Nitroso-dimethylamine, N-	62-75-9	0.009	0.02	0.008	0.002	0.002	0.08	-Carcinogen
Nitroso-di-n-butylamine, N-	924-16-3	0.05	0.07	0.05	0.002	0.002	0.5	-Carcinogen
Nitroso-di-n-propylamine, N-	621-64-7	0.09	0.2	0.04	0.008	0.008	0.4	-Carcinogen
Nitroso-diphenylamine, N-	86-30-6	170	440	0.4	2.5	2.5	4	-Carcinogen
Nitroso-N-methylethylamine, N-	10595-95-6	0.01	0.02	0.03	0.005	0.005	0.3	-Carcinogen
Nitrotoluene, m-	99-08-1	210	1800	2.4	3.6	3.6	24	-Spleen
Nitrotoluene, o-	88-72-2	280	2500	3.3	7.3	7.3	33	-Spleen
Nitrotoluene, p-	99-99-0	640	9700	3.3	7.3	7.3	33	-Spleen
Octamethylpyrophosphoramide	152-16-9	83	860	4	NA	NA	40	-Neurological
Oxamyl	23135-22-0	1100	12000	0.9	0.04	0.04	9	-Body Weight
Paraquat	1910-42-5	310	4000	160	230	230	1600	-Respiratory
Parathion	56-38-2	450	9100	10	0.01	0.01	100	-Neurological
PCBs [Aroclor miture]	1336-36-3	0.5	2.1	17	0.002	0.002	170	-Carcinogen -Immunological
Pebulate	1114-71-2	1600	15000	8.5	7.4	7.4	85	-Blood
Pendimethalin	40487-42-1	2500	36000	28	1	1	280	-Liver
Pentachlorobenzene	608-93-5	27	250	3.9	1.2	1.2	39	-Kidney -Liver
Pentachloronitrobenzene	82-68-8	3	7.7	0.7	0.06	0.06	7	-Carcinogen -Liver
Pentachlorophenol	87-86-5	7.7	23	0.03	0.2	0.2	0.3	-Carcinogen -Kidney -Liver

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Permethrin	52645-53-1	3700	67000	880	0.003	0.003	8800	-Liver
Phenanthrene	85-01-8	2000	30000	250	0.7	0.7	2500	-Kidney
Phenol	108-95-2	900**	390000	0.05	0.03	0.03	0.5	-Developmental
Phenylenediamine, p-	106-50-3	8000	83000	6.2	NA	NA	62	-Whole Body
Phenylphenol, 2-	90-43-7	460	1300	0.4	0.8	0.8	4	-Carcinogen
Phorate	298-02-2	14	280	0.3	0.001	0.001	3	-Neurological
Phosmet	732-11-6	1400	21000	5	0.004	0.004	50	-Body Weight -Liver -Neurological
Phthalic anhydride	85-44-9	8300	57000	76	NA	NA	760	-Kidney -Nasal -Respiratory
Prometon	1610-18-0	980	14000	2.4	14	14	24	-None Specified
Prometryn	7287-19-6	260	3900	0.7	0.5	0.5	7	-Bone Marrow -Kidney -Liver
Propachlor	1918-16-7	770	10000	1.1	0.1	0.1	11	-Body Weight -Liver
Propanil	709-98-8	300	4100	0.4	0.2	0.2	4	-Spleen
Propazine	139-40-2	1200	17000	0.2	2.7	2.7	2	-Body Weight
Propylene glycol	57-55-6	710000	*	560	140	140	5600	-Blood -Bone Marrow
Propylene oxide	75-56-9	3.2	8.1	22	NA	NA	220	-Carcinogen -Nasal -Respiratory
Pydrin [or Fenvalerate]	51630-58-1	1800	32000	700	0.0001	0.0001	7000	-Neurological
Pyrene	129-00-0	2200	37000	880	1.3	1.3	8800	-Kidney
Pyridine	110-86-1	13	95	0.03	5.4	5.4	0.3	-Liver
Resmethrin	10453-86-8	2200	39000	1200	0.01	0.01	12000	-Reproductive

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Ronnel	299-84-3	3600	59000	1300	0.2	0.2	13000	-Liver
Selenium (b)	7782-49-2	390	10000	5	***	***	50	-Hair Loss -Neurological -Skin
Silver (b)	7440-22-4	390	9100	17	***	***	170	-Skin
Simazine	122-34-9	7.4	21	0.08	0.1	0.1	0.8	-Blood -Body Weight -Carcinogen
Strontium	7440-24-6	47000	*	***	NA	NA	***	-Bone
Strychnine	57-24-9	17	210	0.7	0.3	0.3	7	-Mortality
Styrene	100-42-5	2700	21000	3.6	16	16	36	-Blood -Liver -Neurological
Terbacil	5902-51-2	660	7700	0.5	14	14	5	-Liver -Thyroid
Terbufos	13071-79-9	1.4	17	0.02	0.001	0.001	0.2	-Neurological
Tetrachlorobenzene, 1,2,4,5-	95-94-3	6.3	51	0.5	0.5	0.5	5	-Kidney
Tetrachloroethane, 1,1,1,2-	630-20-6	4	5.7	0.01	NA	NA	0.1	-Carcinogen -Kidney -Liver
Tetrachloroethane, 1,1,2,2-	79-34-5	0.7	1.1	0.002	0.08	0.08	0.02	-Carcinogen
Tetrachloroethene [or PCE]	127-18-4	8.9	17	0.03	0.1	0.1	0.3	-Body Weight -Carcinogen -Liver
Tetrachlorophenol, 2,3,4,6-	58-90-2	1500	17000	3.2	0.07	0.07	32	-Liver
Tetraethyl dithiopyrophosphate	3689-24-5	31	420	0.1	0.0004	0.0004	1	-Bone Marrow -Neurological
Thiram	137-26-8	330	4900	1.1	0.005	0.005	11	-Neurological
Tin	7440-31-5	44000	660000	***	NA	NA	***	-Kidney -Liver
Toluene	108-88-3	380	2600	0.5	5.6	5.6	5	-Kidney -Liver -Neurological
Toluidine, p-	106-49-0	1.4	2.2	0.7	NA	NA	7	-Carcinogen

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Toxaphene	8001-35-2	1	3.7	31	0.002	0.002	310	-Carcinogen -Developmental
Triallate	2303-17-5	740	9500	8.4	6	6	84	-Liver -Spleen
Tributyltin oxide	56-35-9	22	400	36	0.2	0.2	360	-Immunological
Trichloro-1,2,2-trifluoroethane, 1,1,2- [or CFC 113]	76-13-1	13000	88000	27000	NA	NA	270000	-Body Weight -Neurological
Trichloroacetic acid	76-03-9	480	4600	1.2	400	400	12	-None Specified
Trichlorobenzene, 1,2,3-	87-61-6	560	7400	4.6	5.6	5.6	46	-Adrenals -Body Weight
Trichlorobenzene, 1,2,4-	120-82-1	560	7500	5.3	1.7	1.7	53	-Adrenals -Body Weight
Trichlorobenzene, 1,3,5-	108-70-3	190	1800	16	NA	NA	160	-None Specified
Trichloroethane, 1,1,1- [or Methyl chloroform]	71-55-6	400	3300	1.9	2.6	2.6	19	-None Specified
Trichloroethane, 1,1,2-	79-00-5	1.3	1.8	0.03	0.2	0.2	0.3	-Carcinogen -Liver
Trichloroethene [or TCE]	79-01-6	6	8.5	0.03	0.9	0.9	0.3	-Carcinogen
Trichlorofluoromethane	75-69-4	200	1300	33	NA	NA	330	-Cardiovascular -Kidney -Mortality -Respiratory
Trichlorophenol, 2,4,5-	95-95-4	6000	82000	0.3	1.5	1.5	3	-Kidney -Liver
Trichlorophenol, 2,4,6-	88-06-2	72	180	0.06	0.1	0.1	0.6	-Carcinogen
Trichlorophenoxy acetic acid, 2,4,5-	93-76-5	590	8300	0.4	0.8	0.8	4	-Kidney
Trichlorophenoxy propionic acid [or Silvex]	93-72-1	590	12000	5.4	NA	NA	54	-Liver
Trichloropropane, 1,2,3-	96-18-4	0.01	0.02	0.001	0.002	0.002	0.01	-Body Weight -Carcinogen -Kidney -Liver -Mortality
Trifluralin	1582-09-8	94	220	3.5	0.6	0.6	35	-Blood -Carcinogen -Liver
Trimethyl phosphate	512-56-1	15	30	0.2	NA	NA	2	-Carcinogen

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Trimethylbenzene, 1,2,3-	526-73-8	13	89	0.3	NA	NA	3	-None Specified
Trimethylbenzene, 1,2,4-	95-63-6	13	88	0.3	7.2	7.2	3	-None Specified
Trimethylbenzene, 1,3,5-	108-67-8	11	74	0.3	6.7	6.7	3	-None Specified
Trinitrobenzene, 1,3,5-	99-35-4	1300	14000	1	0.09	0.09	10	-Blood -Spleen
Trinitrotoluene, 2,4,6-	118-96-7	24	55	0.06	0.3	0.3	0.6	-Carcinogen -Liver
TRPH	NOCAS#	340	2500	340	340	340	3400	-Multiple Endpoints Mixed Contaminants
Uranium, natural	7440-61-1	120	470	***	NA	NA	***	-None Specified
Vanadium **(b)**	7440-62-2	15**	7400	980	NA	NA	9800	-None Specified
Vernam	1929-77-7	29	260	0.1	0.2	0.2	1	-Body Weight
Vinyl acetate	108-05-4	230	1600	0.4	3	3	4	-Body Weight -Kidney -Nasal
Vinyl chloride	75-01-4	0.03	0.04	0.007	NA	NA	0.07	-Carcinogen
Xylenes, total	1330-20-7	5900	40000	0.2	3.9	3.9	2	-Body Weight -Mortality -Neurological
Zinc **(b)**	7440-66-6	23000	560000	6000	***	***	60000	-Blood
Zinc phosphide	1314-84-7	23	550	***	NA	NA	***	-Body Weight
Zineb	12122-67-7	3400	53000	19	0.7	0.7	190	-Thyroid

Table II
Soil Cleanup Target Levels

Contaminant	CAS#	Direct Exposure		Leachability Based on Groundwater Criteria	Leachability Based on Freshwater Surface Water Criteria	Leachability Based on Marine Surface Water Criteria	Leachability Based on Groundwater of Low Yield/ Poor Quality	Target Organ/System or Effect
		Residential	Commercial/ Industrial					
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	

Values rounded to two significant figures if >1 and to one significant figure if <1.

* Contaminant is not a health concern for this default exposure scenario.

** Direct exposure value based on acute toxicity considerations.

*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.

(a) = See discussion on the development of SCTLs for Ammonia in the Technical Report: Development of Soil Cleanup Target Levels for Chapter 62-777, F.A.C., Final Report, dated XXXX, 1999.

(b) = Leachability values derived from USEPA Soil Screening Guidance (1996). These values were derived assuming soil pH 6.8. These leachability values are dependent upon both the metal concentration in soil and soil characteristics. Thus, if site-specific soil characteristics are different than the defaults, these leachability values may not apply. If this is the case, site-specific leachability values should be derived using methods such as TCLP or SPLP.

(c) = Phytotoxicity must be considered.

(d) = Residential direct exposure value from USEPA Revised Interm Soil Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive 9355.4-12 (1994). The industrial direct exposure value was derived using methodologies outlined in USEPA 'Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil,' December 1996.

None Specified = Information on target organ(s) not available at time of rule adoption.

NA = Not available at time of rule adoption.

Appendix B

Soil Boring and Well Completion Logs

ENSAFE

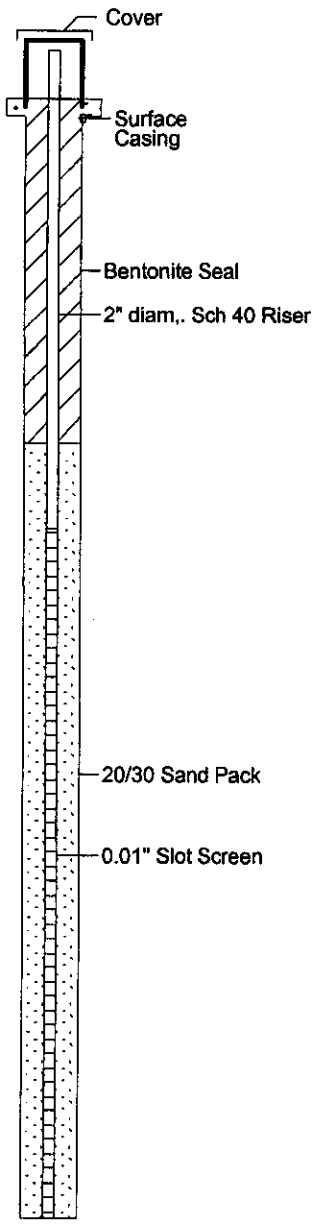
Monitoring Well 11GS16

Well 11GS16
March 11, 2003
Site 11, NASP

Started	: 03/11/2003	Riser	: 0.0' to 5.0'
Finished	: 03/11/2003	Well Screen	: 5.0' to 13.0'
Drilling Method	: DPT		
Geologist	: Brian Caldwell		
Depth Drilled/Well	: 13.0'/13.0'		

Depth in Feet	Samples	PID (ppm)	GRAPHIC	USCS	DESCRIPTION
0	1	0.0		CL	(0-1.0') CLAY, red; fill material.
	2	0.0		SW	(1.0'-2.0) SAND, dark brown.
	3	0.0		SW	(2.0'-6.0') SAND, tan to buff.
5	4	0.0			
	5	0.0		SW	(6.0'-8.0) SAND, dark brown to black; slightly damp.
10				SW	(8.0'-13.0') SAND, black to dark gray; saturated.
					Terminated well at 13.0 feet below ground surface.
15					

Well: 11GS16



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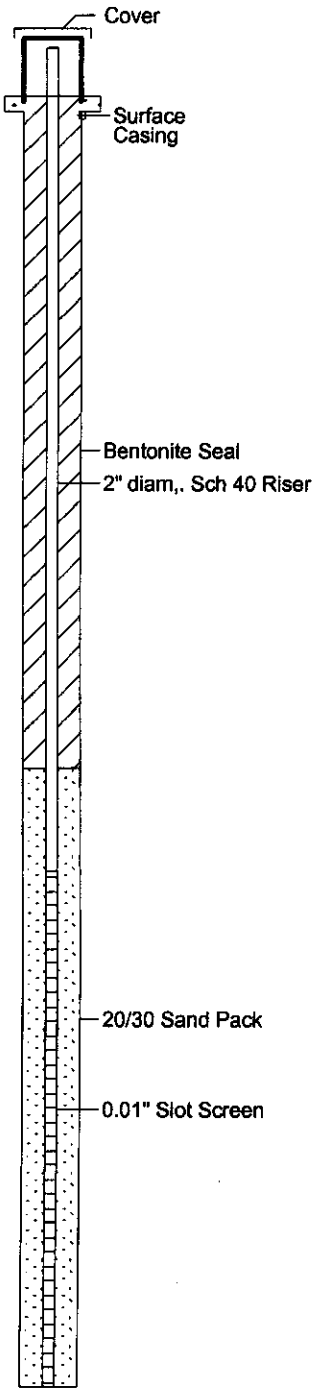
Monitoring Well 12GS17

Well 12GS17
March 11, 2003
Site 12, NASP

Started	: 03/11/2003	Riser	: 0.0' to 15.0'
Finished	: 03/11/2003	Well Screen	: 15.0' to 25.0'
Drilling Method	: DPT		
Geologist	: Brian Caldwell		
Depth Drilled/Well	: 25.0'/25.0'		

Depth in Feet	Samples	PID (ppm)	GRAPHIC	USCS	DESCRIPTION
0				GW	(0-0.5") GRAVEL.
					(0.5"-1.5') ASPHALT.
	1	0.0		SC	(1.5'-3.0') SAND, dark brown to red.
	2	0.0		SW	(3.0'-10.0') SAND, tan.
5	3	0.0			
10	4	0.0		SW	(10.0'-15.0') SAND, dark brown. Water Level at 14.0'.
15	5	0.0		SW	(15.0'-20.0') SAND, medium brown.
20	6	0.0		SW	(20.0'-25.0') SAND, tank to medium brown.
25					Terminated well at 25 feet below ground surface.

Well: 12GS17



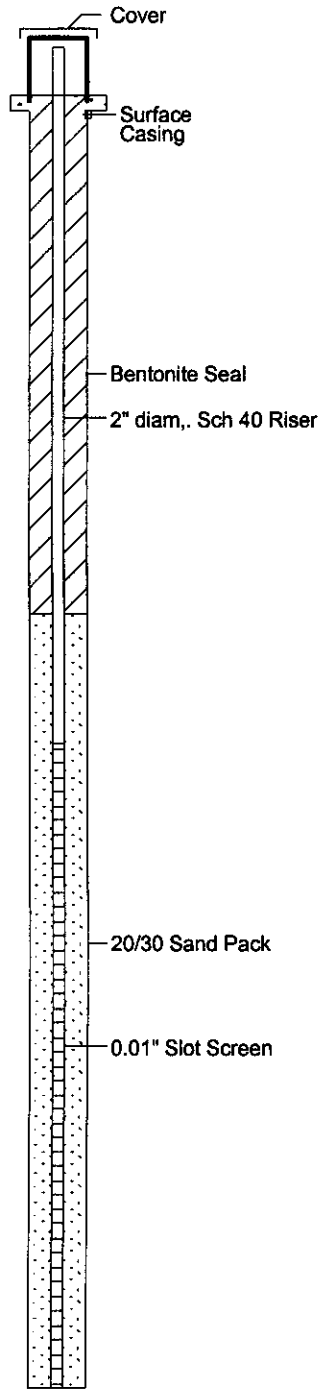
Monitoring Well 25GS10

Well 25GS10
March 12, 2003
Site 25, NASP

Started	: 03/12/2003	Riser	: 0.0' to 10.0'
Finished	: 03/12/2003	Well Screen	: 10.0' to 20.0'
Drilling Method	: DPT		
Geologist	: Brian Caldwell		
Depth Drilled/Well	: 20.0'/20.0'		

Depth in Feet	Samples	PID (ppm)	GRAPHIC	USCS	DESCRIPTION
0					(0-3") ASPHALT.
				SC	(3"-2.0') SANDY CLAY fill; red.
					(2.0'-5.0') SAND, medium brown.
	1	0.0		SW	
5					(5.0' to 20') SAND, tan.
	2	0.0			
10					Slightly damp between 10.0' and 15.0'.
	3	0.0		SW	
15					Wet between 15.0' and 20.0'.
	4	0.0			
20					Terminated well at 20 feet below ground surface.

Well: 11GS16



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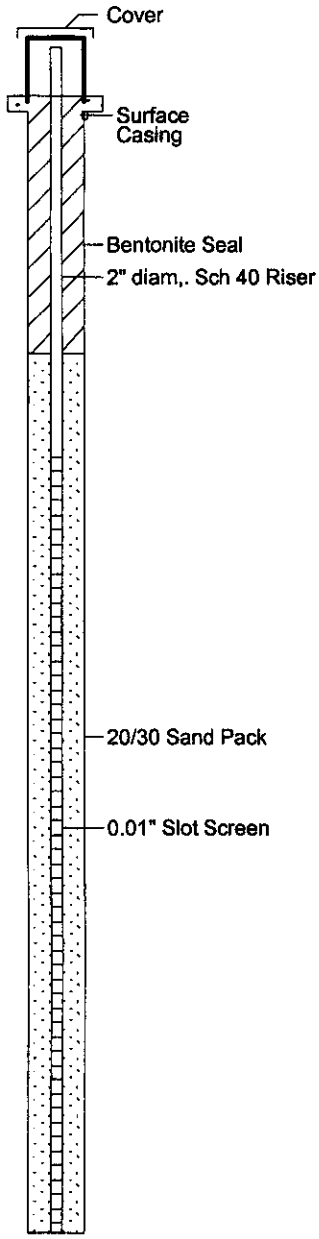
Monitoring Well 30GS175

Well 30GS175
March 12, 2003
Site 30, NASP

Started	: 03/12/2003	Riser	: 0.0' to 7.0'
Finished	: 03/12/2003	Well Screen	: 7.0' to 22.0'
Drilling Method	: DPT		
Geologist	: Brian Caldwell		
Depth Drilled/Well	: 22.0'/22.0'		

Depth in Feet	Samples	PID (ppm)	GRAPHIC	USCS	DESCRIPTION
0				SC	(0.0'-2.0') SANDY CLAY fill, red.
	1	0.0		SC	(2.0'-5.0') CLAYEY SAND, medium brown to red.
5	2	0.0		SW	(5.0'-10.0') SAND, medium brown.
10	3	0.0		SW	(10.0'-17.0') SAND, tan. Becoming damp between 15.0' to 17.0'.
15	4	0.0		SW	(17.0'-20.0') SAND, dark brown turing to gray.
20	5	0.0		SW	(20.0'-22.0') SAND, gray. Terminated well at 22 feet below ground surface.
25					

Well: 12GS17



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BORING LOG 11S06

Boring 11S06
March 14, 2003

Started : 03/14/2003
Completed : 03/14/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	SC		(0.0'-5.0') CLAYEY SAND, fill, red to black. Poor recovery.
5		0	SW		(5.0'-10.0') SAND, tan. Water at 6.0'. Collected sample 11S00606 from the interval immediately above the water table (between 4.0' and 6.0').
10					

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BORING LOG 30S138

Boring 30S138
March 14, 2003

Started : 03/14/2003
Completed : 03/14/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	SW		(0.0'-5.0') SAND, brown; poor recovery. Collected Sample 30S13806 from 4.0' to 6.0' interval.
5		0	SW		(5.0'-10.0') SAND, medium brown grading to white.
10		0	SW		(10.0'-15.0') SAND, white.
15		1.4	SW		(15.0'-20.0') SAND, white grading to dark gray; solvent odor (1.4 ppm). Collected Sample 30S13820 above water table. Water at 20.0' feet.
20		30 to 75	SW		(20.0'-25.0') SAND, medium gray bedded with dary gray.
25					

ENSAFE

BORING LOG 30S137

Boring 30S137
March 14, 2003

Started : 03/14/2003
Completed : 03/14/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0			(0.0'-5.0') ASPHALT followed by CLAYEY SAND, red to brown (fill).
5		0	SC		(5.0'-10.0') CLAYEY SAND, red to tan. Collected Sample 30S13706 from the 4.0' to 6.0' interval.
10		0	SW		(10.0'-20.0') SAND, gray grading to tan.
15					
20					Water at 20.0'.

BORING LOG 30S17

Boring 30S17
March 14, 2003

Started	: 03/14/2003
Completed	: 03/14/2003
Drilling Method	: DPT
Geologist	: Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-5.0') Poor recovery - ASPHALT fill.
					Collected Sample 30S1706 from the 4.0' to 6.0' interval.
5		0	SC		(5.0'-10.0') SAND, red to brown grading to tan.
10			SW		(10.0'-20.0') SAND, tan to light brown grading to dark gray immediately above water table.
15					
					Collected Sample 30S1718 immediately above the water table.
20					

ENSAFE

BORING LOG 30GS53

Boring 30GS53
March 14, 2003

Started : 03/14/2003
Completed : 03/14/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-9.0') SAND, light tan to light red.
					Collected Sample 30GS5302 from the 1.0' to 2.0' interval.
					Collected Sample 30GS5304 from the 2.0' to 4.0' interval.
		0	SW		
5					
					(8.0'-10.0') SAND, dark brown.
		0	SW		Collected Sample 30GS5310 immediately above the water table. Water at 10.0'.
10					

ENSAFE

BORING LOG 30S150

Boring 30S150
March 14, 2003

Started : 03/14/2003
Completed : 03/14/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	SC		(0.0'-5.0') CLAYEY fill, red. At 4.0' a three inch interval of charred metal and possible asbestos debris.
5		0	SW		(5.0'-10.0') SAND, tan.
10		0	SW		(10.0'-20.0') SAND, tan to dark gray at water table. At 14.0' some fragments of carboneous material. Collected Sample 30S15016 from the 14.0' to 16.0' interval above water table. Water at 16.0'.
15	X				
20					

ENSAFE

BORING LOG 30S148

Boring 30S148
March 14, 2003

Started : 03/14/2003
Completed : 03/14/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-5.0') ASPHALT.
5					
		0	SW		(5.0'-10.0') SAND, tan to light red. Collected Sample 30S14806 from the 4.0' to 6.0' interval.
10					(10.0'-20.0') SAND, tan.
15		0	SW		
20					Water at 20.0'.

10-01-2003 G:\B_CALDWELL\0058-NASP BORING LOGS\BORING 30S148.BOR

BORING LOG 30S142

Boring 30S142
March 14, 2003

Started : 03/14/2003
Completed : 03/14/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	SC		(0.0'-3.0') Red CLAYEY SAND fill with gravel.
5		0	SW		(3.0'-6.0') SAND, tan to light red. Collected Sample 30S14206 from the 4.0' to 6.0' interval.
10		0	SW		(6.0'-17.0') SAND, tan to light red.
15					
20		0	SW		(17.0'-22.0') SAND, tan grading to dark gray to tan. Water at 22.0'.
25					

BORING LOG 30GS12

Boring 30GS12
March 15, 2003

Started : 03/15/2003
Completed : 03/15/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-1.0') ASPHALT.
		0	SC-SW		(1.0'-5.0') Red to black CLAYEY SAND (fill) grades into SAND, medium brown.
5		0	SW		(5.0'-10.0') SAND, medium brown to light red.
10	X	0	SW		(10.0'-15.0') SAND, medium brown grading to light tan; several darker lenses in lower 2 feet. Collected Sample 30S01212 from the 10.0' to 12.0' interval.
15	X	30	SW		(15.0'-20.0') SAND, medium brown grading to light gray. Water at 20.0'. Strong solvent odor at water table. Collected Sample 30GS1220 from the 18.0' to 20.0' interval.
20					
25					

BORING LOG 30S006

Boring 30S006
March 15, 2003

Started : 03/15/2003
Completed : 03/15/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-0.5') ASPHALT.
		0	SW		(0.5'-5.0') SAND, tan to red.
5			SW		(5.0'-8.0') SAND, tan grading to light gray. Collected Sample 30S00608 from the 6.0' to 8.0' interval; 15% carbonaceous fragments in sample.
10		0	SW		(8.0'-15.0') SAND, tan to light gray.
15		0	SW		(15.0'-20.0') SAND, light gray grading to dark gray to brown at water table (18.0'); medium gray below water table. Water at 18.0'.
20					

ENSAFE

BORING LOG 27S017

Boring 27S017
March 15, 2003

Started : 03/15/2003
Completed : 03/15/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	SW		(0.0'-6.0') SAND, light red. Collected Sample 27S01706 from the 4.0' to 6.0' interval.
5		0	SW		(6.0'-10.0') SAND, light red grading to light gray.
10		0	SW		(10.0'-15.0') SAND, light gray.
15		0	SW		(15.0'-20.0') SAND, light gray. Water at 18.0'.
20					

ENSAFE

BORING LOG 30S123

Boring 30S123
March 15, 2003

Started : 03/15/2003
Completed : 03/15/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-4.0') SAND, light gray to dark gray.
		0	SW		Collected Sample 30S12304 from the 2.0' to 4.0' interval.
					(4.0'-10.0') SAND, light gray grading to dark gray immediately above water table (9.0') to medium gray below.
5		0	SW		
					Water at 9.0'.
10					

ENSAFE

BORING LOG 11S015

Boring 11S015
March 15, 2003

Started : 03/15/2003
Completed : 03/15/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0			SC-SW		(0.0'-6.0') SAND with CLAY content being organic rich material (OL); hydrogen sulfide odor is very strong.
					Collected Sample 11S01506 from the 4.0' to 6.0' interval.
5					Water at 6.0', grading to SAND, light gray below water table.
10					

ENSAFE

BORING LOG 12GS10

Boring 12GS10
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0	X	0	SW		(0.0'-5.0') SAND, upper 2 feet mixed with red SANDY CLAY fill and oyster shells. Collected Sample 12GS1005 from the 3.0' to 5.0' interval.
5		0	SW		(5.0-10.0') SAND, tan to red grading to dark gray grading to light gray.
10		0	SW		(10.0'-15.0') SAND, variably light and dary gray.
15		0	SW		(15.0'-20.0') SAND, light gray to red to dark brown at water table (19.0'). Water at 19.0'. Medium gray below water table.
20					

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BORING LOG 12GS09

Boring 12GS09
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-10") CONCRETE.
		0	SW		(10"-5.0') SAND, light red to tan. Collected Sample 12GS0905 from the 3.0' to 5.0' interval.
5		0	SW		(5.0'-10.0') SAND, tan to medium gray to light gray.
10		0	SW		(10.0'-15.0') SAND, light gray to tan, variably mixed with a medium brown sand.
15		0	SW		(15.0'-18.0') SAND, dark brown to medium brown, turning to light gray at water table (17.0'). Water at 17.0'.
20					

ENSAFE

BORING LOG 12S13

Boring 12S13
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0			CL		(0.0'-1.0') CLAY, brown, and shell fill.
		0	SW		(1.0'-5.0') SAND, tan to medium gray. Collected Sample 12S1305 from the 3.0' to 5.0' interval.
5		0	SW		(5.0'-10.0') SAND, medium brown grading to dark brown and medium gray to light gray; 2 inch shell horizon at 8.0'.
10		0	SW		(10.0'-15.0') SAND, gray to medium brown.
15		0	SW		(15.0'-20.0') SAND, white to light gray. Water at 16.0'.
20					

ENSAFE

BORING LOG 12S016

Boring 12S016
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-0.5') ASPHALT and shell fill.
		0	SW		(0.5'-5.0') SAND, medium brown to light red.
5			SW		(5.0'-10.0') SAND, red (with some clay) grading to light tan to medium brown. Collected Sample 12S01610 from the 8.0' to 10.0' interval.
10		0	SW		(10.0'-15.0') SAND, dark gray grading to light gray to white.
15					Water at 15.0'.

ENSAFE

BORING LOG 25S008

Boring 25S008
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-0.5') CONCRETE.
		0	SW		(0.5'-5.0') SAND, light red. Collected Sample 25S00804 from the 2.0' to 4.0' interval.
5		0	SW		(5.0'-10.0') SAND, variably bedded red, dark gray, light gray, and tan sand.
10		0	SW		(10.0'-18.0') SAND, light gray.
15					Water at 18.0'.
20					

ENSAFE

BORING LOG 25S005

Boring 25S005
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-10.0') SAND, medium brown to light red.
5		0	SW		
10					SAND, light red grading to tan.
		0	SW		Collected Sample 25S00514 from the 12.0' to 14.0' interval.
15					(15.0'-20.0') SAND, tan to light gray at water table (17.0'), white below water table.
			SW		Water at 17.0'.
20					

ENSAFE

BORING LOG 12S008

Boring 12S008
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-1.0') CONCRETE.
5		0	SW		(1.0'-7.0') SAND, tan to light red. Collected Sample 12S00805 from the 3.0' to 5.0' interval.
10		0	SW		(7.0'-13.0') SAND, interbedded dark brown to dark gray; finely laminated at base of interval.
15		0	SW		(13.0'-20.0') SAND, dark brown grading to light red to light gray at water table (18.0'); white sand below water table. Water at 18.0'.
20					

ENSAFE

BORING LOG 30S120

Boring 30S120
March 19, 2003

Started : 03/19/2003
Completed : 03/19/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	CL		(0.0'-1.0') CLAY, sandy organic rich, dark brown.
		0	SW		(1.0'-4.0') SAND, white. Collected Sample 30S12005 from the 3.0' to 5.0' interval.
		0	SW		(4.0'-5.0') SAND, white. Water at 5.0'.
5					

ENSAFE

BORING LOG 12S07

Boring 12S07
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-1.0') CONCRETE.
		0	SC		(1.0'-4.0') Red, CLAYEY SAND with gravel (fill). Collected Sample 12S0705 from the 3.0' to 5.0' interval.
5		0	SW-CL		(4.0'-12.0') SAND, tan sand layered with red CLAY; sporodic gravel throughout. Collected Sample 12S0708 from the 6.0' to 8.0' interval.
10					
15		0	SW-CL		(12.0'-18.0') SAND, tan sand layered with red CLAY; white sand below water table (18.0'). Water at 18.0'.
20					

ENSAFE

BORING LOG 12S003

Boring 12S003
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0					(0.0'-1.0') CONCRETE.
5		0	SW		(1.0'-7.0') SAND, dark brown grading to medium brown to tan.
10		0	SW		(7.0'-13.0') SAND, tan to light gray to white.
15		0	SW		(13.0'-18.0') SAND, tan to white; dark gray at water table (17.0'); light gray below water table. Collected Sample 12S00315 from the 13.0' to 15.0' interval. Water at 17.0'.
20					

ENSAFE

BORING LOG 30S125

Boring 30S125
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	SC		(0.0'-2.0') SANDY CLAY, black. Collected Sample 30S12503 from the 1.0' to 3.0' interval.
		0	SW		(2.0'-5.0') SAND, medium gray. Collected Sample 30S12505 from the 3.0' to 5.0' interval. Water at 5.0'.
5					

ENSAFE

BORING LOG 30S124

Boring 30S124
March 17, 2003

Started : 03/17/2003
Completed : 03/17/2003
Drilling Method : DPT
Geologist : Brian Caldwell

Depth in Feet	SAMPLES	PID (ppm)	SOIL CLASS	GRAPHIC LOG	DESCRIPTION
0		0	SC		(0.0'-3.0') SANDY CLAY. Collected Sample 30S12403 from 1.0' to 3.0' interval.
		0	SW		(3.0'-5.0') SAND, medium gray.
5					

Appendix C

Groundwater Sampling Records

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/13/03
SAMPLE ID: 0465C0503

PROJECT: NASP	EVENT:
WELL ID: 116505	LOCATION OU2
WEATHER CONDITIONS: Sunny	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: CS/TV
WELL DEVELOPMENT PURGING DEVICE: Peristaltic pump, Bailer	WELL SAMPLING DEVICE: peri pump
DECON PROCESS:	DECON PROCESS: NA
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 13.95	START: 1030 FINISH: 1100
DEPTH TO WATER from TOC (ft.): 6.52	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.): 7.43	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL): 1.2	START: 1100 FINISH:
3 VOLUMES OF WATER (GAL): 3.6	VOLUME PURGED (GAL)
	SAMPLING TIME:
	ANALYSIS: VOCs Metals MNA

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1035	1041	1047									
pH (units):	5.51	5.47	5.47									
Conductivity (mS/cm):	.132	.124	.122									
Turbidity (NTU):	57	17	15									
Temperature °C:	20.3	20.2	20.2									
DO (mg/L):	.64	.46	.44									
ORP:	-68	-104	-113									
Volume Purged:	1	2	3									
Water level:	6.60	6.58										
TDS	.085	.080	.079									

COMMENTS:

1047 Fill up MNA bottles - DC 1st
1120 Bailer starts Diss gas

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 11GS07

PROJECT NAME: PNAS JOB NO: _____ DATE: 11 March 03

WELL NO.: 11GS07 LOCATION _____

WEATHER CONDITIONS: Sunny + Clear AMBIENT TEMP: 70's

PERSONNEL: BA + AL

PURGING DEVICE

Type Device? Peristaltic

How was the device decontaminated? _____

How was the line decontaminated? New line - SAP

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) Yes

Depth to bottom of well from TOC (ft.) 4.76

Depth to water surface from TOC (ft.) 3.04

Length of water (ft.) 1.72

Volume of water (ft.) 0.28

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) 3/4 gal

PURGING

Time started 1440 Finished _____

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start _____

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1450	1500	1510				
Well Volume Purged (gal.)	0.25	1.0	2.0				
Turbidity	Ø	Ø	Ø				
Odor	None	–					
OVA (ppm)							
pH (units)	6.37	6.36	6.36				
Conductivity (μmho)	0.254	0.229	0.235				
Water Temperature (°C)	21.41	20.78	19.75				
TDS (mg/l)	0.167	0.155	0.053				
Depth to water (ft.)			*ORP	0.097	0.114	0.120	

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 01GS00903

PROJECT NAME: NASP JOB NO: DATE: 3/16/02

WELL NO.: 11GS09 LOCATION 042

WEATHER CONDITIONS: cloudy AMBIENT TEMP: 60s

PERSONNEL:

PURGING DEVICE

Type Device? Peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing decon per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing decon per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 12.99

Depth to water surface from TOC (ft.) 3.10

Length of water (ft.) 9.89

Volume of water (ft.) 1.6

(gal.)

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 4.8

PURGING

Time started 0945 Finished 1015

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments Metals, VOCs, SVOCs

Sample Collected: Start 1015

Finish 1045

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	0958	1006	1013				
Well Volume Purged (gal.)	2	~~2.5~~ 3	3.8				
Turbidity	0.4	4	20				
~~Odor~~ DO (mg/L)	.96	<8	.5				
~~OVA (ppm)~~ ORP (mV)	-140	-137	-141				
pH (units)	7.06	7.07	7.09				
Conductivity ~~(µmho)~~ mS/cm	.686	.691	.690				
Water Temperature (°C)	19.0	18.9	18.8				
TDS (mg/l)	.438	.442	.442				
Depth to water (ft.)	3.48	3.45	3.45				

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

tannic stained - TD varying - on 3 flashing on/off -
1008 rain picks up

ENSAFE

DUP: 011HS01303

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/14/03

SAMPLE ID: 011GS01303

PROJECT: 012	EVENT: 3
WELL ID: 11GS13	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP:
REVIEWED BY:	PERSONNEL: AZ
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.):	START: / FINISH:
DEPTH TO WATER from TOC (ft.):	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1025 / FINISH: 1110
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 3.5
	SAMPLING TIME: 1120
	ANALYSIS: VOC, metals, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1035	1040	1050	1105	1110							
pH (units):	6.91	6.95	7.11	6.99	6.98							
Conductivity (mS/cm):	0.536	0.538	0.543	0.549	0.548							
Turbidity (NTU):	38.3	37.5	34.1	19.2	18.0							
Temperature °C:	19.51	19.27	19.20	18.95	18.95							
DO (mg/L):												
ORP:												
Volume Purged:	1.3	2.0	2.5	3.0	3.5							
Water level:												
TDS	0.343	0.344	0.347	0.350	0.349							

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 11GM 15

PROJECT NAME: PNAS JOB NO: _____ DATE: 12 March 03

WELL NO.: 11GM 15 LOCATION _____

WEATHER CONDITIONS: Overcast + Clear AMBIENT TEMP: 70's

PERSONNEL: AL + BA

PURGING DEVICE

Type Device? Peristaltic

How was the device decontaminated? _____

How was the line decontaminated? New Line SAP

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) Yes 1.5'

Depth to bottom of well from TOC (ft.) 12'

Depth to water surface from TOC (ft.) 4.56

Length of water (ft.) 7.44

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 11:00 Finished _____

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start _____

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1130	1135	1145				
Well Volume Purged (gal.)	5.5	5.5	6.5				
Turbidity	19.6	13.4	12.4				
Odor							
OVA (ppm)							
pH (units)	6.19	6.57	6.58				
Conductivity (μmho)	0.1x94	0.195	0.194				
Water Temperature (°C)	20.28	20.57	20.63				
TDS (mg/l)	0.126	0.127	0.127				
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft^3 or 0.65 gal. 1 ft. length 2" = 0.022 ft^3 or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 0 11GS01603

PROJECT NAME: _____ JOB NO: _____ DATE: 3/19/03

WELL NO.: 11GS16 LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

PERSONNEL: _____

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 12.81

Depth to water surface from TOC (ft.) 4.22

Length of water (ft.) _____

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 0940 Finished 1000

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1000

Finish

IN-SITU TESTING

	Time: 0940		0955				
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	2	2.5	3	4			
Turbidity	2.46	3.1	0	3.3			
~~Odor~~ DO (mg/L)	3.48	3.63	3.71	3.76			
~~OVA (ppm)~~ ORP (mV)	82	92	93	95			
pH (units)	6.16	6.14	6.14	6.14			
Conductivity ~~(µmho)~~ mS/cm	0.032	0.167	0.193	0.168			
Water Temperature (°C)	21.53	20.84	20.79	20.76			
TDS (mg/l)	0.02	0.109	0.109	0.109			
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

Metals
SVOCs

GROUNDWATER SAMPLING

Sample ID: 116528

PROJECT NAME: PNAS JOB NO: _____ DATE: 12 March 03

WELL NO.: 116528 LOCATION _____

WEATHER CONDITIONS: Sunny + over cast AMBIENT TEMP: 70°F

PERSONNEL: AL + BT

PURGING DEVICE

Type Device? Peristaltic

How was the device decontaminated? _____

How was the line decontaminated? New Line - SAP

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) yes

Depth to bottom of well from TOC (ft.) 20

Depth to water surface from TOC (ft.) 9.89

Length of water (ft.) 10.11

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.)

PURGING

Time started 0910 Finished 1015

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start _____

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	0925	0935	0945	0955	1000		
Well Volume Purged (gal.)	1.3	1.5	3.0	4.0	4.2		
Turbidity	16.8	16.7	16.7	16.7	16.2		
Odor							
OVA (ppm)							
pH (units)	7.46	6.41	6.09	6.04	6.04		
Conductivity (μmho)	0.185	0.151	0.125	0.112	0.111		
Water Temperature (°C)	21.48	21.78	21.86	21.93	21.97		
TDS (mg/l)	0.123	0.097	0.087	0.072	0.072		
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/13/03
SAMPLE ID: 01IGS04703

PROJECT: 042	EVENT: 3
WELL ID: 01IGS04703 11GM47	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP: ↓ 70s
REVIEWED BY:	PERSONNEL: AZ

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 17.80	START: / FINISH:
DEPTH TO WATER from TOC (ft.): 5.30	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1020 / FINISH: 1100
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 4.0
	SAMPLING TIME: 1115
	ANALYSIS: VOC, Metals, SVOC/PAH + MNA

IN-SITU TESTING

Circle one: DEVELOPMENT (SAMPLING)

Time:	1030	1040	1050	1100								
pH (units):	5.74	5.72	5.74	5.71								
Conductivity (mS/cm):	0.090	0.089	0.091	0.091								
Turbidity (NTU):	92.7	78.8	27.6	17.8								
Temperature °C:	21.64	21.69	21.66	21.67								
DO (mg/L):												
ORP:												
Volume Purged:	1.0	2.0	3.0	3.5								
Water level:	5.46	→										
TDS	0.058	0.058	0.059	0.059								

COMMENTS: Low flow

Purge water placed into drum #_____

REVISION 2001

ENSAFE

Shallow DUP. 011H505203 ~~011G505203~~

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/14/03

SAMPLE ID: 011G505203

PROJECT: OU2	EVENT: 3
WELL ID: 11GM52	LOCATION PMAS
WEATHER CONDITIONS: partly cloudy	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: AL
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.):	START: FINISH:
DEPTH TO WATER from TOC (ft.):	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1210 FINISH: 1235
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 2.0
	SAMPLING TIME: 1245
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1225	1230	1235	1240								
pH (units):	5.89	5.87	5.86	5.86								
Conductivity (mS/cm):	0.077	0.078	0.077	0.078								
Turbidity (NTU):	33.7	22.5	16.6	13.7								
Temperature °C:	21.98	21.99	22.00	22.00								
DO (mg/L):												
ORP:												
Volume Purged:	1.3	1.5	1.7	2.0								
Water level:												
TDS	0.050	0.051	0.050	0.051								

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 116I Ø2

PROJECT NAME: PWAS JOB NO: DATE: 12 March 03

WELL NO.: 116I Ø2 LOCATION

WEATHER CONDITIONS: Overcast + Sunny AMBIENT TEMP: 70's

PERSONNEL: AL + Bob

PURGING DEVICE

Type Device? Peristaltic

How was the device decontaminated?

How was the line decontaminated? New line - SAP

Which well was previously purged?

SAMPLING DEVICE

Type Device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) Yes - 3'

Depth to bottom of well from TOC (ft.) 45'

Depth to water surface from TOC (ft.) 9.18

Length of water (ft.) 35.82

Volume of water (ft.)

(gal.)

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.)

PURGING

Time started 10:40 Finished 1120

Volume purged 3 gal

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments

Sample Collected: Start

Finish

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1055	1110	1115				
Well Volume Purged (gal.)	0.5 gal	1.8	2.5				
Turbidity	35	15.6	16.4				
Odor							
OVA (ppm)							
pH (units)	5.64	5.54	5.51				
Conductivity (μmho)	0.078	0.077	0.077				
Water Temperature (°C)	24.42	24.45	24.39				
TDS (mg/l)	0.050	0.050	0.050				
Depth to water (ft.)	8.16						

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: _____

PROJECT NAME: PNAS JOB NO: _____ DATE: 12 Mar 03

WELL NO.: 11GI04 LOCATION _____

WEATHER CONDITIONS: Mostly cloudy AMBIENT TEMP: 70s

PERSONNEL: AL & BA

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? Peristaltic

How was the device decontaminated? _____

How was the line decontaminated? new line

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) 3'

Depth to bottom of well from TOC (ft.) 49.02

Depth to water surface from TOC (ft.) 8.85

Length of water (ft.) 40.17

Volume of water (ft.) 6.55

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) 19.64

PURGING

Time started 1350 Finished 1425

Volume purged 4.0

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start _____

Finish 1430

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1358	1415	1420	1425			
Well Volume Purged (gal.)	1.0	2.5	3.0	4.0			
Turbidity	51.5	19.5	18.8	15.1			
Odor							
OVA (ppm)							
pH (units)	5.81	5.70	5.69	5.68			
Conductivity (μmho)	0.071	0.070	0.070	0.070			
Water Temperature (°C)	23.68	23.68	23.67	23.69			
TDS (mg/l)	0.046	0.045	0.045	0.045			
Depth to water (ft.)	Low flow 8.94						

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 116I08

PROJECT NAME: PNAS JOB NO: DATE: 3/11

WELL NO.: 116I08 LOCATION

WEATHER CONDITIONS: Sunny + Clear AMBIENT TEMP: 70's

PERSONNEL: AL + BA

PURGING DEVICE

Type Device? Peristaltic

How was the device decontaminated?

How was the line decontaminated? New line - SAP

Which well was previously purged?

SAMPLING DEVICE

Type Device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) yes -2.5'

Depth to bottom of well from TOC (ft.) 47.2

Depth to water surface from TOC (ft.) 5.68

Length of water (ft.) 41.52

Volume of water (ft.) 6.77

(gal.)

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 20.3

PURGING

Time started 1430 Finished 1700

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments

Sample Collected: Start

Finish

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1452	1500	1506	1517	1525	1532	15
Well Volume Purged (gal.)	2 gal	2.5	3.0	3.5	4.0	4.5	5.0
Turbidity	50.3	18.4	16.9	16.5	13.0	11.7	11.8
Odor	None	—	—	—	—	—	—
OVA (ppm)							
pH (units)	6.37	6.51	6.58	6.66	6.74	6.76	6.75
Conductivity (μmho)	0.669	1.38	1.94	2.81	3.51	3.51	3.52
Water Temperature (°C)	22.1	22.1	21.83	21.63	21.65	21.66	21.67
TDS (mg/l)	0.444	0.86	1.23	1.78	2.25	2.31	2.34
Depth to water (ft.)				*ORP	0.058	0.050	0.046

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. , 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 01161 01003

PROJECT NAME: NASP JOB NO: DATE: 3/16/03

WELL NO.: 11GI 10 LOCATION 042

WEATHER CONDITIONS: Cloudy AMBIENT TEMP: 60s

PERSONNEL: TR

PURGING DEVICE

Type Device? Peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 47.11

Depth to water surface from TOC (ft.) 3.43

Length of water (ft.) 43.68

Volume of water (ft.) 7

(gal.)

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 21

PURGING

Time started 1000 Finished 1053

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments Metals, VOCs

Sample Collected: Start 1055 TR

Finish 1115

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1007	1020	1027	1034	1045	1052	
Well Volume Purged (gal.)	1.5	4.5	5.5	6.5	8.5	9	
Turbidity	0	0	0	0	0	0	
~~Odor~~ DO (mg/L)	6.7	2.7	1.4	1.2	1.0	.95	
~~OVA (ppm)~~ ORP (mV)	310	237	182	163	137	121	
pH (units)	8.31	7.57	7.07	6.90	6.79	6.79	
Conductivity ~~(µmho)~~ (mS/cm)	.521	.781	.917	.993	1.35	1.41	
Water Temperature (°C)	21.9	22.3	22.3	22.0	22.1	22.0	
TDS (mg/l)	.333	.489	.589	.79	1.87	.9	
Depth to water (ft.)		4.80	4.15	3.96	3.92		

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

2nd bkt TVC tannic-staining

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WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/14/03
SAMPLE ID: 011GI01203

PROJECT: OU2	EVENT: 3
WELL ID: 11GI12	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP: ↓ 70s
REVIEWED BY:	PERSONNEL: Az
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 46.75	START: FINISH:
DEPTH TO WATER from TOC (ft.): 4.76	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 0920 FINISH: 0938
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.2
	SAMPLING TIME: 0940
	ANALYSIS: VOC, metals

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	0930	0932	0935	0938								
pH (units) :	7.40	7.33	7.28	7.28								
Conductivity (mS/cm):	0.928	0.946	1.26	1.27								
Turbidity (NTU):	18.6	17.7	14.1	15.0								
Temperature °C:	23.84	23.88	23.87	23.87								
DO (mg/L):												
ORP:												
Volume Purged:	0.6	0.8	1.0	1.2								
Water level:												
TDS	0.593	0.607	0.82	0.80								

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/13/23
SAMPLE ID: 01IGI01503

PROJECT: OU2	EVENT: 3
WELL ID: 11GI15	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: AZ
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS:
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 39.50	START: FINISH:
DEPTH TO WATER from TOC (ft.): 5.62	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1210 FINISH: 1330
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 4.0
	SAMPLING TIME: 1335
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1225	1235	1315	1320	1325	1330	~~1335~~					
pH (units):	8.19	8.20	7.05	6.93	6.93	6.92						
Conductivity (mS/cm):	0.359	0.360	0.860	0.857	0.857	0.857						
Turbidity (NTU):	72.6	123.4	103.6	46.3	23.7	18.1						
Temperature °C:	23.52	23.56	23.40	23.42	23.39	23.38						
DO (mg/L):												
ORP:	2	2	-157	-156	-155	-153						
Volume Purged:	1.8	2.2	2.5	3.0	3.5	4.0						
Water level:	6.41	6.41	5.82	→	→	→						
TDS	0.232	0.233	0.550	0.549	0.548	0.548						

COMMENTS: let settle out due to continued turbidity between 1235 & 1305

Purge water placed into drum #_____

REVISION 2001

ENSAFE

DUP: ~~011GI~~ 011HI01403

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/14/03

SAMPLE ID: 011GI01403

PROJECT: OU2	EVENT: 3
WELL ID: 11GI14	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: AC
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.):	START: FINISH:
DEPTH TO WATER from TOC (ft.):	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1020 FINISH: 1055
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 3.3
	SAMPLING TIME: 1100
	ANALYSIS: VOC, metals

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1030	1037	1053	1055								
pH (units):	5.93	6.60	6.64	6.64								
Conductivity (mS/cm):	0.085	0.094	0.104	0.104								
Turbidity (NTU):	58.0	39.8	17.5	16.1								
Temperature °C:	23.84	23.27	23.30	23.30								
DO (mg/L):												
ORP:												
Volume Purged:	1.5	2.0	3.0	3.3								
Water level:												
TDS	0.055	0.061	0.058	0.058								

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/13/03
SAMPLE ID: 0126S001/03

PROJECT: NASP	EVENT:
WELL ID: 126S01	LOCATION DU2
WEATHER CONDITIONS: Sun & clear	AMBIENT TEMP: 70.5
REVIEWED BY:	PERSONNEL: CS/TK
WELL DEVELOPMENT PURGING DEVICE: peristaltic pump + New tubing	WELL SAMPLING DEVICE: peristaltic pump
DECON PROCESS: per CSAP	DECON PROCESS: NA
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 22.45	START: 1140 FINISH: 1158
DEPTH TO WATER from TOC (ft.): 14.64	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.): 7.81	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL): 1.25	START: 1200 FINISH:
3 VOLUMES OF WATER (GAL): 3.7	VOLUME PURGED (GAL)
	SAMPLING TIME: 1200
	ANALYSIS: VOCs, MNA

IN-SITU TESTING

Circle one: DEVELOPMENT (SAMPLING)

Time:	1145	1151	1158									
pH (units):	6.81	6.84	6.80									
Conductivity (mS/cm):	.205	.204	.204									
Turbidity (NTU):	15	13	12									
Temperature °C:	23.9	23.9	24.1									
DO (mg/L):	5.9	6.0	5.9									
ORP:	111	126	137									
Volume Purged:	0.5	1.5	2.5									
Water level:	14.65	14.66	14.66									
TDS (g/L)	.132	.133	.133									

COMMENTS: 1200 Collect Ethanol + DO bottle

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/12/03
SAMPLE ID: 0126S00603

PROJECT: NASP	EVENT:
WELL ID: 126S06	LOCATION: DRMO/OU2
WEATHER CONDITIONS: Cloudy	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: CS+TK
WELL DEVELOPMENT PURGING DEVICE: New tubing + pert. pump	WELL SAMPLING DEVICE: peri pump
DECON PROCESS: per CSAP	DECON PROCESS: N/A
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 15.16	START: 1120 FINISH: 1140
DEPTH TO WATER from TOC (ft.): 22.60	VOLUME PURGED (GAL): 2
LENGTH OF WATER COL. (ft.): 7.44	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL): 1.2	START: 1145 FINISH: 1150
3 VOLUMES OF WATER (GAL): 3.6	VOLUME PURGED (GAL): 2.0
	SAMPLING TIME: 1145
	ANALYSIS: VOCs

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1125	1130	1135	1140								
pH (units):	6.66	6.66	6.64	6.65								
Conductivity (mS/cm):	.207	.206	.204	.212								
Turbidity (NTU):	10	15	60	0								
Temperature °C:	24.1	24.13	24.1	24.1								
DO (mg/L):	5.69	6.19	5.70	5.88								
ORP:	160	161	164	168								
Volume Purged:	.5	1.0	1.5	2.0								
Water level:	15.18	15.16	15.18	15.18								
TDS	.134	.134	.133	.138								

COMMENTS: ← Drop rate to lower TD

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/12/03
SAMPLE ID: 126SD08 03

PROJECT: NASP	EVENT:
WELL ID: 126S08	LOCATION OU2
WEATHER CONDITIONS: Sunny	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: JK/CS
WELL DEVELOPMENT PURGING DEVICE: peri pump + new tubing	WELL SAMPLING DEVICE: peri pump
DECON PROCESS: Per SSAP	DECON PROCESS: NA
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 14.86	START: 1453 FINISH: 1507
DEPTH TO WATER from TOC (ft.): 19.70	VOLUME PURGED (GAL) 2.5 - Hook up through bottle
LENGTH OF WATER COL. (ft.): 4.85	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL): 0.8	START: 1518 FINISH: 1520
3 VOLUMES OF WATER (GAL): 2.4	VOLUME PURGED (GAL) ~3
	SAMPLING TIME: 1520
	ANALYSIS: Pest/PCBs/Metals/VOAs

IN-SITU TESTING

Circle one: DEVELOPMENT (SAMPLING)

Time:	1458	1502	1507									
pH (units):	6.03	6.01	6.04									
Conductivity (mS/cm):	.243	.244	.241									
Turbidity (NTU):	28	16	5									
Temperature °C:	22.8	22.8	22.8									
DO (mg/L):	4.2	4.1	4.4									
ORP:	153	148	146									
Volume Purged:	0.75	2	2.5									
Water level:	14.87	14.87	14.87									
TDS (g/L)	.158	.158	.156									

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 012G500903
SAMPLE ID: 3A2/03

PROJECT: NASP	EVENT:
WELL ID: 012G509	LOCATION DRMO 042
WEATHER CONDITIONS: Sunny	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: TK/CS
WELL DEVELOPMENT PURGING DEVICE: Peristaltic pump, new tubing	WELL SAMPLING DEVICE: peri pump, new
DECON PROCESS: per CSAP	DECON PROCESS: N/A
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 20.70	START: 1350 FINISH: ~~1412~~ 1405
DEPTH TO WATER from TOC (ft.): 13.71	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.): 6.99	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL): 1.1	START: 1405 FINISH: 1415
3 VOLUMES OF WATER (GAL): 3.3	VOLUME PURGED (GAL) 1415
	SAMPLING TIME: 1415
	ANALYSIS: METALS

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1357	1400	1405										
pH (units):	6.21	6.21	6.21										
Conductivity (mS/cm):	.291	.304 ~~0.200~~	.306										
Turbidity (NTU):	0	0	0										
Temperature °C:	24.2	24.1	24.1										
DO (mg/L):	2.6	1.3	1.4										
ORP:	105	118	125										
Volume Purged:	2		2.5										
Water level:	13.72	13.72	13.72										
TDS (g/L)	.195	.197	.199										

COMMENTS: 1405 Hook up trash bottle

Duplicate 012HS00903

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/12/03
SAMPLE ID: 0126501003

PROJECT: NASP	EVENT:
WELL ID: 1265010	LOCATION DRMO
WEATHER CONDITIONS: Sunny	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: TK+CS

WELL DEVELOPMENT PURGING DEVICE: peri pump/ new tubing	WELL SAMPLING DEVICE: peri pump
DECON PROCESS: New	DECON PROCESS: N/A
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 14.20	START: 1025 FINISH: 1050
DEPTH TO WATER from TOC (ft.): 19.50 Firm	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.): 5.30	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL): 0.85	START: 1050 FINISH: 1055
3 VOLUMES OF WATER (GAL): 2.5	VOLUME PURGED (GAL) 3
	SAMPLING TIME: 1055
	ANALYSIS: VOCs ONLY

IN-SITU TESTING

Circle one: DEVELOPMENT (SAMPLING)

Time:	1027	1033	1042	1045	1050							
pH (units):	6.36	6.35	6.36	6.36	6.37							
Conductivity (mS/cm):	.202	.193	.194	.196	.194							
Turbidity (NTU):	55	16	30	111	106							
Temperature °C:	23.1	23.06	22.9	23.29	23.32							
DO (mg/L):	3.05	2.22	2.97	3.09	3.17							
ORP:	97	94	101	104	102							
Volume Purged:		1.5	2	2.5	3							
Water level:	14.23	14.22	14.22	14.22	14.22							
TDS (g/L)	.131	.129	.127	0.128	.127							

COMMENTS:

DUPLICATE 0126501003

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/12/03
SAMPLE ID: 0126S0140 3

PROJECT: NASP	EVENT:
WELL ID: 126S14	LOCATION DRMD
WEATHER CONDITIONS: overcast	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: TL CS
WELL DEVELOPMENT PURGING DEVICE: New TEFLON Peri pump TUBING	WELL SAMPLING DEVICE: tubing + peristaltic
DECON PROCESS: per CSAP	DECON PROCESS: NA
WELL DIA: 2"	WELL ~~DEVELOPMENT~~ PURGE
TOTAL DEPTH from TOC (ft.): 19.00	START: 0925 FINISH: 0942
DEPTH TO WATER from TOC (ft.): 13.90	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.): 5.10	GROUNDWATER SAMPLING
1 VOLUME OF WATER: (GAL): 1.1	START: 0945 FINISH: 1003
3 VOLUMES OF WATER (GAL): 3.4	VOLUME PURGED (GAL) 2.5-3
	SAMPLING TIME: 0945
	ANALYSIS: SVOCs (4-1L Amber)

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	0931	0935	0938	0942								
pH (units):	6.57	6.55	6.55	6.55								
Conductivity (mS/cm):	0.200	.201	.204	.214								
Turbidity (NTU):	~~100~~ 0	~~200~~ 0	0	0								
Temperature °C:	24.03	23.77	23.54	23.30								
DO (mg/L):	5.03	5.12	5.00	4.94								
ORP:	117	111	107	103								
Volume Purged:		1	1.5	2.0								
Water level:	13.91	13.93	13.90	13.90								
TDS	0.129	0.131	0.131	.137								

COMMENTS:
Stable @ 0942; hook up 9L transfer bottles w/ decanted cap @ 0945

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 012GSD1703

PROJECT NAME: _____ JOB NO: _____ DATE: 3/18/03

WELL NO.: 126S17 LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

PERSONNEL: _____

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 22.74

Depth to water surface from TOC (ft.) 14.24

Length of water (ft.) _____

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1025 Finished 1055

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1055

Finish _____

IN-SITU TESTING

Time:	1030	1038	1045	1050	1055		
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	1	1.5	2	2.5	3		
Turbidity	89	65.1	42.4	40.7	42.8		
~~Odor~~ DO (mg/L)	4.11	1.18	0.73	0.70	0.68		
~~OVA (ppm)~~ ORP (mV) Horriba	28	-65	-96	-99	-101		
pH (units)	6.25	6.17	6.11	6.10	6.10		
Conductivity ~~(µmho)~~ mS/cm	0.24	0.236	0.242	0.250	.243		
Water Temperature (°C)	25.28	24.52	24.45	24.42	24.46		
TDS (mg/l)	0.158	0.151	0.152	0.154	0.156		
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

VOCs

GROUNDWATER SAMPLING

Sample ID: 025G5001 03 + Dup

PROJECT NAME: _____ JOB NO: _____ DATE: 3/17/03

WELL NO.: 25G501 LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: mid 60's

PERSONNEL: _____

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) 5.

Depth to bottom of well from TOC (ft.) 28.61 ~~50 ft~~

Depth to water surface from TOC (ft.) 21.39

Length of water (ft.) 07.22

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1415 Finished 1500

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1500

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1420	1430	1440	1450			
Well Volume Purged (gal.)	1	3	4	5			
Turbidity	* 203	241	226	212			
~~Oder~~ ~~DO~~ DO (mg/L) Horiba	8.56	9.69	9.67	9.74			
~~OVA (ppm)~~ ORP (mV)	72	99	105	113			
pH (units)	6.30	6.44	6.46	6.45			
Conductivity ~~(umho)~~ mS/cm	0.186	0.173	0.172	0.171			
Water Temperature (°C)	22.49	22.43	22.34	22.23			
TDS (mg/l)	0.118	0.112	0.112	0.110			
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

Note: ~~turbidity~~ meter inaccurate, DI H_2O = 222 turb.

7.22
.16
43.32
7220
115.52

GROUNDWATER SAMPLING

Sample ID: 025G50100 3

PROJECT NAME: _____ JOB NO: _____ DATE: 3/19/03

WELL NO.: 25G510 LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

PERSONNEL: _____

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 20.07

Depth to water surface from TOC (ft.) 13.14

Length of water (ft.) _____

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1115 Finished 1150

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1150

Finish _____

IN-SITU TESTING

Time:	1120	1130	1140	1145	1150		
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	.5	1.5	2	2.3	2.5		
Turbidity	122	28.5	14.5				
~~Oder~~ DO (mg/L)	1.60	0.71	0.62	0.59	0.61		
~~OVA (ppm)~~ ORP (mV) Horiba	-30	-69	-81	-85	-79		
pH (units)	6.13	6.11	6.11	6.11	6.10		
Conductivity ~~(umho)~~ mS/cm	0.198	0.198	0.203	0.205	0.201		
Water Temperature (°C)	25.59	25.38	25.25	25.24	25.22		
TDS (mg/l)	0.128	0.130	0.132	0.131	0.130		
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: ~~025GI01~~ 025GI0010 3

PROJECT NAME: _____ JOB NO: _____ DATE: 3/17/03

WELL NO.: 25GI03 LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: VOCs

PERSONNEL:

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) 8.5'

Depth to bottom of well from TOC (ft.) 49.64

Depth to water surface from TOC (ft.) 13.97

Length of water (ft.) 35.67

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.)

PURGING

Time started 1320 Finished _____

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1350

Finish

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1325	1340	1345	1350			
Well Volume Purged (gal.)	1	3	4	5			
Turbidity	75	0	0	0.9			
~~Odor~~ DO (mg/L)	2.47	1.28	0.90	0.87			
~~OVA (ppm)~~ ORP (mV)	55	56	53	49			
pH (units)	5.41	5.28	5.24	5.23			
Conductivity ~~(umho)~~ mS/cm	0.084	0.082	0.082	0.082			
Water Temperature (°C)	25.53	25.55	25.57	25.54			
TDS (mg/l)	0.055	0.054	0.053	0.054			
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

35.67
× .6
21.402
35670
6.702

ENSAFE

DUP: 025HI00203

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/17/03

SAMPLE ID: 025GI00203

PROJECT: OU2	EVENT: 3
WELL ID: 25GI02	LOCATION PNAB
WEATHER CONDITIONS: mostly cloudy	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: AL

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 50.08	START: FINISH:
DEPTH TO WATER from TOC (ft.): 14.98	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1435 FINISH: 1458
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 3.5
	SAMPLING TIME: 1505
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1445	1448	1452	1455	1458							
pH (units):	6.68	6.53	5.96	5.96	5.95							
Conductivity (mS/cm):	0.222	0.220	0.177	0.176	0.176							
Turbidity (NTU):	109.0	532	26.7	18.9	16.3							
Temperature °C:	26.33	26.33	26.32	26.32	26.30							
DO (mg/L):												
ORP:												
Volume Purged:	0.8	1.4	2.1	2.8	3.5							
Water level:												
	0.132	0.132	0.125	0.124	0.124							

COMMENTS: Duplicate taken

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 027GS001C3

PROJECT NAME: NAS Pensacola JOB NO: _____ DATE: 3/19/03

WELL NO.: 27GS01 LOCATION _____

WEATHER CONDITIONS: Sunny, Warm AMBIENT TEMP: 80°

PERSONNEL: [illegible]

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? New Teflon Tubing

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 24.11'

Depth to water surface from TOC (ft.) 17.25'

Length of water (ft.) 6.86'

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.)

PURGING

Time started 1100 Finished 1140

Volume purged 4.5g

Comments on Well Recovery very good

Depth to water (ft.) 17.25'

Completion _____

Additional Comments _____

Sample Collected: Start 1145

Finish

IN-SITU TESTING

Time:	1110	1100	1130	1140			
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	1g	2g	3g	4g			
Turbidity	98	9.7	– Turbidity is not functioning proper				
~~Odor~~ DO	3.84	3.72	3.67	3.64		– turbidity is lo	
~~OVA~~ (ppm) ORP	-64	-66	-64	-63			
pH (units)	6.11	6.11	6.10	6.10			
Conductivity (µmho)	0.129	0.128	0.127	0.125			
Water Temperature (°C)	22.51	22.5	22.5	22.5			
TDS (mg/l)	0.082	0.082	0.083	0.082			
Depth to water (ft.)	17.25	17.25	17.25	17.25			

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

(Dup) 027HS002

GROUNDWATER SAMPLING

Sample ID: 027GS002 02

PROJECT NAME: NAS JOB NO: _____ DATE: 3/18/03

WELL NO.: 27GS002 LOCATION 042

WEATHER CONDITIONS: Partly Cloudy, Warm AMBIENT TEMP: 75°

PERSONNEL: CTempleton

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? New Teflon Tubing

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 26.48'

Depth to water surface from TOC (ft.) 18.90'

Length of water (ft.) 7.58'

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1450 Finished 1520

Volume purged 5.0g

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1525

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1500	1510	1520	1525			
Well Volume Purged (gal.)	1.0g	2.0g	3.0g	4.0g			
Turbidity	225	153	74.1	73.2			
~~Odor~~ DO	6.57	6.48	5.61	6.79			
~~OVA~~ (ppm) ORP	88	89	92	94			
pH (units)	6.16	6.13	6.15	6.16			
Conductivity (μmho)	0.119	0.117	0.116	0.116			
Water Temperature (°C)	22.48	22.56	22.52	22.54			
TDS (mg/l)	0.075	~~18.90~~	0.077	0.076	0.076		
Depth to water (ft.)	18.91	18.92	18.92	18.92			

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 0276S0040 3

PROJECT NAME: NASP JOB NO: DATE: 3/17/03

WELL NO.: 276S04 LOCATION 06-7

WEATHER CONDITIONS: fc AMBIENT TEMP: 70s

PERSONNEL: GT, TK

PURGING DEVICE

Type Device? peristaltic

How was the device decontaminated? N/A

How was the line decontaminated? drummed per CSAP

Which well was previously purged? N/A

SAMPLING DEVICE

Type Device? peristaltic

How was the device decontaminated? N/A

How was the line decontaminated? drummed per CSAP

Which well was previously sampled? N/A

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 23.86

Depth to water surface from TOC (ft.) 15.87

Length of water (ft.) 7.99

Volume of water (ft.)

(gal.) 1.3

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 3.9

PURGING

Time started 1445 Finished 1500

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOCs

Sample Collected: Start 1500

Finish 1505

IN-SITU TESTING

Time:	1448	1450	1456	1500			
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	1	1.5	2	2.5			
Turbidity	96	94	250	—	—		
~~Odor~~ DO (mg/L)	5.6	inaccurate	inacc	—	—		
~~OVA (ppm)~~ ORP (mV)	243	232	222	216	211		
pH (units)	6.37	6.36	6.34	6.35	6.35		
Conductivity ~~(µmho)~~ mS/cm	.285	.280	.265	.262	.262		
Water Temperature (°C)	23.9	23.9	23.9	23.9	23.9		
TDS (mg/l)	.185	.178	.174	.171	.167		
Depth to water (ft.)	15.91	15.92	15.92	15.92			

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

DO + Turb. probes malfunctioning now.

GROUNDWATER SAMPLING

Sample ID: 0276S00803

PROJECT NAME: NASP JOB NO: DATE: 3/17/03

WELL NO.: 276S05 LOCATION OU-2

WEATHER CONDITIONS: Cloudy AMBIENT TEMP: 60s

PERSONNEL: TL, GT

PURGING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? Disconnected new teflon tubing

Which well was previously purged? NA

SAMPLING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? disconnected new teflon tubing

Which well was previously sampled? N/A

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 25.05

Depth to water surface from TOC (ft.) 17.91

Length of water (ft.) 7.14

Volume of water (ft.)

(gal.) 1.1

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 3.3

PURGING

Time started 1140 Finished 1200

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOCs

Sample Collected: Start 1200

Finish 1210

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1146	1154	1200				
Well Volume Purged (gal.)	1.2	2.5	3				
Turbidity	15	~~0~~	~~0~~				
~~Odor~~ DO (mg/L)	6.7	6.6	6.6				
~~OVA (ppm)~~ ORP (mV)	318	315	314				
pH (units)	6.43	6.45	6.44				
Conductivity ~~(µmho)~~ mS/cm	.156	.152	.150				
Water Temperature (°C)	23.5	23.5	23.5				
TDS (mg/l)	.101	.098	.097				
Depth to water (ft.)	17.91	17.91	17.91				

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 0276S0060

PROJECT NAME: NASP
JOB NO:
DATE: 3/17/03
WELL NO.: 276S06
LOCATION: OU-2
WEATHER CONDITIONS: cloudy, pc
AMBIENT TEMP: 60-70s
PERSONNEL: GT, TL

PURGING DEVICE

Type Device? Peristaltic Pump
How was the device decontaminated? New Teflon Tubing
How was the line decontaminated?
Which well was previously purged?

SAMPLING DEVICE

Type Device? Peristaltic Pump
How was the device decontaminated? N/A New Teflon Tubing
How was the line decontaminated? N/A
Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2"
Stickup (ft.)
Depth to bottom of well from TOC (ft.) 26.23
Depth to water surface from TOC (ft.) 17.71
Length of water (ft.) 8.52
Volume of water (ft.)
(gal.) 1.4
Amount of sediment at bottom of well (ft.)
3 Volumes of water (gal.) 4.1

PURGING

Time started 1125 Finished 1155
Volume purged 3.5g
Comments on Well Recovery
Depth to water (ft.)
Completion SVOCs
Additional Comments
Sample Collected: Start 1155
Finish 1210

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1135	1145	1150	~~1210~~			
Well Volume Purged (gal.)	1.5	2.5	3.0				
Turbidity	83	2.9	0				
~~Odor~~ DO (mg/L)	2.54	2.55	2.26				
~~OVA (ppm)~~ ORP (mV)	-11	-9	-18				
pH (units)	6.25	6.28	6.24				
Conductivity ~~(µmho)~~ mS/cm	0.170	0.169	0.168				
Water Temperature (°C)	23.3	23.3	23.3				
TDS (mg/l)	0.111	0.110	0.109				
Depth to water (ft.)	17.7	17.7	17.7				

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 027GS4003

PROJECT NAME: NASP JOB NO: DATE: 3/17/03

WELL NO.: 27GS10 LOCATION 04-2

WEATHER CONDITIONS: Sunny AMBIENT TEMP: 70s

PERSONNEL: GT TK

PURGING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? deionized per CSAP

Which well was previously purged? N/A

SAMPLING DEVICE

Type Device? peri pump

How was the device decontaminated? N/A

How was the line decontaminated? deionized per CSAP

Which well was previously sampled? N/A

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 26.76

Depth to water surface from TOC (ft.) 17.75

Length of water (ft.) 9.01

Volume of water (ft.)

(gal.) 1.4

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 4.3

PURGING

Time started 1330 Finished 1418

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOC, metals

Sample Collected: Start 1420

Finish 1430

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1335	1345	1355*	~~1405~~ 1410	1417		
Well Volume Purged (gal.)	1	2	2.5	3.5	4		
Turbidity	100		0	4	4		
~~Odor~~ DO (mg/L)	1.5	1.4	1.9	3.0	2.9		
~~OVA (ppm)~~ ORP (mV)	309	287	276	255	249		
pH (units)	6.18	6.10	6.08	6.26	6.07		
Conductivity ~~(µmho)~~ mS/cm	.173	.170	.169	.170	.163		
Water Temperature (°C)	23.7	23.7	23.4	22.8	23.3		
TDS (mg/l)	.113	.111	.110	.111	.105		
Depth to water (ft.)	17.78	17.78					

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

* recal U22 - ready 300+ NTUs on arr! No vis. turb. in H2O however from well. TS meter still faulty after recal - try to clean but not very effective.

GROUNDWATER SAMPLING

Sample ID: 0276S011 03

PROJECT NAME: NAS Pensacola JOB NO: _____ DATE: 3/19/03

WELL NO.: 27GS11 LOCATION _____

WEATHER CONDITIONS: Sunny, Warm AMBIENT TEMP: 80°

PERSONNEL: G Temple

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? New Teflon Tubing

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 26.48'

Depth to water surface from TOC (ft.) 18.76'

Length of water (ft.) 7.72'

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.)

PURGING

Time started 1350 Finished 1440

Volume purged 4.5g

Comments on Well Recovery good

Depth to water (ft.) 18.79'

Completion _____

Additional Comments _____

Sample Collected: Start 1445

Finish

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1400	1410	1420	1430	1435		
Well Volume Purged (gal.)	1g	2g	3g	4g	4.5g		
Turbidity	77.2	76.2	Turbidity is not functioning properly				
~~Odor~~ DO	0.86	1.03	1.20	1.23	1.28	turbidity is low	
~~OVA~~ (ppm) ORP	-49	-78	-93	-98	-99		
pH (units)	6.11	6.12	6.13	6.14	6.14		
Conductivity (µmho)	0.20	0.196	0.193	0.192	0.192		
Water Temperature (°C)	23.5	23.5	23.5	23.5	23.5		
TDS (mg/l)	0.130	0.128	0.128	0.126	0.125	0.124	
Depth to water (ft.)	18.78	18.79	18.79	18.79	18.79		

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/19/03
SAMPLE ID: 027GS01703

PROJECT: OU2	EVENT: 3
WELL ID: 27GS17	LOCATION FNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: AL
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 23.98	START: FINISH:
DEPTH TO WATER from TOC (ft.): 17.42	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1000 FINISH: 1030
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 0.7
	SAMPLING TIME: 1035
	ANALYSIS: VOC, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1005	1010	1015	1020	1025	1030						
pH (units) :	6.46	6.49	6.60	6.67	6.68	6.68						
Conductivity (mS/cm):	0.150	0.152	0.150	0.150	0.150	0.151						
Turbidity (NTU):	36.7	24.1	15.1	16.5	15.9	14.8						
Temperature °C:	23.57	23.70	23.84	23.72	23.71	23.69						
DO (mg/L):												
ORP:												
Volume Purged:	0.2	0.3	0.4	0.5	0.6	0.7						
Water level:												

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

DUP: 027HS01803

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/19/03
SAMPLE ID: 027GS01803

PROJECT: OU2	EVENT: ~~027GS01803~~ 3
WELL ID: 27GS18	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP: ~80s
REVIEWED BY:	PERSONNEL: AZ
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 24.98	START: FINISH:
DEPTH TO WATER from TOC (ft.): 14.36	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1105 FINISH: 1125
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.5
	SAMPLING TIME: 1135
	ANALYSIS: VOC, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1104	1115	1120	1125								
pH (units):	6.15	6.20	6.23	6.24								
Conductivity (mS/cm):	0.154	0.156	0.157	0.158								
Turbidity (NTU):	17.0	13.1	9.2	9.0								
Temperature °C:	24.04	24.09	24.10	24.07								
DO (mg/L):	0.58	0.56	0.55	0.55								
ORP:												
Volume Purged:	1.2	1.3	1.4	1.5								
Water level:												

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/19/03
SAMPLE ID: 027G501903

PROJECT: OU2	EVENT: 3
WELL ID: 27G519	LOCATION PNAS
WEATHER CONDITIONS: clear, sunny	AMBIENT TEMP: ↓ 80s
REVIEWED BY:	PERSONNEL: AZ
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 25.0	START: FINISH:
DEPTH TO WATER from TOC (ft.): 17.74	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1450 FINISH: 1515
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.0
	SAMPLING TIME: 1525
	ANALYSIS: ~~VOCs~~ VOCs, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1500	1505	1510	1515								
pH (units):	5.84	5.89	5.90	5.91								
Conductivity (mS/cm):	0.129	0.133	0.131	0.133								
Turbidity (NTU):	45.1	26.0	17.1	16.3								
Temperature °C:	25.05	24.87	24.87	24.87								
DO (mg/L):	2.51	1.55	1.23	1.23								
ORP:												
Volume Purged:	0.4	0.6	0.8	1.0								
Water level:												

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/19/03 027G502003

SAMPLE ID: ~~030G502003~~

PROJECT: 042	EVENT: 3
WELL ID:	LOCATION PNAS
WEATHER CONDITIONS: 27GS20 → Sunny, clear	AMBIENT TEMP: mid 80s
REVIEWED BY:	PERSONNEL: AZ
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 24.47	START: / FINISH:
DEPTH TO WATER from TOC (ft.): 17.39	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1350 / FINISH: 1415
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.5
	SAMPLING TIME: 1425
	ANALYSIS: SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT (SAMPLING)

Time:	1395	1400	1405	1410	1415							
pH (units):	6.04	6.03	6.03	6.02	6.02							
Conductivity (mS/cm):	0.232	0.230	0.231	0.229	0.230							
Turbidity (NTU):	65.0	46.9	22.5	16.9	14.7							
Temperature °C:	23.79	23.75	23.74	23.75	23.76							
DO (mg/L):	0.88	0.89	0.90	0.89	0.85							
ORP:												
Volume Purged:	1.0	1.2	1.3	1.4	1.5							
Water level:												

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 027GS0210

PROJECT NAME: NAS Pensacola JOB NO: _____ DATE: 3/19/03

WELL NO.: 27GS21 LOCATION 042

WEATHER CONDITIONS: Sunny, Warm AMBIENT TEMP: 78°

PERSONNEL: GTemple

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? New Teflon Tubing

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 25.14'

Depth to water surface from TOC (ft.) 17.58'

Length of water (ft.) 7.56'

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1000 Finished 1035

Volume purged 4.5g

Comments on Well Recovery Very good

Depth to water (ft.) 17.61'

Completion _____

Additional Comments _____

Sample Collected: Start 1040

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1010	1015	1025	1030	1035		
Well Volume Purged (gal.)	1g	2g	3g	4g	4.5g		
Turbidity	166 – Turbidity is not functioning properly						
~~Odor~~ DO	0.60	0.65	0.66	0.68	0.73	– turbidity is not	
~~OVA~~ (ppm) ORP	42	-11	-18	-26	-29		
pH (units)	5.95	5.92	5.93	5.93	5.92		
Conductivity (μmho)	0.143	0.144	0.144	0.143	0.142		
Water Temperature (°C)	24.74	24.7	24.7	24.7	24.7		
TDS (mg/l)	0.092	0.093	0.094	0.093	0.092		
Depth to water (ft.)	17.60	17.61	17.61	17.61	17.61		

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

(Dup) 027HI0020

GROUNDWATER SAMPLING

Sample ID: 027GI00205

PROJECT NAME: NAS Pensacola JOB NO: DATE: 3/18/03

WELL NO.: 027GI02 LOCATION

WEATHER CONDITIONS: Partly Cloudy, Warm AMBIENT TEMP: 75°c

PERSONNEL: G Temple

PURGING DEVICE

Type Device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously purged?

SAMPLING DEVICE

Type Device? Peristaltic Pumple

How was the device decontaminated? New Teflon Tubing

How was the line decontaminated?

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.)

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 66.28'

Depth to water surface from TOC (ft.) 20.03'

Length of water (ft.) 46.25

Volume of water (ft.)

(gal.)

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.)

PURGING

Time started 1330 Finished 1420

Volume purged 5.0g

Comments on Well Recovery very good

Depth to water (ft.) 20.11

Completion

Additional Comments

Sample Collected: Start 1425

Finish

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1340	1350	1400	1405	1410	1415	
Well Volume Purged (gal.)	1.0g	2.0g	3.0g	3.5g	4.0g	4.5	
Turbidity	91.5	82.9	16.7	16.2	16.8	16.8	
~~Odor~~ DO	0.61	0.62	0.61	0.59	0.58	0.55	
~~OVA (ppm)~~ ORP	-68	-61	-58	-60	-61	-60	
pH (units)	6.26	5.89	5.75	5.74	5.73	5.72	
Conductivity (μmho)	0.089	0.078	0.077	0.076	0.076	0.076	
Water Temperature (°C)	23.64	23.65	23.69	23.64	23.63	23.63	
TDS (mg/l)	0.057	0.050	0.050	0.050	0.050	0.050	
Depth to water (ft.)	20.10	20.11	20.11	20.11	20.11	20.11	

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 0276E004-03

PROJECT NAME: NASD JOB NO: DATE: 3/16/93

WELL NO.: 276E04 LOCATION OU 2

WEATHER CONDITIONS: Cloudy w/rain AMBIENT TEMP: 60s

PERSONNEL: TC

PURGING DEVICE

Type Device? air pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing decon per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peristaltic

How was the device decontaminated? N/A

How was the line decontaminated? tubing new, decanned per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 59.37

Depth to water surface from TOC (ft.) 18.30

Length of water (ft.) 41.01

Volume of water (ft.)

(gal.) 6.70

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 20

PURGING

Time started 1350 Finished 1430

Volume purged

Comments on Well Recovery very silty to start - clears

Depth to water (ft.)

Completion

Additional Comments VOCs

Sample Collected: Start 1430

Finish 1400

IN-SITU TESTING

Time:	1400	1412 *	1420	1430			
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	2	4	5	7			
Turbidity	205	479	~~0~~	~~0~~			
~~Odor~~ 420	1.5	.97	.95	.90			
~~OVA (ppm)~~ ORP (mV)	292	277	293	275			
pH (units)	5.03	4.90	4.84	4.90			
Conductivity (µmho)	.131	.123	.127	.123			
Water Temperature (°C)	24.4	24.5	24.5	24.5			
TDS (mg/l)	.085	.08	.082	.08			
Depth to water (ft.)	18.42	18.40	18.41				

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

* recal 6-22 - Tb not that high - H2O Hgway

027GI0603

Groundwater Sampling Form

Sample ID: ~~030GF17003~~

PROJECT NAME: _____ JOB NO: _____

DATE: 3/14 EVENT: _____

WELL NO.: 27GI06 LOCATION: _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

REVIEWED BY: _____ PERSONNEL: _____

PURGING DEVICE

Type device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 59.72 ~~26.46~~

Depth to water surface from TOC (ft.) 19.81

Length of water (ft.) ~~7.45~~ ~~39.91~~ 39.91

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.)

WELL PURGING

Time started 0915 Finished 0957

Volume purged _____

Comments on Well Recovery

Depth to water (ft.)

Completion: _____

Additional Comments

Sample Collected: Start 1000

Finish

IN-SITU TESTING	Time: 0920	0935	0940	0947	0952	0957				
Well Volume Purged (gal.)	.5	1.5	2.3	3.0	3.5	4.-				
Turbidity	115	107	101	99.5	42.7	34.7				
ORP (mV) Horiba u-22	281	189	203	216	218	224				
pH (units)	6.31	6.27	6.13	5.91	5.89	5.85				
Conductivity (mS/cm)	.249	0.157	0.147	0.142	0.139	0.138				
Water Temperature (°C)	23.17	24.11	24.09	24.05	24.07	24.07				
Salinity (%)	0.01	0.01	0.01	0.01	0.01	0.00				
Other:										

NOTES: 1 ft. length of 4" PVC = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.

Revision Date: 11/14/02

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/18/03
SAMPLE ID: 030G500503

PROJECT: OU2	EVENT: 3
WELL ID: 30G505	LOCATION PNAS
WEATHER CONDITIONS: sunny, clear	AMBIENT TEMP: ↓ 70s
REVIEWED BY:	PERSONNEL: AL

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 15.82	START: FINISH:
DEPTH TO WATER from TOC (ft.): 15.40	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 0915 FINISH: 0935
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.5
	SAMPLING TIME: 0940
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	0930	0932	0935									
pH (units) :	6.67	6.69	6.69									
Conductivity (mS/cm):	0.296	0.294	0.294									
Turbidity (NTU):	5.1	4.7	4.9									
Temperature °C:	21.05	21.03	21.03									
DO (mg/L):												
ORP:												
Volume Purged:	~~1.0~~	1.3	1.5									
Water level:												

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 30GS0603

PROJECT NAME: NASO JOB NO: DATE: 3/18/03

WELL NO.: 30GS06 LOCATION OU-2

WEATHER CONDITIONS: sunny, clear AMBIENT TEMP: 70s

PERSONNEL: TK

PURGING DEVICE

Type Device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously purged?

SAMPLING DEVICE

Type Device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 23.58

Depth to water surface from TOC (ft.) 16.25

Length of water (ft.) 7.33

Volume of water (ft.)

(gal.) 1.2

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 3.6

PURGING

Time started 1115 Finished 1150

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOCs, Metals, SVOCs

Sample Collected: Start 1150 - transf. bottle

Finish 1220

IN-SITU TESTING

probe/sensor malfct

Time:	1130	1136	1141	1147			
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	1.5	2.5		3.5			
Turbidity	60	15*	42	6			
~~Odor~~ DO (mg/L)	—	—	—				
~~OVA (ppm)~~ ORP (mV)	78	40	25	10			
pH (units)	6.15	6.15	6.18	6.16			
Conductivity ~~(µmho)~~ mS/cm	.359 .234	.351	.358	.345			
Water Temperature (°C)	23.7	23.7	23.8	23.8			
TDS (mg/l)	.234	.228	.233	.224			

Depth to water (ft.) No meter avail during sampling.

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

*Tb meter/sensor still not operating properly. No visible turb. in GW noted or observed. Slight yellow tinge only. Probe reads 300 NTU. Thanks!

Also has petro/chem odor

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/18/03
SAMPLE ID: 030GS01103

PROJECT: OU2	EVENT: 3
WELL ID: 30GS11	LOCATION PNAS
WEATHER CONDITIONS: mostly cloudy	AMBIENT TEMP: ↓ 70s
REVIEWED BY:	PERSONNEL: AL

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 24.6	START: FINISH:
DEPTH TO WATER from TOC (ft.): 17.3	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1335 FINISH: 1355
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.0
	SAMPLING TIME: 1400
	ANALYSIS: VOC, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1345	1348	1350	1353	1355							
pH (units):	6.57	6.57	6.56	6.59	6.60							
Conductivity (mS/cm):	0.174	0.173	0.171	0.174	0.173							
Turbidity (NTU):	26.2	21.3	19.5	12.5	13.2							
Temperature °C:	22.79	22.78	22.65	22.62	22.61							
DO (mg/L):												
ORP:												
Volume Purged:	0.3	0.5	0.7	0.9	1.0							
Water level:	Ø											

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 0306501503

PROJECT NAME: NASP JOB NO: DATE: 3/14/03

WELL NO.: 306515 LOCATION 042

WEATHER CONDITIONS: Cloudy AMBIENT TEMP: 70s

PERSONNEL: TL

PURGING DEVICE

Type Device? peri pump, New tubing

How was the device decontaminated? per CSAP

How was the line decontaminated? per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peri pump

How was the device decontaminated?

How was the line decontaminated?

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 29.52

Depth to water surface from TOC (ft.) 21.85

Length of water (ft.) 7.67

Volume of water (ft.)

(gal.) 1.2

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 3.6

PURGING

Time started 1443 Finished 1505

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOCs + MNA

Sample Collected: Start 1510

Finish 1515

IN-SITU TESTING U-22 data

Time:	1449	1453	1501	1505			
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	0.5	1	1.85	2.5			
Turbidity	35	6	16	17			
~~Odor~~ DO (mg/L)	7.0	7.3	6.8	6.9			
~~OVA (ppm)~~ ORP (mv)	138	144	150	153			
pH (units)	6.38	6.36	6.32	6.31			
Conductivity (~~umho~~) mS/cm	.187	.194	.202	.199			
Water Temperature (°C)	23.5	23.4	23.4	23.4			
TDS (mg/l)	.124	.124	.125	.130			
Depth to water (ft.)	21.85	21.85	21.85	21.85			

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

1505 Collect MNA volumes

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/18/03
SAMPLE ID: 030GS01803

PROJECT: OU2	EVENT: 3
WELL ID: 30GS18	LOCATION PNAS
WEATHER CONDITIONS: clear, sunny	AMBIENT TEMP: 170s
REVIEWED BY:	PERSONNEL: AZ
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 19.35	START: FINISH:
DEPTH TO WATER from TOC (ft.): 9.56	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1105 FINISH: 1130
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 3.1
	SAMPLING TIME: 1135
	ANALYSIS: VOC, Metals, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1115	1120	1125	1125	1128	1130						
pH (units):	5.75	5.77	5.80	5.82	5.79	5.80						
Conductivity (mS/cm):	0.189	0.189	0.192	0.194	0.195	0.194						
Turbidity (NTU):	18.2	-6.5	-6.9	-6.1	-6.4	-6.3						
Temperature °C:	20.46	20.42	20.25	20.27	20.24	20.22						
DO (mg/L):												
ORP:												
Volume Purged:	2.5	2.7	2.8	2.9	30.	3.1						
Water level:												
	0.129	0.128	0.125	0.126	0.120	0.119						

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/13/03

SAMPLE ID: 030GS02003

PROJECT: OU2	EVENT: 3
WELL ID: 30GS20	LOCATION PWAs
WEATHER CONDITIONS: Clear, sunny	AMBIENT TEMP: mid 70s
REVIEWED BY:	PERSONNEL: AZ

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new / dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 20.40	START: FINISH:
DEPTH TO WATER from TOC (ft.): 12.71	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1000 FINISH: 1020
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.3
	SAMPLING TIME: 1025
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1010	1013	1015	1020								
pH (units):	6.41	6.24	6.25	6.25								
Conductivity (mS/cm):	0.218	0.218	0.218	0.218								
Turbidity (NTU):	75.0	39.0	18.8	18.2								
Temperature °C:	19.07	18.51	18.50	18.49								
DO (mg/L):												
ORP:												
Volume Purged:	0.5	0.8	1.0	1.3								
Water level:												

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 0206S0220B

PROJECT NAME: NASP JOB NO: DATE: 3/14/03

WELL NO.: 30GS22 LOCATION OU2

WEATHER CONDITIONS: Sun, clear AMBIENT TEMP: 70s

PERSONNEL:

PURGING DEVICE

Type Device? Peri pump / teflon tubing (new)

How was the device decontaminated? per CSAP

How was the line decontaminated? per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peri pump

How was the device decontaminated? per CSAP

How was the line decontaminated? per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 28.05 (SOP)

Depth to water surface from TOC (ft.) 19.39

Length of water (ft.) 8.66

Volume of water (ft.)

(gal.) 1.4

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 4.2

PURGING

Time started 1109 Finished 1140

Volume purged

Comments on Well Recovery QUICK

Depth to water (ft.)

Completion

Additional Comments Metals, VOCs, SVOCs/PAH, MNA

Sample Collected: Start 1145

Finish

IN-SITU TESTING

Time:	1115	1124	1128	1133	1138		
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	1	2.5	3.2	4	4.2		
Turbidity	70	11	11	8	7		
~~Odor~~ ORP (U-22)	-128	-180	-186	-186	-180		
~~OVA (ppm)~~ DO (mg/L)	.95	1.1	.81	.80	.79		
pH (units)	6.29	6.27	6.25	6.25	6.26		
Conductivity (~~µmho~~) mS/cm	.297	.299	.300	.300	.300		
Water Temperature (°C)	23.7	23.6	23.7	23.8	24.0		
TDS (mg/l)	.192	.195	.195	.194	.195		
Depth to water (ft.)	19.43	19.42	19.42	19.41	19.42		

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

H_2S odor yes y y y y

1140 - start MNA params.

1224 - hook up disl gas

GROUNDWATER SAMPLING

Sample ID: 030650220 3

PROJECT NAME: _____ JOB NO: _____ DATE: 3/14/03

WELL NO.: 30652 7 LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

PERSONNEL: _____

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 26.4

Depth to water surface from TOC (ft.) 18.57

Length of water (ft.) _____

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.)

PURGING

Time started 1052 Finished 1123

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1125

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1105	1110	1120	1123			
Well Volume Purged (gal.)	1.0	1.5	2.0	2.1			
Turbidity	87.7	36.2	19.8	20.0			
~~Odor~~ ORP Horriba	303	301	293	292			
OVA (ppm)	—						
pH (units)	6.13	6.18	6.21	6.16			
Conductivity (µmho)	0.087	0.089	0.091	0.09			
Water Temperature (°C)	23.0	23.21	~~23.28~~ 23.28	23.22			
TDS (mg/l)	0	0	0	0			
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 030GS028 03

PROJECT NAME: NASP JOB NO: DATE: 3/15/03

WELL NO.: 306528 LOCATION

WEATHER CONDITIONS: Sunny AMBIENT TEMP: 70s

PERSONNEL: TL

PURGING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? new tubing decanned per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? new tubing decanned per CSAP

Which well was previously sampled? N/A

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 26.63

Depth to water surface from TOC (ft.) 18.65

Length of water (ft.) 7.98

Volume of water (ft.)

(gal.) 1.3

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 3.9

PURGING

Time started 1235 Finished 1301

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOCs, Metals

Sample Collected: Start Transfer bottle 1305

Finish 1325

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1245	1251	1256	1301			
Well Volume Purged (gal.)	1	1.5	2.25	2.75			
Turbidity	118	18	14	7			
~~Odor~~ DO	5.5	6.6	4.4	3.9			
~~OVA (ppm)~~ ORP	138	124	121	118			
pH (units)	6.11	6.11	6.10	6.10			
Conductivity (µmho)	.179	.181	.181	.181			
Water Temperature (°C)	22.9	22.7	22.8	22.8			
TDS (mg/l)	.116	.118	.117	.118			
Depth to water (ft.)	18.65	18.66	18.66	18.66			

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/18/03
SAMPLE ID: 030GS03303

PROJECT: OU2	EVENT: 3
WELL ID: 30GS33	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny, clear	AMBIENT TEMP: ↑70s
REVIEWED BY:	PERSONNEL: AZ
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 26.0	START: FINISH:
DEPTH TO WATER from TOC (ft.): 18.4	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1230 FINISH: 1310
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.5
	SAMPLING TIME: 1315
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1240	1245	1250	1255	1300	1305	1310					
pH (units):	6.50	6.50	6.45	6.45	6.47	6.47	6.47					
Conductivity (mS/cm):	0.163	0.160	0.159	0.160	0.160	0.160	0.160					
Turbidity (NTU):	61.9	55.1	42.8	31.5	24.2	15.6	14.7					
Temperature °C:	23.64	23.50	23.31	23.31	23.31	23.30	23.30					
DO (mg/L):												
ORP:												
Volume Purged:	0.2	0.4	0.6	0.8	1.0	1.2	1.4					
Water level:												

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

(Dup) 030H5046 03

Sample ID: 030G5046 03

GROUNDWATER SAMPLING

PROJECT NAME: _____ JOB NO: _____ DATE: 3/18/03

WELL NO.: 30GS46 LOCATION 042

WEATHER CONDITIONS: Sunny, Warm AMBIENT TEMP: 73°

PERSONNEL: GTemple

PURGING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? New Teflon Tubing

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? Dedicated New Teflon Tubing

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 27.11'

Depth to water surface from TOC (ft.) 18.54

Length of water (ft.) 8.57'

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 0945 Finished 1020

Volume purged 5.0g

Comments on Well Recovery Very good

Depth to water (ft.) 18.56

Completion _____

Additional Comments _____

Sample Collected: Start 1025

Finish 1050

IN-SITU TESTING

Time:	0950	1000	1010	1015			
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	1.0g	2.0g	4.0g	5.0			
Turbidity	308	425	— Turbidity Not Functioning				
~~Odor~~ DO	0.68	0.74	0.91	0.92			
~~OVA (ppm)~~ ORP	-130	-138	-146	-148			
pH (units)	6.27	6.27	6.32	6.34			
Conductivity (µmho)	0.145	0.148	0.137	0.148			
Water Temperature (°C)	22.28	22.27	22.24	22.24			
TDS (mg/l)	0.095	0.094	0.090	0.096			
Depth to water (ft.)	18.56'	18.56'	18.56	18.56			

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 030GS051 03

PROJECT NAME: NAS Pensacola JOB NO: _____ DATE: 3/18/03

WELL NO.: 30GS51 LOCATION OU 2

WEATHER CONDITIONS: Sunny, Warm AMBIENT TEMP: 76°

PERSONNEL:

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? New Teflon Tubing

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 18.30'

Depth to water surface from TOC (ft.) 17.35'

Length of water (ft.) 0.95'

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1135 Finished 1210

Volume purged 4.0g

Comments on Well Recovery very good

Depth to water (ft.) 17.39'

Completion _____

Additional Comments _____

Sample Collected: Start 1215

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1145	1150	1155	1200	1205		
Well Volume Purged (gal.)	.5g	1.0g	2.0g	2.5	3.5		
Turbidity	82	121	134	175	202	- Turbidity is not	
~~Odor~~ DO	1.15	1.73	1.85	1.94	1.89	functioning proper	
~~OVA (ppm)~~ ORP	-101	-96	-97	-98	-101	- Water is very cl	
pH (units)	6.13	6.10	6.12	6.12	6.15		
Conductivity (μmho)	0.128	0.136	0.142	0.151	0.153		
Water Temperature (°C)	23.03	23.02	23.02	23.04	23.06		
TDS (mg/l)	0.086	0.091	0.094	0.097	0.098		
Depth to water (ft.)	17.38'	17.39	17.39	17.39	17.39		

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/13/03
SAMPLE ID: 030GS10103

PROJECT: OU2	EVENT: 3
WELL ID: 30GS101	LOCATION PNAS
WEATHER CONDITIONS: mostly sunny	AMBIENT TEMP: 770s
REVIEWED BY:	PERSONNEL: AL

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE:
DECON PROCESS:	DECON PROCESS:
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.):	START: / FINISH:
DEPTH TO WATER from TOC (ft.):	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1325 / FINISH: 1435
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 5.0
	SAMPLING TIME: 1440
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1350	1355	1405	1415	1425	1435						
pH (units):	7.04	6.61	6.60	6.60	6.57	6.56						
Conductivity (mS/cm):	0.143	0.140	0.140	0.140	0.139	0.139						
Turbidity (NTU):	89.8	40.6	35.1	30.3	21.8	19.4						
Temperature °C:	20.62	20.39	20.58	20.56	20.56	20.54						
DO (mg/L):												
ORP:												
Volume Purged:	1.7	2.2	2.8	3.3	4.0	4.8						
Water level:												
TDS	0.093	0.091	0.091	0.091	0.091	0.091						

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/13/03
SAMPLE ID: 030GS10303

PROJECT: OU2	EVENT: 3
WELL ID: 30GS103	LOCATION PNAS
WEATHER CONDITIONS: partly cloudy	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: AL

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 17.27	START: FINISH:
DEPTH TO WATER from TOC (ft.): 5.72	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1600 FINISH: 1630
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 3.0
	SAMPLING TIME: 1635
	ANALYSIS: metals, SVOCs/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1610	1615	1620	1625	1630							
pH (units):	6.86	6.84	6.84	6.83	6.83							
Conductivity (mS/cm):	0.596	0.596	0.378	0.378	0.378							
Turbidity (NTU):	66.3	37.1	26.8	18.1	16.7							
Temperature °C:	22.18	22.17	22.15	22.15	22.15							
DO (mg/L):												
ORP:												
Volume Purged:	1.0	1.7	2.3	2.6	3.0							
Water level:	5.91											
	0.381	0.381	0.381	0.381	0.381							

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/14

SAMPLE ID: 030G5105G3

PROJECT: OU2	EVENT: 3
WELL ID: 30G5105	LOCATION PNAS
WEATHER CONDITIONS:	AMBIENT TEMP:
REVIEWED BY:	PERSONNEL:

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 14.74	START: FINISH:
DEPTH TO WATER from TOC (ft.): 4.93	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1300 FINISH: 1315
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 2.7
	SAMPLING TIME: 1320
	ANALYSIS: SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1305	1310	1313	1315								
pH (units):	6.35	6.54	6.55	6.54								
Conductivity (mS/cm):	0.161	0.165	0.164	0.165								
Turbidity (NTU):	32.4	23.0	15.4	14.3								
Temperature °C:	19.50	19.29	19.17	19.15								
DO (mg/L):												
ORP:												
Volume Purged:	2.0	2.3	2.5	2.7								
Water level:												
TDS	0.00	0.107	0.107	0.108								

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/17/03
SAMPLE ID: 030 GS1103

PROJECT: OU2	EVENT: 3
WELL ID: 30GS111	LOCATION PNAS
WEATHER CONDITIONS: partly cloudy	AMBIENT TEMP: ↓70s
REVIEWED BY:	PERSONNEL: AL

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicate
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 14.29	START: FINISH:
DEPTH TO WATER from TOC (ft.): 7.32	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1055 FINISH: 1104
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL)
	SAMPLING TIME: 1110
	ANALYSIS: VOC, Metals, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1058	1101	1104										
pH (units):	6.61	6.60	6.59										
Conductivity (mS/cm):	0.383	0.381	0.381										
Turbidity (NTU):	9.2	4.8	7.6										
Temperature °C:	22.75	22.73	22.72										
DO (mg/L):													
ORP:													
Volume Purged:	0.3	0.5	0.8										
Water level:													
TDS	0.248	0.248	0.247										

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

DUP: 030HS11303 ~~030GS1130~~

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/14/03

SAMPLE ID: 030GS11303

PROJECT: OU2	EVENT: 3
WELL ID: 30GS113	LOCATION: PNAS
WEATHER CONDITIONS: partly cloudy	AMBIENT TEMP: ↑70s
REVIEWED BY:	PERSONNEL: AL
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.):	START: / FINISH:
DEPTH TO WATER from TOC (ft.):	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1420 / FINISH: 1450
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 2.5
	SAMPLING TIME: 1455
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1425	1430	1440	1445	1450							
pH (units):	6.90	6.72	6.67	6.69	6.67							
Conductivity (mS/cm):	0.265	0.249	0.243	0.242	0.242							
Turbidity (NTU):	107.0	43.0	25.7	18.9	13.0							
Temperature °C:	21.36	21.10	21.15	21.08	21.09							
DO (mg/L):												
ORP:												
Volume Purged:	0.3	1.0	2.0	2.3	2.5							
Water level:												
TDS	0.175	0.162	0.157	0.157	0.157							

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: ~~3/13/03~~ 3/14/03

SAMPLE ID: 03065123 03

PROJECT: NASP	EVENT:
WELL ID: 3065123	LOCATION: OU2
WEATHER CONDITIONS: Sunny, clear	AMBIENT TEMP: 70s
REVIEWED BY:	PERSONNEL: TK/BA
WELL DEVELOPMENT PURGING DEVICE: peri pump + new tubing	WELL SAMPLING DEVICE: peri pump
DECON PROCESS: per CSAP	DECON PROCESS: N/A
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 14.62 soft	START: 0912 FINISH: 0933
DEPTH TO WATER from TOC (ft.): 6.96	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.): 7.66	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL): 1.2	START: 0938 FINISH: 1010
3 VOLUMES OF WATER (GAL): 3.6	VOLUME PURGED (GAL) 5+
	SAMPLING TIME: 1015
	ANALYSIS: VOCs, SVOCs/PAH, MET, P/P, MR

IN-SITU TESTING

Circle one: DEVELOPMENT (SAMPLING)

Time:	0917	0920	0924	0933								
pH (units):	5.94	5.90	5.90	5.87								
Conductivity (mS/cm):	.193	.191	0.190	.184								
Turbidity (NTU):	10	14	16	2								
Temperature °C:	20.9	20.7	20.7	20.6								
DO (mg/L):		.44		3.6								
ORP:	84	~~99~~	-101	-112								
Volume Purged:	.75	1.25	1.75	3								
Water level:												
TDS (g/L)	.125	.124	0.125	.117								

COMMENTS:

0938 Collect DO + MW4 Check → Look up MW4 deeps

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 030GS12603

PROJECT NAME: NASP JOB NO: DATE: 3/15/03

WELL NO.: 30GS126 LOCATION: OU2

WEATHER CONDITIONS: Sun AMBIENT TEMP: 80s

PERSONNEL: TK

PURGING DEVICE

Type Device? peri pump

How was the device decontaminated? p

How was the line decontaminated? per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peri pump

How was the device decontaminated? NA

How was the line decontaminated? per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 16.80

Depth to water surface from TOC (ft.) 8.20

Length of water (ft.) 8.60

Volume of water (ft.)

(gal.) 1.4

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 4.2

PURGING

Time started 1101 Finished 1128

Volume purged 3+

Comments on Well Recovery

Depth to water (ft.)

Completion METALS + VOCS

Additional Comments start transfer bottle

Sample Collected: Start 1130

Finish 1145

IN-SITU TESTING

Time:	1110	1116	1122	1128			
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	1	1.5	2.25	3			
Turbidity	135	29	19	17			
~~Color~~ ORP	135	139	141	140			
~~OVA (ppm)~~ DO	.96	1.5	.78	.79			
pH (units)	5.62	5.56	5.60	5.58			
Conductivity (~~umhos~~ mS/cm	.113	.111	.110	.109			
Water Temperature (°C)	21.1	21.2	21.3	21.5			
TDS (mg/l)	.073	.072	.071	.071			
Depth to water (ft.)	8.22	8.22	8.22				

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 030GS16203

PROJECT NAME: NASP JOB NO: DATE: 3/16/03

WELL NO.: 306S162 LOCATION 042

WEATHER CONDITIONS: rain AMBIENT TEMP: 60s

PERSONNEL: TK

PURGING DEVICE

Type Device? Peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing decanned per CSAP

Which well was previously purged?

SAMPLING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing decanned per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 30.06

Depth to water surface from TOC (ft.) 20.90

Length of water (ft.) 9.16

Volume of water (ft.)

(gal.) 1.5

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 4.5

PURGING

Time started 1150 Finished 1213

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments Dupe for VOCs ✓

Sample Collected: Start 1215

Finish 1220

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1155	1201	1208	1212			
Well Volume Purged (gal.)	0.5	1.25	2.25	3			
Turbidity	58	211	12	0			
~~Oder~~ DO (mg/L)	4.1	5.1	4.6	4.4			
~~OVA (ppm)~~ ORP (mV)	213	220	218	211			
pH (units)	6.89	6.68	6.65	6.63			
Conductivity ~~(umho)~~ mS/cm	.277	.266	.264	.258			
Water Temperature (°C)	21.6	21.6	21.6	21.6			
TDS (mg/l)	.179	.176	.170	.174			
Depth to water (ft.)	20.91	20.90	20.91	20.91			

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 030GS14603

PROJECT NAME: NASA JOB NO: DATE: 3/15/03

WELL NO.: 30GS146 LOCATION OU2

WEATHER CONDITIONS: Sun, hot AMBIENT TEMP: 80s

PERSONNEL: TK

PURGING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? per CSAP - discarded new tubing

Which well was previously purged?

SAMPLING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? per CSAP

Which well was previously sampled? N/A

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 30.88

Depth to water surface from TOC (ft.) 22.82

Length of water (ft.) 8.06

Volume of water (ft.)

(gal.) 1.2

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 3.8

PURGING

Time started 1345 Finished 1410

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOCs only

Sample Collected: Start 1415

Finish 1420

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1347	1357	1401	1405	1410		
Well Volume Purged (gal.)	0.25	1	1.25	1.5	2.5		
Turbidity	37	40	34	46	50		
~~Odor~~ DO	6.5	~~[illegible]~~ 8	4.9	4.9	5.0		
~~OVA (ppm)~~ ORP	144	154	155	154	154		
pH (units)	6.50	6.70	6.71	6.73	6.73		
Conductivity ~~(umhos)~~ mS/cm	.215	.213	.219	.221	.219		
Water Temperature (°C)	24	23.8	23.9	23.9	23.9		
TDS (mg/l)	.140	.142	.141	.144	.142		
Depth to water (ft.)	22.85	22.85	22.85	22.85	22.85		

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

No visible Tb - Tb probe acting up - flow rate is low
All ~~stable~~ stable but Tb - only VOCs - No visible Tb!

Sampled Instead of 03065175 (not installed)

Groundwater Sampling Form

Groundwater Sampling

Sample ID: 03065170003

PROJECT NAME: _____ JOB NO: _____

DATE: 3/13/03

WELL NO.: 3065170 LOCATION: _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

REVIEWED BY: PERSONNEL:

PURGING DEVICE

Type device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) 24

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 26.95

Depth to water surface from TOC (ft.) 18.37

Length of water (ft.) 8.58

Volume of water (ft.) _____

(gal.) 1.2

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) 3.6

WELL PURGING

Time started 1500 Finished 1530

Volume purged ~4

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1530

Finish _____

IN-SITU TESTING

Time:	1505	1511	1517	1525	1528	1530			
Well Volume Purged (gal.)	0.5	1.25	2	2.5	3.5	4			
ORP (mV)	144	159	164	171	172	173			
Turbidity (NTU)	45	35	16	4	3	5			
DO (mg/L)	5.5	5.3	5.3	5.4	5.1	4.9			
pH (units)	6.64	6.60	6.59	6.60	6.58	6.57			
Conductivity (ms/cm)	.244	.254	.250	.238	.242	.239			
Water Temperature (°C)	23.3	23.2	23.3	23.4	23.4	23.4			
Salinity (%)									

NOTES: 1 ft. length of 4" PVC = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 9/11/02

TDS (g/L)	.163	.169	.157	.156	.156	.154

1543 Start diss gases

GROUNDWATER SAMPLING

Sample ID: 030G5174 0

PROJECT NAME: _____ JOB NO: _____ DATE: 3/19/03

WELL NO.: 30G5174 LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

PERSONNEL: _____

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 21.18

Depth to water surface from TOC (ft.) 17.28

Length of water (ft.) _____

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1340 Finished _____

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1420

Finish _____

IN-SITU TESTING

Time:	1345	1350	1400	1410	1420		
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	.5	1.0	1.5	2.	2.5		
Turbidity	0.4	0	0	10	8.0		
~~Oder~~ ~~DO~~ (mg/L)	7.51	7.39	7.25	7.14	7.21		
~~OVA (ppm)~~ ORP (mV) Horiba	136	142	147	151	157		
pH (units)	6.47	6.43	6.42	6.39	6.41		
Conductivity ~~(µmho)~~ mS/cm	0.140	0.143	0.144	0.148	0.149		
Water Temperature (°C)	24.33	24.49	24.37	24.32	24.30		
TDS (mg/l)	0.091	0.093	0.094	0.092	0.093		
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

TOC
metals

GROUNDWATER SAMPLING

Sample ID: 0306MW030

PROJECT NAME: NASP JOB NO: DATE: 3/15/03

WELL NO.: MW-35 LOCATION OU2

WEATHER CONDITIONS: PC AMBIENT TEMP: 70s

PERSONNEL: TK

PURGING DEVICE

Type Device? pri pump w/ new tubing

How was the device decontaminated? ~~per CSAP~~ N/A

How was the line decontaminated? per CSAP

Which well was previously purged? N/A

SAMPLING DEVICE

Type Device? pri pump

How was the device decontaminated? N/A

How was the line decontaminated? per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 1" PIEZO!

Stickup (ft.) No lock - (FAIL)

Depth to bottom of well from TOC (ft.) NA (see below)

Depth to water surface from TOC (ft.) NA (see below)

Length of water (ft.)

Volume of water (ft.)

(gal.)

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.)

PURGING

Time started 0922 Finished 0950

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments SVOCs + VOCs

Sample Collected: Start 0950 (Transfer bottle)

Finish 1010 (sample time 100C)

IN-SITU TESTING

Time:	0922	0935	0940	0945	0950		
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	0.1	0.8	1.2	1.5	1.8		
Turbidity	53	0	0	0	0		
~~Odor~~ ORP (mV)	160	157	157	159	160		
~~OVA (ppm)~~ DO (mg/L)	3.6	3.1	3.0	2.9	2.9		
pH (units)	6.77	6.74	6.75	6.71	6.71		
Conductivity ~~(µmho)~~ mS/cm	.337	.307	.301	.296	.294		
Water Temperature (°C)	23.0	22.8	22.9	22.7	22.8		
TDS (mg/l)	.221	.201	.194	.192	.191		
Depth to water (ft.)							

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

WL indicator jams in 1" piezo - can't TD or get WL. Use tubing to access + set @ ~ 15-17' based on reported TD of 24' on plate! Tubing to bottom + pull up 2' - pumping dry - have to put in bottom to get water still

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WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/18/03
SAMPLE ID: 030GI01903

PROJECT: OU2	EVENT: 3
WELL ID: 30GI19	LOCATION PNAS
WEATHER CONDITIONS: sunny, clear	AMBIENT TEMP: ↑70s
REVIEWED BY:	PERSONNEL: Az
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 50.98	START: FINISH:
DEPTH TO WATER from TOC (ft.): 9.31	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1103 FINISH: 1135
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 4.0
	SAMPLING TIME: 1145
	ANALYSIS: VOC, Metals

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1115	1120	1125	1130	1135							
pH (units):	4.63	4.43	4.38	4.37	4.38							
Conductivity (mS/cm):	0.159	0.159	0.160	0.160	0.159							
Turbidity (NTU):	64.7	43.2	29.8	17.9	12.1							
Temperature °C:	21.14	21.12	21.10	21.06	21.06							
DO (mg/L):												
ORP:												
Volume Purged:	2.5	3.0	3.2	3.5	3.8							
Water level:												

COMMENTS:

Purge water placed into drum #_____

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WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/17/03

SAMPLE ID: 030GI11103

PROJECT: OU2	EVENT: 3
WELL ID: 30GI111	LOCATION 7NAs
WEATHER CONDITIONS: mostly cloudy	AMBIENT TEMP: ↓70s
REVIEWED BY:	PERSONNEL: AC
WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 49.17	START: FINISH:
DEPTH TO WATER from TOC (ft.): 7.40	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1305 FINISH: 1323
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) ~2.0
	SAMPLING TIME: 1330
	ANALYSIS: VOC, Metals, SVOC/PAH

IN-SITU TESTING

Circle one: DEVELOPMENT (SAMPLING)

Time:	1310	1315	1318	1320	1323							
pH (units):	6.69	6.69	6.68	6.68	6.68							
Conductivity (mS/cm):	4.25	4.25	4.24	4.21	4.20							
Turbidity (NTU):	38.1	22.1	18.6	13.3	11.3							
Temperature °C:	24.49	24.33	24.29	24.26	24.26							
DO (mg/L):												
ORP:												
Volume Purged:	0.3	0.8	1.2	1.5	1.8							
Water level:												
TDS	2.73	2.72	2.70	2.70	2.69							

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

ENSAFE

DUP 030HI11303

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FORM

DATE: 3/14/03

SAMPLE ID: 030GI11303

PROJECT:	OU2	EVENT:	3
WELL ID:	30GI113	LOCATION	PNAS
WEATHER CONDITIONS:	partly cloudy	AMBIENT TEMP:	70s
REVIEWED BY:		PERSONNEL:	AL

WELL DEVELOPMENT PURGING DEVICE:	WELL SAMPLING DEVICE: Peristaltic
DECON PROCESS:	DECON PROCESS: new/dedicated
WELL DIA: 2"	**WELL DEVELOPMENT**
TOTAL DEPTH from TOC (ft.): 48.56	START: / FINISH:
DEPTH TO WATER from TOC (ft.): 8.43	VOLUME PURGED (GAL)
LENGTH OF WATER COL. (ft.):	**GROUNDWATER SAMPLING**
1 VOLUME OF WATER: (GAL):	START: 1350 / FINISH: 1405
3 VOLUMES OF WATER (GAL):	VOLUME PURGED (GAL) 1.5
	SAMPLING TIME: 1415
	ANALYSIS: VOC

IN-SITU TESTING

Circle one: DEVELOPMENT SAMPLING

Time:	1355	1358	1402	1405								
pH (units):	6.64	6.62	6.61	6.60								
Conductivity (mS/cm):	4.63	4.64	4.63	4.63								
Turbidity (NTU):	48.6	36.1	15.2	15.3								
Temperature °C:	24.80	24.54	24.31	24.30								
DO (mg/L):												
ORP:												
Volume Purged:	0.8	1.0	1.2	1.5								
Water level:												
TDS	2.98	0.197	0.196	0.196								

COMMENTS:

Purge water placed into drum #_____

REVISION 2001

GROUNDWATER SAMPLING

Sample ID: 0306F126 03

PROJECT NAME: NASP JOB NO: DATE: 3/18/03

WELL NO.: 306F126 LOCATION 04-2

WEATHER CONDITIONS: sun, clear AMBIENT TEMP: 20s

PERSONNEL: TK

PURGING DEVICE

Type Device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously purged?

SAMPLING DEVICE

Type Device? Peristaltic Pump

How was the device decontaminated? N/A

How was the line decontaminated? DI CSAP

Which well was previously sampled? N/A

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 56.37

Depth to water surface from TOC (ft.) 8.23

Length of water (ft.) 43.17

Volume of water (ft.)

(gal.) 7

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 21

PURGING

Time started 1340 Finished 1436

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments VOC, SVOC, Metals

Sample Collected: Start 1440 TB

Finish

IN-SITU TESTING

	Time: 1357	1406	1416	1426	1436		
	1	2	3	4	5	6	7
Well Volume Purged (gal.)	3	4	5	6	7		
Turbidity	85*	20	15	21	14		
~~Odor~~ DO (mg/L)	5.7	3.6	3.2	2.8	2.9		
~~OVA (ppm)~~ ORP (mV)	257	229	214	206	210		
pH (units)	5.43	5.39	5.39	5.38	5.36		
Conductivity ~~(µmho)~~ mS/cm	.137	.136	.136	.136	.138		
Water Temperature (°C)	22.3	22.5	22.3	22.1	22.3		
TDS (mg/l)	.09	.09	.09	.09	.09		
Depth to water (ft.)	No water avail during sampling.						

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

* NVT - faulty probe still

GROUNDWATER SAMPLING

Sample ID: 030GI32A03

PROJECT NAME: _____ JOB NO: _____ DATE: 3/14/03

WELL NO.: 3eG I 132A LOCATION _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

PERSONNEL: _____

PURGING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type Device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously sampled? _____

INITIAL WELL VOLUME

Well diameter (in.) _____

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) _____

Depth to water surface from TOC (ft.) _____

Length of water (ft.) _____

Volume of water (ft.) _____

(gal.) _____

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) _____

PURGING

Time started 1425 Finished 1500

Volume purged _____

Comments on Well Recovery _____

Depth to water (ft.) _____

Completion _____

Additional Comments _____

Sample Collected: Start 1500

Finish _____

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1435	1445	1457				
Well Volume Purged (gal.)	1.0	1.5	2.0				
Turbidity	95.2	40.0	22.4				
Odor	—	—	—				
~~OVA (ppm)~~ ORP Horriba	272	275	277				
pH (units)	5.75	5.68	5.65				
Conductivity (µmho)	0.150	0.151	0.151				
Water Temperature (°C)	24.32	24.17	24.14				
TDS (mg/l)	0	0.098	0				
Depth to water (ft.) ~~ORP~~		~~275~~					

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque

Revision Date: 12/93

GROUNDWATER SAMPLING

Sample ID: 0306I164G3

PROJECT NAME: NASP JOB NO: DATE: 3/16/03

WELL NO.: 30 GI 164 LOCATION OWZ

WEATHER CONDITIONS: Cloudy + rain AMBIENT TEMP: 60s

PERSONNEL: TK

PURGING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing dumped per CSAP

Which well was previously purged? —

SAMPLING DEVICE

Type Device? peristaltic pump

How was the device decontaminated? N/A

How was the line decontaminated? New tubing dumped per CSAP

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2"

Stickup (ft.)

Depth to bottom of well from TOC (ft.) 40.6

Depth to water surface from TOC (ft.) 20.10

Length of water (ft.) 20.5

Volume of water (ft.)

(gal.) 3.3

Amount of sediment at bottom of well (ft.)

3 Volumes of water (gal.) 9.9

PURGING

Time started 1231 Finished 1300

Volume purged

Comments on Well Recovery

Depth to water (ft.)

Completion

Additional Comments SVOCs, VOCs

Sample Collected: Start ~~1300~~ 1310

Finish 1330

IN-SITU TESTING

	1	2	3	4	5	6	7
Time:	1236	1241	1250	1300			
Well Volume Purged (gal.)	0.75	1.5	2.5	3.5			
Turbidity	0	25	55*	18			
~~Odor~~ DO (mg/L)	1.5	1.6	1.3	1.3			
~~OVA (ppm)~~ ORP (mV)	239	234	232	230			
pH (units)	6.30	6.29	6.26	6.27			
Conductivity ~~(umhos)~~ mS/cm	.177	.176	.178	.178			
Water Temperature (°C)	22.3	22.4	22.1	22.0			
TDS (mg/l)	.115	.115	.116	.116			
Depth to water (ft.)	20.18	20.16	20.12				

NOTES: 1 ft. length of 4" = 0.087 ft³ or 0.65 gal. 1 ft. length 2" = 0.022 ft³ or 0.16 gal.
Turbidity choices: clear, turbid, opaque Revision Date: 12/93

*NVT - No vis. turbidity - Hgry tint

Groundwater Sampling Form

Sample ID: 0306I 17003

PROJECT NAME: _____ JOB NO: _____

DATE: 3/13/03 EVENT: _____

WELL NO.: 306I170 LOCATION: _____

WEATHER CONDITIONS: _____ AMBIENT TEMP: _____

REVIEWED BY: _____ PERSONNEL: _____

PURGING DEVICE

Type device? _____

How was the device decontaminated? _____

How was the line decontaminated? _____

Which well was previously purged? _____

SAMPLING DEVICE

Type device?

How was the device decontaminated?

How was the line decontaminated?

Which well was previously sampled?

INITIAL WELL VOLUME

Well diameter (in.) 2

Stickup (ft.) _____

Depth to bottom of well from TOC (ft.) 45.95

Depth to water surface from TOC (ft.) 18.21

Length of water (ft.) 27.74

Volume of water (ft.) _____

(gal.) 4.4

Amount of sediment at bottom of well (ft.) _____

3 Volumes of water (gal.) 13.3

WELL PURGING

Time started 1500 Finished 1530

Volume purged 2.3 gal

Comments on Well Recovery

Depth to water (ft.)

Completion: _____

Additional Comments

Sample Collected: Start 1530

Finish

IN-SITU TESTING	Time: 1510	1520	1523	1526						
Well Volume Purged (gal.)	.5	1	1.5	2.1						
Turbidity	33.4	35.7	23.6	1.8						
ORP (mV)	297 1.61	296	292	298						
pH (units)	5.24	6.10	5.06	6.03						
Conductivity (mS/cm)	0.115	0.120	0.120	0.121						
Water Temperature (°C)	23.25	23.29	23.24	23.25						
Salinity (%)	0	0	0	0						
Other:										

NOTES: 1 ft. length of 4" PVC = 0.087 ft^3 or 0.65 gal. 1 ft. length 2" = 0.022 ft^3 or 0.16 gal.

Revision Date: 11/14/02