



Missouri Department of
HEALTH

MEMO

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FROM: Daryl W. Roberts *JWR*
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DATE: February 11, 1992

SUBJECT: Draft BRA for St. Louis FUSRAP Site

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DEQ ADMIN

We have reviewed the subject document and from the results of the Human Health Risk Assessments presented in this document, the St. Louis site presents a certain degree of risk to the public.

Under present use conditions, the risk will be limited primarily to the persons involved directly with the site, like maintenance workers and employees. For these individuals, measures should be taken to protect them from exposure during their regular work activities. The risks to the general public are expected to be minimal as all the most hazardous areas are adequately secured to prevent access by the general public.

Future use of the sites and the vicinity properties for residential, commercial, or recreational purposes in the absence of remediation, is unsatisfactory from the standpoint of human health. In order to release these areas for unrestricted use they must be cleaned up so that contaminant levels are below those established by the EPA for radionuclides. Chemical contamination at the St. Louis sites is minimal compared to the radionuclides. Attached is a list of the chemical contaminants of concern (from page 7.7) which shows figures that can be used as cleanup guidelines.

If you have any questions on these comments, please contact Dick Gnaedinger at 751-6102.

DWR:RG:je

CONTAMINANT	HIGHEST LEVEL FOUND AT THE SITE (PPM)			RECOMMENDED ANY USE LEVEL (PPM)		HEALTH EFFECTS POSSIBLE AT CONCENTRATIONS ABOVE THE RECOMMENDED LEVEL
	WATER	SOIL	OTHER	WATER	SOIL	
ANTIMONY	-	-	-	.01	23	NAUSEA; HEADACHE; SLEEPLESSNESS; LOSS OF APPETITE; DIZZINESS; LIVER AND KIDNEY DEGENERATION.
ARSENIC	-	-	-	.05	11	KNOWN HUMAN CARCINOGEN; GI DISTURBANCES; PERIPHERAL NEURITIS; SKIN, HAIR, DAMAGE.
BARIUM	-	-	-	2.0	3938	CNS DEPRESSANT; HEART ARRHYTHMIAS; ABNORMAL MUSCLE FUNCTION.
BERYLLIUM	-	-	-	.001	1.2	ANIMAL CARCINOGEN; PROBABLE HUMAN CARCINOGEN.
BORON	-	-	-	ND	ND	ND
CADMIUM	-	-	-	.005	28	ATTACKS KIDNEY, PROSTATE; POSSIBLE CARCINOGEN; LIVER CIRRHOSIS.
CHROMIUM TOTAL	-	-	-	.1	281	LIVER, KIDNEY DAMAGE; IRRITANT TO SKIN, EYES, NOSE, THROAT.
CHROMIUM III	-	-	-	.1	56250	
CHROMIUM VI	-	-	-	ND	188	CAN CAUSE CANCER IN HUMANS.
COBALT	-	-	-	ND	ND	ND
COPPER	-	-	-	1.3	ND	GI DISTURBANCES; HEMORRHAGIC GASTRITIS.
LEAD	-	-	-	.050	238	NEUROLOGICAL DAMAGE; RENAL DISEASE; REPRODUCTIVE, CARDIOVASCULAR EFFECTS.
MANGANESE	-	-	-	.05	5625	CNS CHANGES; PSYCHIATRIC DISORDERS; LIVER CIRRHOSIS.
MOLYBDENUM	-	-	-	.07	56	LOW TOXICITY; CAN CAUSE IRRITATION TO MUCOUS MEMBRAN
NICKEL	-	-	-	.1	1125	ANIMAL CARCINOGEN; PROBABLE HUMAN CARCINOGEN; SKIN IRRITANT.
SELENIUM	-	-	-	.05	281	PALLOR; LASSITUDE; IRRITABLE; BILIOUSNESS; INDIGESTION POSSIBLE TRACE ELEMENT FOR MAN.
SILVER	-	-	-	.05	281	ARGYRIA - PERMANENT ASHEN GRAY COLORATION OF SKIN, CONJUNCTIVAE, INTERNAL ORGANS.
THALLIUM	-	-	-	.002	4	VERY TOXIC; HAIR LOSS; GASTROENTERITIS; CNS AND REPRODUCTIVE EFFECTS.
URANIUM	-	-	-	.02	ND	TOXIC TO KIDNEYS; CELL DAMAGE.
VANADIUM	-	-	-	.007	169	EYE, SKIN IRRITANT, AFFECTS LUNG, KIDNEY, CNS.
ZINC	-	-	-	5	5625	SKIN SENSITIZATION; LUNG IRRITANT; NAUSEA; ESSENTIAL NUTRIENT.
FLUORIDE	-	-	-	ND	ND	ND
NITRATE	-	-	-	ND	ND	ND
BENZENE	-	-	-	.005	172	CNS DEPRESSANT; SKIN, EYE, LUNG IRRITANT; KNOWN HUMAN CARCINOGEN.
BIS(2-ETHYLHEXYL)PHTHALATE	-	-	-	.004	357	KNOWN ANIMAL CARCINOGEN; PROBABLE HUMAN CARCINOGEN; DAMAGE; GI DISORDERS; SUSPECTED TERATOGEN.
BROMOBENZENE	-	-	-	.10	5100	IRRITATION OF EYE, NOSE, SKIN; LIVER DAMAGE; DROWSINESS; INCOORDINANCE.
DDT	-	-	-	2.4E-08	15	IRRITANT; CNS EFFECTS; PROBABLE HUMAN CARCINOGEN.
1-2-DICHLOROBENZENE	-	-	-	.6	5063	POSSIBLE HUMAN CARCINOGEN; EYE, THROAT IRRITANT; DIZZINESS; BLOOD, KIDNEY, LIVER DAMAGE.
CIS-1-2-DICHLORDETHYLENE	-	-	-	.07	563	DIZZINESS; EYE, NOSE, THROAT IRRITANT;

TRANS-1-2-DICHLOROETHYLENE	-	-	-	.1	1125	DIZZINESS; EYE, NOSE, THROAT IRRITANT; POSSIBLE LIVER DAMAGE.
1-2-DICHLOROPROPANE	-	-	-	.005	ND	DERMATITIS; EYE IRRITANT; NARCOSIS; LIVER, KIDNEY EFFECTS.
ENDOSULFAN	-	-	-	ND	ND	ND
BENZO(a)ANTHRACENE	-	-	-	.0002	ND	PROBABLE HUMAN CARCINOGEN; SKIN DISORDERS; IMMUNOSUPPRESSANT; LIVER, KIDNEY DAMAGE.
BENZO(b)FLUORANTHENE	-	-	-	.0002	ND	PROBABLE HUMAN CARCINOGEN; SKIN DISORDERS; IMMUNOSUPPRESSANT; LIVER, KIDNEY DAMAGE.
BENZO(k)FLUORANTHENE	-	-	-	.0002	ND	PROBABLE HUMAN CARCINOGEN; SKIN DISORDERS; IMMUNOSUPPRESSANT; LIVER, KIDNEY DAMAGE.
BENZO(a)PYRENE	-	-	-	.0002	.44	PROBABLE HUMAN CARCINOGEN; SKIN DISORDERS; IMMUNOSUPPRESSANT; LIVER, KIDNEY DAMAGE.
CHRYSENE	-	-	-	.0002	ND	PROBABLE HUMAN CARCINOGEN; SKIN DISORDERS; IMMUNOSUPPRESSANT; LIVER, KIDNEY DAMAGE.
DIBENZ(a-h)ANTHRACENE	-	-	-	.0002	ND	PROBABLE HUMAN CARCINOGEN; SKIN DISORDERS; IMMUNOSUPPRESSANT; LIVER, KIDNEY DAMAGE.
INDENO(1-2-3-c-d)PYRENE	-	-	-	.0002	ND	PROBABLE HUMAN CARCINOGEN; SKIN DISORDERS; IMMUNOSUPPRESSANT; LIVER, KIDNEY DAMAGE.
PCBs	-	-	-	.0005	.65	PROBABLE HUMAN CARCINOGEN; REPRODUCTIVE EFFECTS; DERMAL DAMAGE.
TOLUENE	-	-	-	1	11250	CNS DEPRESSANT; LIVER, KIDNEY DAMAGE.
TRICHLOROETHYLENE	-	-	-	.005	263	CNS DEPRESSANT; ANIMAL, PROBABLE HUMAN CARCINOGEN; GI TRACT CHANGES.
VINYL CHLORIDE	-	-	-	.002	ND	KNOWN HUMAN CARCINOGEN; CNS DEPRESSION; NAUSEA.

ND = NO DATA AVAILABLE OR INSUFFICIENT DATA.

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