

Coal combustion wastes contain toxic chemicals such as mercury, arsenic, cadmium, lead and hexavalent chromium, Manganese, Nickel, Radiation sources from Uranium, Strontium and Vanadium... that readily leach into drinking water and accumulate in fish.



Above: 7/20/2012...no smoke stack...(see yellow pin) Below: 11.2013... smokestack.



ms
Givone Exhibit No. 1
Date 3-19-15 Reporter KV
File No. ER-2014-0351

LPI-1

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

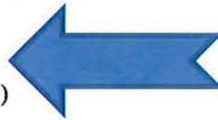


MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.: MO-0095362
 Owner: Empire District Electric Company
 Address: PO Box 127, Joplin, MO 64802

Receiving Stream: Blackberry Creek (U)
 First Classified Stream and ID: Blackberry Creek (C)(03184)
 USGS Basin & Sub-watershed No.: (11070207-140003)



**Blackberry Creek:
 "Receiving Stream"
 for CCW WASTE**

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Impaired Waters List			
(From MDNR Proposed 2010 Missouri 303(d) List)			
Waterbody Name	Pollutant(s)	Source	U/D County
Blackberry Cr.	Chloride, Sulfate Chloride	Asbury PP	Jasper
Center Cr.	Cadmium, Lead, Zinc, Bacteria	Mill Tailings (Aban.), Rural NPS	Jasper
Center Cr.	Bacteria	Rural NPS	Jasper/Newton
Clear Cr.	Bacteria	Rural NPS	Newton
Clear Cr.	Nutrients, Low D.O.	Monett WWTP	Newton
Dry Branch	Bacteria	Rural NPS	Jasper
Hickory Cr.	Bacteria	Rural NPS	Newton
Indian Cr.	Bacteria	Rural NPS	Newton
Little Lost Cr.	Bacteria	Rural NPS	Newton
Lone Elm Hollow	Metals	Mill Tailings (Aban.)	Jasper
Lost Cr.	Bacteria	Rural NPS	Newton
Middle Indian Cr	Bacteria	Rural NPS	Newton
North Fk. Spring R.	Low D.O., Bacteria	Lamar WWTP, Rural NPS	Jasper
North Indian Cr.	Bacteria	Rural NPS	Newton
Shoal Cr.	Bacteria	Rural NPS	Newton
South Indian Cr.	Bacteria	Rural NPS	Newton
Spring River	Bacteria	Rural NPS	Jasper
Turkey Cr.	Cadmium, Lead, Zinc, Bacteria	Mill Tailings (Aban.), Rural NPS	Jasper
Willow Br.	Bacteria	Rural NPS	Newton

Why are Blackberry Creek and Spring River on the Impaired Waters List?

<http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys2/empire-asbury-draft.pdf>

Summary: GEI was contracted by the EPA in reference to FEMA's guidelines for dam safety.

Contract No. EP09W001698, Order No. EP-B10S-00018 between EPA and GEI, dated **September 23, 2010**.

The Upper Pond (17.6 acres) was constructed in 1970,

The Lower Pond (63 acres) was constructed in 1974

The South Pond (10.2 acres) was added in 1978.

In 1987, the Empire District contracted with Black and Veatch Engineers...(who) **designed an impermeable clay barrier for the Lower Pond that was excavated and "keyed" into the underlying clay downstream of the existing crest.**

(Are the other ponds "lined" or leaching into aquifer?)

(The toxic "63 acre lower pond" with a volume of approximately 500 ac-ft ...SEEPED from 1974-1987 into Blackberry Creek, etching out a WELL DEFINED DITCH AND NO 3RD PARTY INSPECTIONS OF THE IMPOUNDMENTS HAVE BEEN PERFORMED...OPERATION AND MAINTENANCE MANUAL DOES NOT EXIST FOR THE CCW FACILITIES.)

RECOMMENDATION OF GEI CONTRACTED BY THE EPA: **"SIGNIFICANT HAZARD"** in accordance with the Federal Guidelines for Dam Safety.

<http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys2/empire-asbury-draft.pdf>

*Ponds:
90 acres
in 8 years...*

Empires

THESE TOXINS MAKE THEIR WAY INTO OUR WATER.

**** JOPLIN WATER REPORT PWS ID:MO 5010413 (BELOW):**

FINDINGS: Chromium-6, Strontium, Vanadium

They are "unregulated" by EPA, yet, chromium 6 (hexavalent chromium) was the cause of cancers, spinal degeneration and other illnesses from PG&E fly ash waste, prosecuted by Erin Brocovich & Ed Masry. What's with the EPA not 'regulating' these toxins? Could it be utility companies are big donors to politicians?

Unregulated Substances (In the Distribution System)

Substance (units)	Year Sampled	Results	Range Low-High	Typical Source
Chromium - 6 (ppb)	2013	0.2	0.2 - 0.3	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chromium - Total (ppb)	2013	0.5	0.3 - 0.9	Discharge from steel and pulp mills; Erosion of natural deposits
Strontium (ppb)	2013	60	59 - 64	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode ray tube televisions to block x-ray emissions
Vanadium (ppb)	2013	0.7	0.4 - 1.1	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst

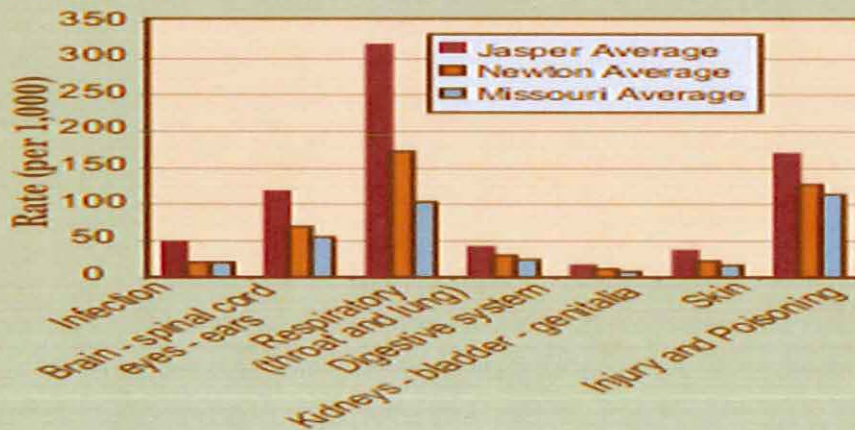
...AND THEY HARM US THROUGH THE AIR:

COPD - Chronic Obstructive Pulmonary Disease

	Time Frame	Jasper County Rate	Newton County Rate	Missouri Rate
Deaths (per 100,000)	1997-2007	63.2	50.1	45.8
Hospitalizations (per 10,000)	2003-2007	31.1	29.7	22.3
ER Visits (per 1,000)	2003-2007	8.6	8.3	5.2

RESPIRATORY (THROAT AND LUNG) IS THE #1 REASON KIDS <15 GO TO THE EMERGENCY RM

2008 Rates of Emergency Room Visits Children Under Age 15



"ALMOST" THE WORST AIR IN AMERICA? "1ST" WOULD BE "THE WORST", WE ARE 6TH.

CECIL FLOYD IS DOWNWIND FROM RIVERTON'S EMPIRE DISTRICT AND ALSO WITHIN 30 MILES OF ASBURY'S EMPIRE DIST. COMPANY

USA TODAY Home News Travel

SPECIAL REPORT
The Smokestack Effect
 Toxic Air and America's Schools

Schools in: Missouri > Jasper County > Joplin

Cecil Floyd Elem.
 School District: Joplin R-Viii

WORST AIR (with blue arrow pointing to the exposure bars)

National Rank
6th percentile
 6,007 of 127,809 schools have worse air.

Exposure to cancer-causing toxics
 BEST WORST
 Note: Rankings are based on modeled concentrations and severity of chemicals known or believed to cause cancer. Learn More

Exposure to other toxic chemicals
 BEST WORST
 Note: Rankings are based on modeled concentrations of chemicals that cause health problems other than cancer. Learn More

Map showing location of Cecil Floyd Elem. (2201 W 24th, Joplin, MO) with a callout box displaying the 6th percentile ranking.

http://content.usatoday.com/news/nation/environment/smokestack/search/MO/Joplin/cecil_floyd/outline/

TOXINS FOUND AT CECIL FLOYD ELEMENTARY:

Chemicals most responsible for the toxicity outside this school

-  **Chromium and chromium compounds**
47% of overall toxicity
-  **Manganese and manganese compounds**
26% of overall toxicity
-  **Nickel and nickel compounds**
22% of overall toxicity
-  **Sulfuric acid**
2% of overall toxicity
- Diisocyanates**
1% of overall toxicity

**ALL 4 TOXINS
 EMITTED FROM
 COAL FIRED
 ELECT. CO'S.**

Somehow, the EPA neglected to list Empire District as a likely polluter for this school's main toxins.



Distance between Joplin, MO and Riverton, KS

(37.0842313, -94.513485) to (37.0749458, -94.7045859)

How many miles? **11 Miles / 17 Km**

How many hours? This take **14 mins**

Riverton Empire 1.30.2015 as seen from Galena's "Premiere Hospital" parking lot.

Impact to human health :

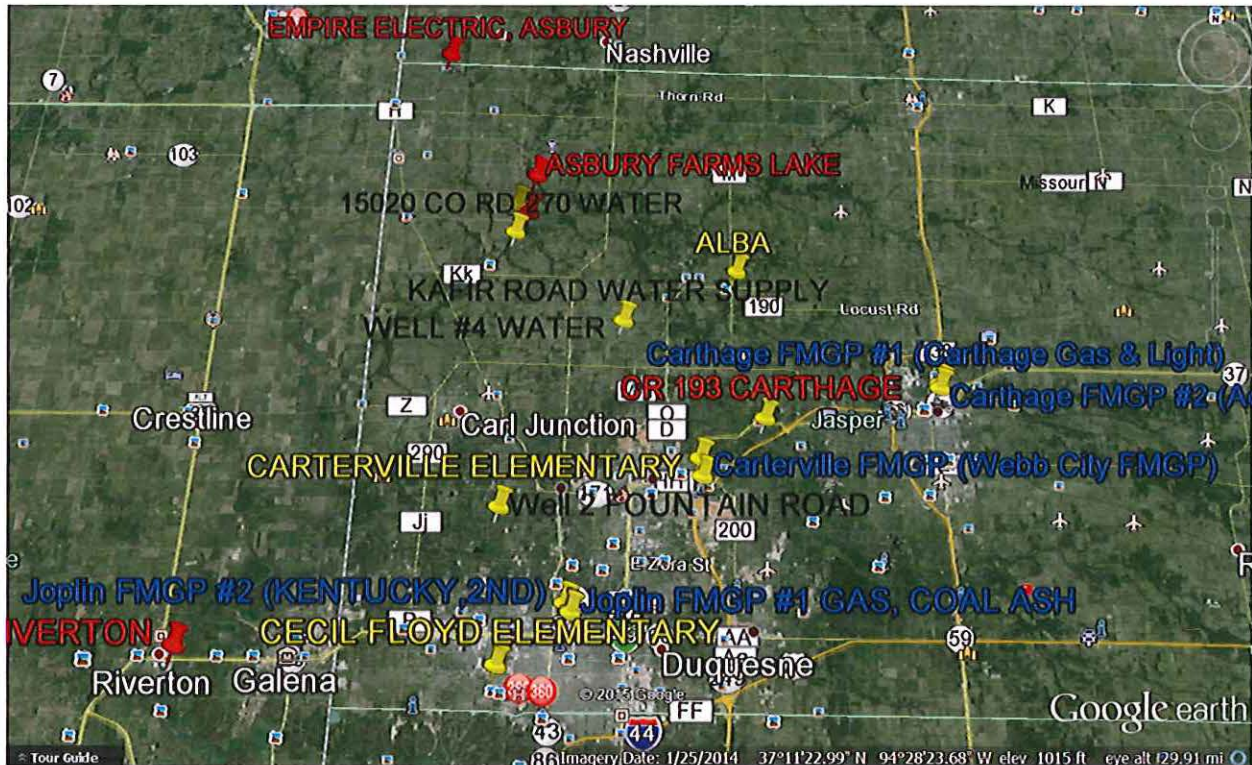
Researches found out a wide range of **diseases and symptoms related to the pollution generated from coal-fired power plants, from light syndrome, respiratory diseases to lethal sickness, like heart attack and cancer.** Following are a few data of health damages reported to be in link with the pollution of the coal power generation:

- Researchers at the Harvard School of Public Health estimated that **power plants are responsible for about 15,000 deaths per year**
- American Lung Association estimated that **24,000 people a year die prematurely because of pollution from coal-fired power plants.** And every year 38,000 heart attacks, 12,000 hospital admissions and an additional 550,000 asthma attacks result from power plant pollution.
- The Center for Disease Control (CDC) estimates that **12,000 coal miners died from black lung disease between 1992 and 2002.**

...Coal also contains trace quantities of the naturally-occurring **radionuclide uranium and thorium, as well as their radioactive decay products, and potassium-40.** ...The U.S Environment Protection Agent even stated that **Coal-Fired Plants are the single largest source of mercury pollution in the country.** The release of sulfur oxides and nitrogen oxides are harmful to human health and are largely responsible for acid rain. **The coal combustion also results radionuclide waste,** which concentrates in the ash that can escape from the boiler into the atmosphere in tiny solid particles. In the U.S., coal combustion contribute 40% of it CO2 emission.

*Now Empire
wants to "sequester"
or trap and bury
CO2 under ground.
How safe is
that?*

<http://1st-ecofriendlyplanet.com/02/coal-fired-power-plants/>



Blue lettering, above, various FMGP (Former Manuf. Gas Plant sites)...gas and coal ash were found under a creek and under buildings. Why isn't this removed? Well water, aquifer, drinking water, surface waters; rivers, creeks, lakes may all be contaminated with coal ash waste.

Empire wrote:

Gas Segment

The acquisition of our natural gas distribution assets in June 2006 involved the potential future remediation of two former manufactured gas plant (FMGP) sites. FMGP Site #1 in Chillicothe, Missouri is listed in the MDNR Registry of **Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites** in Missouri. No remediation of this site is expected to be required in the near term. We have received a letter stating no further action is required from the MDNR with respect to FMGP Site #2 in Marshall, Missouri. We have incurred \$0.2 million in remediation costs and estimate further remediation costs at these two sites to be minimal.

Why not accept your responsibility and clean it up to protect people?

Empire buys gas and coal, as found under **Abandoned or Uncontrolled Hazardous Waste Disposal Sites** "Former Manufactured Gas Plants" Jasper Co., Chillicothe and Marshall:

GAS ↓ ← COAL

Purchases	Firm physical gas and transportation contracts	Coal and coal transportation contracts
	(in millions)	
January 1, 2012 through December 31, 2012	\$ 30.9	\$ 35.3
January 1, 2013 through December 31, 2014	43.5	46.7
January 1, 2015 through December 31, 2016	24.5	31.3
January 1, 2017 and beyond	17.8	—

<http://www.sec.gov/Archives/edgar/data/32689/000104746912001313/R18.htm>

...Water contamination is from the tiny solid particle waste released from the coal ash that escape from a smokestack of a power plant. This coal ash is composed primarily of oxides of silicon, aluminum, magnesium, iron, calcium, titanium, potassium, arsenic, mercury, sodium and sulfur plus small quantities of uranium and thorium and can travel 600 miles and contaminate the water bodies, making some water supply as well contaminated.

As little as 0.002 pounds of mercury a year can contaminate a 25-acre lake to the point where fish are unsafe to eat.



Riverton, KS Empire District February, 2015

TCDD
Dioxin

Within a 30 mile distance we have two coal fired plants operated by Empire Electric; 11 miles away in Riverton, KS and the other 22 miles away in Asbury MO. TCDD Dioxin and heavy metals are released. The coal fired plant in ^{Asbury} Asbury, Missouri **doesn't even have a 'pond liner'**. **The old clay pond liner in Riverton, KS is so old as to be moot.**

^{Asbury} "An EPA study found that all liners eventually degrade, crack or tear, meaning that all landfills eventually leak and release their toxins into the local environment.^{[8][9]} **In a best case scenario, the EPA study determined that a 10-acre landfill would leak 0.2 to 10 gallons per day, or between 730 and 36,500 gallons over a ten-year period, an amount guaranteed to infiltrate the drinking water supply.^[8]"**

http://www.sourcewatch.org/index.php/Fly_ash#cite_note-rachel2-8

Lawsuits mentioned, fighting EPA regulations, dam/levy breaks in latan, harming people and property while "VIGOROUSLY DEFENDING" themselves...knowing they are guilty.

<https://www.empiredistrict.com/DocHandler.ashx?id=417>

Voters want clean energy, yet Empire willfully states they are exempted from solar, as mandated:

On November 4, 2008, Missouri voters approved the Clean Energy Initiative (Proposition C). This initiative requires us and other investor-owned utilities in Missouri to generate or purchase electricity from renewable energy sources, such as solar, wind, biomass and hydro power, or purchase RECs, at the rate of at least 2% of retail sales by 2011, increasing to at least 15% by 2021. Two percent of this amount must be solar. We believe we are exempted from the solar requirement. A challenge to our exemption, brought by two of our customers and Power Source Solar, Inc., was dismissed on May 31, 2011 by the Missouri Western District Court of Appeals. The plaintiffs filed in the Missouri Supreme Court for transfer of the case from the Missouri Western District to the Missouri Supreme Court. The transfer was denied.

FERC FORM NO. 1 (ED. 12-88)

Page 123.48

"Two percent of this amount **must** be solar" Empire says: "We believe we are **exempted** from the solar requirement." http://www.apscservices.info/RcvdDocs/10_1_05012012_1_1.pdf

↑ they best

coal power: air pollution

Environmental impacts of coal power: air pollution

"Coal plants are the nation's top source of **carbon dioxide** (CO₂) emissions..."

Sulfur dioxide (SO₂): Coal plants are the United States' leading source of SO₂ pollution, which takes a major toll on public health, including by contributing to the formation of small acidic particulates that **can penetrate into human lungs and be absorbed by the bloodstream.**

Nitrogen oxides (NOx): NOx pollution causes ground level ozone, or smog, which can **burn lung tissue, exacerbate asthma, and make people more susceptible to chronic respiratory diseases.**

Particulate matter: Particulate matter (also referred to as soot or fly ash) can cause **chronic bronchitis, aggravated asthma, and premature death**, as well as haze obstructing visibility

★ **Mercury:** Coal plants are responsible for more than half of the U.S. human-caused emissions of mercury, a toxic heavy metal that **causes brain damage and heart problems.** Just 1/70th of a teaspoon of mercury deposited on a 25-acre lake can make the fish unsafe to eat.

Other harmful pollutants emitted annually from a typical, uncontrolled coal plant include approximately:

- ★
- 114 pounds of **lead**, 4 pounds of **cadmium, other toxic heavy metals**, and trace amounts of **uranium**. Baghouses can reduce heavy metal emissions by up to 90 percent³.

(Uranium is noted as "Alpha Particles" in water reports below)

- 720 tons of **carbon monoxide**, which causes headaches and places additional **stress on people with heart disease.**
- 220 tons of **hydrocarbons**, volatile organic compounds (VOC), which form ozone.
- 225 pounds of **arsenic**, which will cause cancer in one out of 100 people who drink water containing 50 parts per billion.

★ http://www.ucsusa.org/clean_energy/coalvswind/co2c.html#.VNa7zvnF9mo

(what if it bioaccumulates in the body at lower doses?)

★ **Chromium -VI** Leaches From Coal Ash. Coal ash, the waste left after coal is combusted, contains numerous toxic heavy metals that leach when exposed to water. **Coal ash disposal sites** have been found to be **a major pathway for the release of hexavalent chromium into groundwater**, in some places leaching deadly quantities of Chromium(VI) into **drinking water.**

http://earthjustice.org/sites/default/files/CoalAsh_Factsheet.pdf



Disability POPULATION Statistics for Jasper and Newton Counties, Missouri
From Pooled 2005-2007 ACS PUMS Data

Jasper County is one of 2 counties within PUMA 2700 in Missouri.

Subject	With a Disability	% With a Disability	Without a Disability	% Without a Disability	Total Population
	Total	% of Population	Total	% of Population	Total
Population					
Ages 5+	31,400	20.2%	123,940	79.8%	155,340
Ages 21-64	18,510	19.5%	76,490	80.5%	95,000
Ages 16-64	19,760	18.5%	86,870	81.5%	106,630

http://www.disabilityplanningdata.com/site/county_population_table.php?cntyname=Jasper&state=missouri&submit=submit

5% = NATIONAL AVERAGE: OUR KIDS IN IEP (SPECIAL ED) CLASSES: 10-25%

SCHOOL	#KIDS	# IEP
NATIONAL AVERAGE FOR CHILDREN IN IEP'S		
		5.20%
Carterville elementary p-4 (of Webb City SD)	228	25.00%
Webb City 673-6010x236	4232	10.00%
Carthage 359-7020	4316	14.00%
Carl Junction 649-7026 dese.mo.gov (page in progress, info unavailable now)	3397	"Look at Dese.mo.gov"
Joplin 625-5200	7626	16.00%
Avilla 246-5330 msg 5.14.13	179	
Sarcoxie 5482153	776	17.00%
Neosho p-12	4940	13.00%
Jasper 3942511	465	18.00%
Diamond 325-5186 p-12	898	15.00%
Golden City 537-4900	239	13.00%
Newton County School Dist	1402	16.00%
Commerce Ottawa Co, OK	850	20.00%
Baxter Springs 620-8562375	1042	13.00%
Cherokee CO, KS 667-457-8350		
Wyandotte Schools (elementary)	387	13.00%
Seneca P-4 Laura Weaver	520	18.00%
Webb City middle school 5-6 together	658	10.00%

“There are currently no existing national limits on the amount of mercury and other toxic air pollution released from power plant smokestacks. The 1990 Clean Air Act Amendments mandated EPA control toxic air pollutants, and the EPA took action to reduce mercury emissions from the highest-emitting sources, **except power plants,** as the Clean Air Mercury Rule passed under President George W. Bush **was vacated by a court.**^[21]

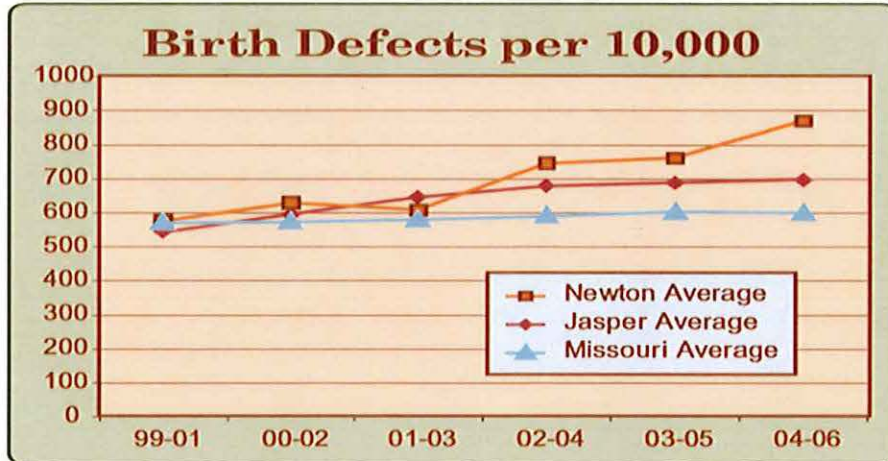
This NSPS would revise the standards new coal- and oil-fired power plants must meet for **particulate matter (PM), sulfur dioxide (SO₂), and nitrogen oxides(NO_x).** The proposed standards should reduce mercury emissions from power plants burning coal and oil by 91 percent, acid gas pollution by 91 percent, direct particulate matter emissions by 30 percent, and sulfur dioxide (SO₂) emissions by 53 percent, down to 2.1 million tons of annual SO₂ emissions.^[21]

The EPA's proposed standards are projected to save as many as 17,000 lives every year by 2015; prevent up to **120,000 cases of childhood asthma symptoms and 11,000 fewer cases of acute bronchitis among children every year; avoid more than 12,000 emergency room and hospital visits annually; and prevent 850,000 lost work days every year.**

In May 2009, the [Environmental Integrity Project](#) and [Earthjustice](#) released a report finding that the Bush Administration failed to release information suggesting an alarmingly high cancer threat for people who live near coal ash waste dumps. According to the study, the Bush Administration only made a portion of the data available, hiding the true extent of the health risks associated with coal ash disposal sites.^[30]

In 2002, an EPA study showed significant risk of coal ash ⁸sumps, but requests for the data under the Freedom of Information Act were either denied or given documents with the estimates of cancer risk blacked out. A 2007 EPA assessment report found that people living near coal ash dump sites have as high as a **1 in 50 chance of getting cancer from drinking water contaminated by arsenic.** It also determined that living near such dump sites raises an individual's risk of liver, kidney, lungs and other organ damage resulting from exposure to toxic metals in the ash.^[30]

http://www.sourcewatch.org/index.php/Heavy_metals_and_coal



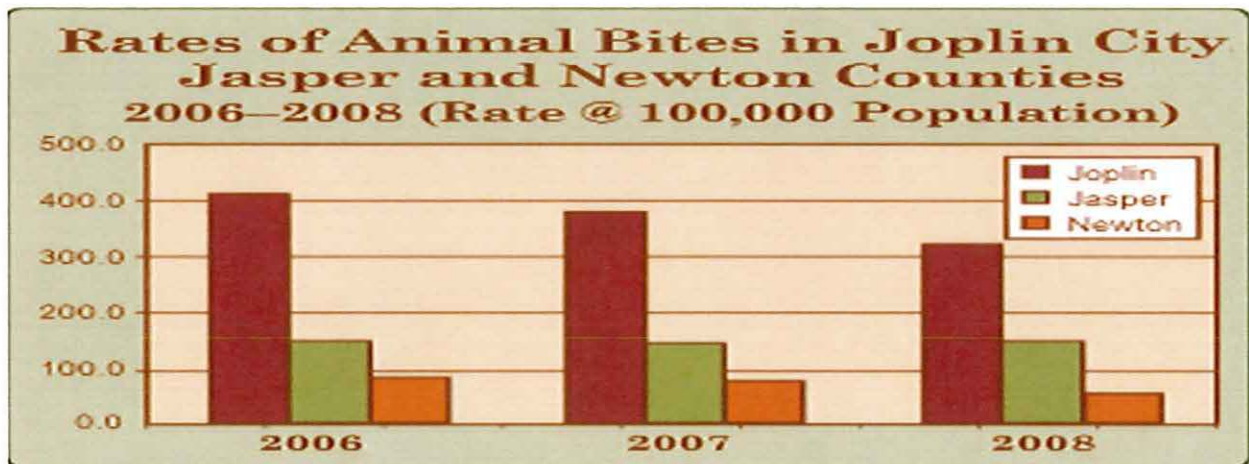
<http://www.joplinmo.org/DocumentCenter/View/1211>

NATIONAL AVERAGE: ONLY 3% have Birth defects= \$2.6 billion hospital fees.

Our birth defects are significantly higher than the national average...

<http://www.hcup-us.ahrq.gov/reports/statbriefs/sb24.pdf>

Scientists have been using animals as “sentinels” for our health issues. When animals are affected by environmental toxins, they tend to bite:



1.1 Purpose

This report presents the results of a specific site assessment of the dam safety of the coal combustion waste (CCW) impoundment at the Riverton Generating Station in Riverton, Kansas. The Riverton Generating Station is operated and owned by Empire District Electric Company (EDE), Kansas. **The impoundment is an unlined Ash Disposal Pond. (Meaning it can leach into the aquifer below ground)**

unlined

and into Spring River...) neither state nor federal regulatory officials have inspected the embankments within the last five years. The first unit went online in 1905. The CCW impoundment contains two cells; the original West Cell constructed in 1951, and the expansion East Cell constructed in 1985.

The first pond constructed in 1951 is an 8 acre ash pond ...

The second pond is 16 acres, built in 1985

What did they do with the waste from 1905-1951?)

Is this why Gas and Coal Tar/Coal Ash is found under creeks and buildings in Joplin? (FMGP's) or because the ponds are not lined, now?

only 24 acres in over 100 years. Ashbury accumulated 90 acres in only 8 years

Site assessment was performed on September 23, 2010. GEI report: June, 2011

<http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys2/empire-riverton-final.pdf>

Radiation in our water...What percent came from Empire District in 100 yrs?

Jasper Co Pwsd #1

Carl Junction, Missouri Serves 4,750 people

View State...
 CHART KEY | 1 or more tests taken in the month | 1 or more positive detections | 1 or more tests above health limit | 1 or more tests above legal limit

5 contaminants below legal limits, but above health guidelines

In some states a small percentage of tests were performed before water was treated, and some contaminants were subsequently removed or diluted. As a result, some reported levels of contamination may be higher than were present at the tap.

Contaminant	Average result	Maximum result	Health limit	Legal limit	NUMBER OF TESTS				MONTHLY TESTING HISTORY					EPA regulated	
					Total #	Positive result	Above health	Above legal	2004	2005	2006	2007	2008		2009
Alpha particle activity	5.03 pCi/L	6.60	-	15	11	11	11	0							Yes
Combined Radium (-226 & -228)	1.53 pCi/L	1.90	-	5	6	6	6	0							Yes
Lead (total)	0.18 ppb	5.32	0.20	15	9	6	1	0							Yes
Radium-226	1.58 pCi/L	2.10	0.05	5	12	12	12	0							Yes
Radium-228	0.03 pCi/L	0.80	0.02	5	12	1	1	0							Yes

Above health limits
Above legal limits

Carl Junction/briarbrook Subdivision

Carl Junction, Missouri Serves 3,957 people

View State...
 CHART KEY | 1 or more tests taken in the month | 1 or more positive detections | 1 or more tests above health limit | 1 or more tests above legal limit

1 contaminant above legal limits

In some states a small percentage of tests were performed before water was treated, and some contaminants were subsequently removed or diluted. As a result, some reported levels of contamination may be higher than were present at the tap. Results shown are based on individual samples and may not indicate a violation of the Safe Drinking Water Act, which often occurs only after prolonged tests show concentrations above a legal limit.

Contaminant	Average result	Maximum result	Health limit	Legal limit	NUMBER OF TESTS				MONTHLY TESTING HISTORY					EPA regulated	
					Total #	Positive result	Above health	Above legal	2004	2005	2006	2007	2008		2009
Alpha particle activity	7.83 pCi/L	15.70	-	15	12	12	12	1							Yes

Contaminant	Average result	Maximum result	Health limit	Legal limit	NUMBER OF TESTS				MONTHLY TESTING HISTORY					EPA regulated	
					Total #	Positive result	Above health	Above legal	2004	2005	2006	2007	2008		2009
Combined Radium (-226 & -228)	2.65 pCi/L	3.10	-	5	4	4	4	0							Yes
Radium-226	2.34 pCi/L	3.10	0.05	5	12	12	12	0							Yes
Radium-228	0.12 pCi/L	0.80	0.02	5	12	2	2	0							Yes

one test above legal limits
above health limits

*PWS #2
2009-2008*

Jasper Co Pwsd #2

Webb City, Missouri Serves 3,330 people

View State...

CHART KEY | 1 or more tests taken in the month | 1 or more positive detections | 1 or more tests above health limit | 1 or more tests above legal limit

4 contaminants below legal limits, but above health guidelines

In some states a small percentage of tests were performed before water was treated, and some contaminants were subsequently removed or diluted. As a result, some reported levels of contamination may be higher than were present at the tap.

Contaminant	Average result	Maximum result	Health limit	Legal limit	NUMBER OF TESTS				MONTHLY TESTING HISTORY						EPA regulated	
					Total #	Positive result	Above health	Above legal	2004	2005	2006	2007	2008	2009		
Alpha particle activity	5.57 pCi/L	10.70	-	15	7	6	6	0								Yes
Lead (total)	2.49 ppb	8.71	0.20	15	9	5	4	0								Yes
Radium-226	0.69 pCi/L	2.10	0.05	5	7	5	5	0								Yes
Radium-228	0.36 pCi/L	1	0.02	5	7	3	3	0								Yes

above health limits

Jasper county pwsd 2

PWSD #2 2013

Our water comes from the following source(s):

Source Name	Type
WELL # 4 - 23530 KAFIR RD	GROUND WATER
WELL # 1 - 15020 COUNTY RD 270	GROUND WATER

Regulated Contaminants

Regulated Contaminants	Collection Date	Highest Value	Range (low - high)	Unit	MCL	MCLG	Typical Source
ARSENIC	5/17/2013	3.68	0 - 3.68	ppb	10	0	Erosion of natural deposits
BARIUM	5/17/2013	0.13	0.0683 - 0.13	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	5/17/2013	4.34	3.55 - 4.34	ppb	100	100	Discharge from steel and pulp mills
FLUORIDE	5/17/2013	0.34	0.15 - 0.34	ppm	4	4	Natural deposits, Water additive which promotes strong teeth
NITRATE-NITRITE	9/30/2013	0.055	0 - 0.055	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection Byproducts	Monitoring Period	Highest RAA	Range (low - high)	Unit	MCL	MCLG	Typical Source
THM	2011 - 2013	7	7.47	ppb	80	0	Byproduct of drinking water disinfection

Lead and Copper	Date	90th Percentile	Range (low - high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2011 - 2013	0.0465	0.00426 - 0.108	ppm	1.3	0	Corrosion of household plumbing systems

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	6/4/2013	2.8	0 - 2.8	pCi/l	5		Erosion of natural deposits
COMBINED URANIUM	5/17/2013	1.33	1.01 - 1.33	µg/l	30		Erosion of natural deposits
GROSS ALPHA PARTICLE ACTIVITY	2/12/2013	17.2	8.5 - 17.2	pCi/l			Erosion of natural deposits
GROSS ALPHA EXCL. RADON & URANIUM	2/12/2013	16	7.4 - 16	pCi/l	15	0	Erosion of natural deposits
RADIUM-226	6/4/2013	1.7	0 - 1.7	pCi/l	5	0	
RADIUM-228	6/4/2013	1.1	0 - 1.1	pCi/l	5	0	

Ranged from 8.5-17.2

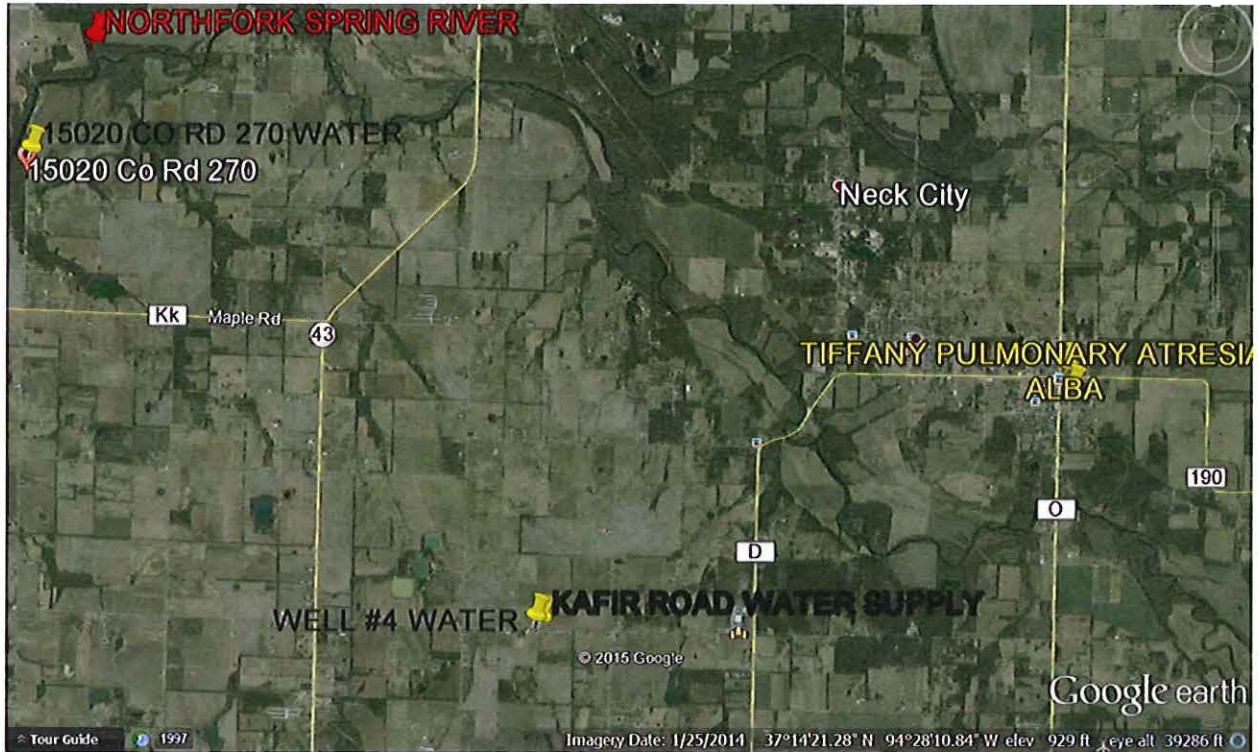
WELL 4 (ABOVE) : 23530 kafir rd (BETWEEN ALBA AND ORONO)WELL 1: 15020 COUNTY ROAD 270

NOTICE THE ARSENIC, BARIUM, CHROMIUM, etc...known toxins from coal fired plants like Empire Radiation (Gross Alpha Particles) ranged from 8.5-17.2 pCi/L ABOVE LEGAL and HEALTH LIMITS. I cannot believe Alba's tests are accurate when these wells are so close...need independent study.

above legal limits

PWS #2

15 is legal limit... Above "Health" Limits



Ozark Center Turn Around Ranch

Jasper County, Missouri Serves 60 people

View State...

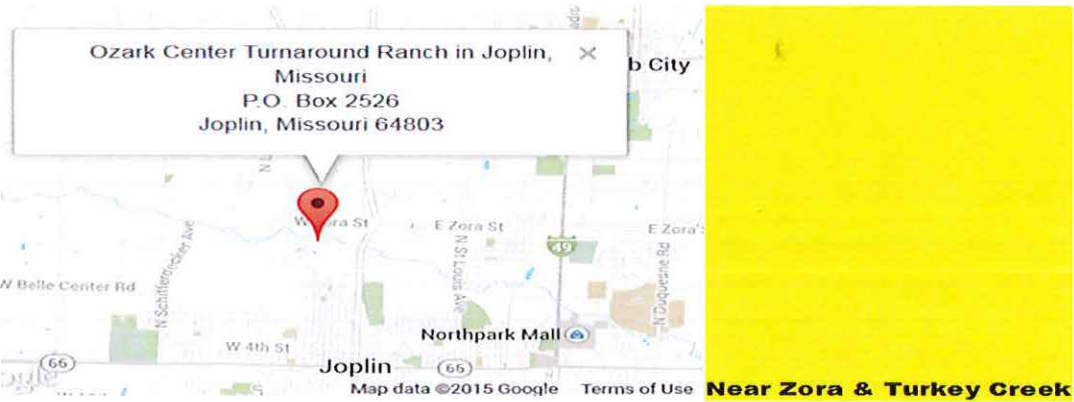
CHART KEY | 1 or more tests taken in the month | 1 or more positive detections | 1 or more tests above health limit | 1 or more tests above legal limit

5 contaminants below legal limits, but above health guidelines

In some states a small percentage of tests were performed before water was treated, and some contaminants were subsequently removed or diluted. As a result, some reported levels of contamination may be higher than were present at the tap.

Contaminant	Average result	Maximum result	Health limit	Legal limit	NUMBER OF TESTS				MONTHLY TESTING HISTORY						EPA regulated	
					Total #	Positive result	Above health	Above legal	2004	2005	2006	2007	2008	2009		
Alpha particle activity	9.74 pCi/L	12.60	-	15	8	8	8	0								Yes
Combined Radium (-226 & -228)	2.83 pCi/L	3.20	-	5	3	3	3	0								Yes
Lead (total)	0.61 ppb	13.20	0.20	15	6	3	1	0								Yes
Radium-226	2.96 pCi/L	3.50	0.05	5	7	7	7	0								Yes
Radium-228	0.26 pCi/L	1.20	0.02	5	7	2	2	0								Yes

above health limits



Carthage

Carthage, Missouri Serves 13,656 people

View State...

CHART KEY 1 or more tests taken in the month 1 or more positive detections 1 or more tests above health limit 1 or more tests above legal limit

3 contaminants below legal limits, but above health guidelines

In some states a small percentage of tests were performed before water was treated, and some contaminants were subsequently removed or diluted. As a result, some reported levels of contamination may be higher than were present at the tap.

Contaminant	Average result	Maximum result	Health limit	NUMBER OF TESTS					MONTHLY TESTING HISTORY						EPA regulated
				Legal limit	Total #	Positive result	Above health	Above legal	2004	2005	2006	2007	2008	2009	
Alpha particle activity	5.70 pCi/L	5.70	-	15	1	1	1	0	[Chart showing 1 test in 2004]						Yes
Lead (total)	0.39 ppb	9.36	0.20	15	18	11	6	0	[Chart showing 11 tests in 2004, 6 in 2005, 1 in 2006, 1 in 2007, 1 in 2008, 1 in 2009]						Yes
Radium-226	0.90 pCi/L	0.90	0.05	5	1	1	1	0	[Chart showing 1 test in 2004]						Yes

Carthage only test twice above health limits

They only took one test for radiation; 2004. FOUND IT and STOPPED TESTING in Carthage.

Alba/Purcell's shared well water

Regulated Contaminants							
Regulated Contaminants	Collection Date	Highest Value	Range (low - high)	Unit	MCL	MCLG	Typical Source
BARIUM	1/10/2013	0.167	0.167	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	1/10/2013	0.29	0.29	ppm	4	4	Natural deposits; Water additive which promotes strong teeth

Lead and Copper	Date	90th Percentile	Range (low - high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2010 - 2012	0.0116	0.00277 - 0.0172	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2010 - 2012	2.52	1.18 - 3.85	ppb	15	0	Corrosion of household plumbing systems

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	3/2/2012	1.1	1.1	pCi/l	5		Erosion of natural deposits
GROSS ALPHA PARTICLE ACTIVITY	3/2/2012	8.2	8.2	pCi/l			Erosion of natural deposits
RADIUM-226	3/2/2012	1.1	1.1	pCi/l	5	0	

above health limits

Microbiological	Result	MCL	MCLG	Typical Source
COLIFORM (TCR)	In the month of October, 2 sample(s) returned as positive	MCL: Systems that Collect Less Than 40 Samples per Month - No more than 1 positive monthly sample	0	Naturally present in the environment

Violations and Health Effects Information

During the 2013 calendar year, we had the below noted violation(s) of drinking water regulations

Compliance Period	Analyte	Type
10/01/2013 - 10/31/2013	COLIFORM (TCR)	MCL (TCR), MONTHLY

<http://dnr.mo.gov/ccr/MO5010004.pdf> Carl Junction North

Chromium

Regulated Contaminants							
Regulated Contaminants	Collection Date	Highest Value	Range (low - high)	Unit	MCL	MCLG	Typical Source
BARIUM	1/16/2013	0.127	0.115 - 0.127	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	1/16/2013	1.24	1.12 - 1.24	ppb	100	100	Discharge from steel and pulp mills
ETHYLBENZENE	1/16/2013	1.7	0 - 1.7	ppb	700	700	Discharge from petroleum refineries
FLUORIDE	1/16/2013	0.75	0.62 - 0.75	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
XYLENES, TOTAL	1/16/2013	0.00951	0 - 0.00951	ppm	10	10	Discharge from petroleum factories; Discharge from chemical factories

Lead and Copper	Date	90th Percentile	Range (low - high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2011 - 2013	0.0345	0.00554 - 0.0358	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2011 - 2013	1.66	1.04 - 1.9	ppb	15	0	Corrosion of household plumbing systems

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	5/4/2012	1.5	1.5	pCi/l	5		Erosion of natural deposits
GROSS ALPHA PARTICLE ACTIVITY	5/4/2012	8.2	8.2	pCi/l			Erosion of natural deposits
RADIUM-226	5/4/2012	1.5	1.5	pCi/l	5	0	

radiation above health limits

Table 1. Toxicological and Environmental Properties of Hazardous Air Pollutants (HAPs) Emitted from Electric Generating Stations Fueled by Coal.			
Class of HAP	Notable HAPs	Human Health Hazards	Environmental Hazards
Acid Gases	Hydrogen chloride, Hydrogen fluoride	Irritation to skin, eye, nose, throat, breathing passages.	Acid precipitation, damage to crops and forests.
Dioxins and Furans	2,3,7,8-tetrachlorodioxin (TCDD)	Probable carcinogen: soft-tissue sarcomas, lymphomas, and stomach carcinomas. May cause reproductive and developmental problems, damage to the immune system, and interference with hormones.	Deposits into rivers, lakes and oceans and is taken up by fish and wildlife. Accumulates in the food chain.
Mercury	Methylmercury	Damage to brain, nervous system, kidneys and liver. Causes neurological and developmental birth defects.	Taken up by fish and wildlife. Accumulates in the food chain.
Non-Mercury Metals and Metalloids (excluding radioisotopes)	Arsenic, beryllium, cadmium, chromium nickel, selenium, manganese	Carcinogens: lung, bladder, kidney, skin. May adversely affect nervous, cardiovascular, dermal, respiratory and immune systems.	Accumulates in soil and sediments. Soluble forms may contaminate water systems.
	Lead	Damages the developing nervous system, may adversely affect learning, memory, and behavior. May cause cardiovascular and kidney effects, anemia, and weakness of ankles, wrists and fingers.	Harms plants and wildlife; accumulates in soils and sediments. May adversely affect land and water ecosystems.
Polynuclear Aromatic Hydrocarbons (PAH)	Naphthalene, benzo-a-anthracene, benzo-a-pyrene, benzo-b-fluoranthene, chrysene, dibenzo-a-anthracene	Probable carcinogens. May attach to small particulate matter and deposit in the lungs. May have adverse effects to the liver, kidney, and testes. May damage sperm cells and cause impairment of reproduction.	Exists in the vapor or particulate phase. Accumulates in soil and sediments.
Radioisotopes	Radium	Carcinogen: lung and bone. Bronchopneumonia, anemia, brain abscess.	Deposits into rivers, lakes and oceans and is taken up by fish and wildlife. Accumulates in soils, sediments, and in the food chain.
	Uranium	Carcinogen: lung and lymphatic system. Kidney disease.	
Volatile Organic Compounds	Aromatic hydrocarbons including benzene, toluene, ethylbenzene, xylene	May cause irritation of the skin, eyes, nose, and throat; difficulty in breathing; impaired function of the lungs; delayed response to a visual stimulus; impaired memory; stomach discomfort; and effects to the liver and kidneys. May also cause adverse effects to the nervous system. Benzene is a known carcinogen.	Degrade through chemical reactions in the atmosphere and contribute to carbon-based radicals that contribute to formation of ground-level ozone and its human health effects.
	Aldehydes including formaldehyde	Probable carcinogen: lung and nasopharyngeal cancer. Eye, nose, and throat irritation, respiratory symptoms.	

Hazard information compiled from toxicological profiles and concise chemical assessment documents for specific pollutants published by the Agency for Toxic Substances and Disease Registry and World Health Organization and available on-line (ATSDR, 2011; WHO, 2011).

We deserve to have an independent study because it is not possible to trust the DNR, who 'examined' Empire District, but has never tested the levy, our aquifer or around the unlined ponds built in the

50 years -
no ponds
where was
it dumped?

new

1950's (50+ years of "no ponds") from Riverton or the 1970 unlined ponds- 1987 clay lined pond in Asbury or the EPA to give us honest results when they are compromised by "stakeholders".

4.2014, Canoe, Impaired waters, superfunds;

<http://www.dnr.mo.gov/env/wpp/tmdl/tmdl-consent-decree.pdf> Lawsuit by the American Canoe Association and Sierra Club vs. EPA: about listing impaired waters. EPA's Carole Brown and Dennis Grams- REMOVED FROM POSITION OF INVESTIGATOR

American Canoe Association, et al. v. EPA, Consolidated Case No. 98-1195-CV-W-SOW, consolidated with 98-4282-CV-W-SOW

WHEREAS, in order to resolve this lawsuit, Plaintiffs and EPA also have entered into a Settlement Agreement and EPA has issued a letter setting forth certain commitments with respect to review of some National Pollutant Discharge Elimination System permits in Missouri that have been filed separately with the Court for informational purposes only, the terms of which are not incorporated into this Consent Decree and are not enforceable orders of this Court;

WHEREAS, Plaintiffs and EPA have agreed to a settlement of this action without any admission of fact or law, which they consider to be just, fair, adequate and equitable resolution of the claims raised in this action;

I. PARTIES

1. The parties to this Consent Decree are Plaintiffs and EPA. The parties understand that (a) Carol Browner and Dennis Grams were sued in their official capacities as Administrator of the United States Environmental Protection Agency and Regional Administrator of United States EPA, Region VII, respectively and (b) the obligations arising under this Consent Decree are to be performed by EPA and not by Carol Browner or Dennis Grams in their individual capacities.



<http://www.americancanoe.org/general/?type=CONTACT>

Empire District has acted irresponsibly for over 100 years while making millions or billions as we became mentally and physically impaired. There is NO DOUBT that 'some' of our illnesses were caused by their negligence and they should not get further rate increases.