



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

June 14, 1993

Ref: 80EA

THE OPERATION OF THE BASIN F LIQUID INCINERATOR

- * 350,653 gallons of toxic Basin F liquid have been transferred to the incinerator as of June 14, 1993.
- * The combustion process has produced more than 350,653 gallons of brine. As of June 14, 1993, seven tankcars of brine have been recycled at Encycle in Corpus Christi. Six more cars are en route. The brine has averaged 22.5 percent total dissolved solids with an average copper content of 2091 parts per million.
- * During the first mini-burn (50 percent Basin F liquid) on May 7, 1993, a destruction and removal efficiency of 99.9995 percent was achieved at all test temperatures between 1,750 F to 1,900 F. The minimum requirement is 99.99 percent.
- * During the second mini-burn (100 percent Basin F Liquid) on May 20-25, 1993, a feed injection rate of 170 lbs per minute was demonstrated. Preliminary results for the second mini-burn are attached.
- * Particulate emission measurements for the second mini-burn are all below 0.0183 grains/standard cubic feet (gr/scf) versus the regulation of 0.10 gr/scf corrected to 10 percent of CO₂.
- * Hydrochloric acid emissions are below 0.051 lbs per hr versus 4.0 lbs per hr maximum allowed by the regulations.

(Please see attachments)

Source of information: U S Army and Weston Labs

looky at PWA's now

100% BASIN F WASTE
EMISSION RESULTS FROM MINI-BURN #2

METALS	RISK ASSESSMENT RATES (lb/hr)	ACTUAL EMISSION RATES (lb/hr)
Aluminum	5.15E-03	2.84E-03
Antimony	1.81E-04	ND
Arsenic	1.03E-03	ND
Barium	2.51E-04	5.61E-05
Beryllium	1.05E-05	ND
Boron	7.65E-03	7.34E-03 ⁽¹⁾
Cadmium	1.61E-04	ND
Calcium	4.39E-02	6.42E-03
Chromium	7.05E-05	5.42E-05
Cobalt	2.25E-04	ND
Copper	9.59E-01	4.92E-02
Iron	1.36E-02	9.90E-04
Lead*	3.21E-04	7.39E-04
Lithium	3.14E-05	ND
Manganese	1.76E-03	6.85E-04
Mercury*	2.84E-04	1.55E-03
Molybdenum	3.15E-03	ND
Nickel	8.18E-03	2.50E-04
Selenium	2.63E-03	4.37E-04
Silver*	2.72E-05	9.89E-05
Thallium	2.64E-03	1.35E-03
Tin	2.31E-03	1.70E-03
Titanium*	1.74E-05	4.78E-05
Vanadium	6.68E-04	8.07E-05
Zinc*	4.65E-03	5.94E-03

(1) Boron value for run #2 was not determined analytically.

* Actual emissions exceeded Risk Assessment rates.

100% BASIN F WASTE
EMISSION RESULTS FROM MINI-BURN #2

	RISK ASSESSMENT RATES (lb/hr)	ACTUAL EMISSION RATES (lb/hr)
DIOXIN/FURANS		
U.S. EPA TEF	1.19E-09	2.56E-10
PESTICIDES		
Methyl Parathion ⁽¹⁾	1.14E-07	8.50E-06
SEMIVOLATILE ORGANICS		
Phenol	1.09E-03	6.57E-05
Benzoic Acid	1.01E-04	1.07E-03
Dimentylphthalate	NA	3.09E-05
Diethylphthalate	NA	9.29E-05
Butylbenzylphthalate	NA	8.50E-05
bis(2-Ethylhexyl)- phthalate	NA	1.51E-04
OTHERS		
Ammonia	4.79E-02	4.51
Particulate	4.00	1.65
Hydrogen Chloride	1.35	0.103

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Cancer toxicity data not available.

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100% BASIN F WASTE
EMISSION RESULTS FROM MINI-BURN #2

NO
POHC

NO F

VOLATILE ORGANICS	RISK ASSESSMENT RATES (lb/hr)	ACTUAL EMISSION RATES (lb/hr) RUN #1	ACTUAL EMISSION RATES (lb/hr) RUN #2	ACTUAL EMISSION RATES (lb/hr) RUN #3	ACTUAL EMISSION RATES (lb/hr) RUN #4
Chloromethane	NA	ND	1.27E-03	2.38E-04	3.24E-04
Bromomethane	7.43E-09	ND	2.14E-04	9.55E-05	ND
Methylene Chloride ⁽¹⁾ X	2.08E-06	5.26E-04	4.13E-04	7.45E-04	5.11E-04
Carbon Disulfide	NA	ND	1.22E-04	ND	ND
Chloroform	2.14E-07	7.54E-04	6.14E-04	7.27E-04	1.19E-03
Carbon Tetrachloride ⁽⁴⁾ X	1.24E-07	5.34E-05	4.49E-05	4.78E-05	5.42E-05
Bromodichloromethane	NA	3.10E-04	2.25E-04	2.88E-04	3.39E-04
Dibromochloromethane	NA	1.75E-04	1.07E-04	8.27E-05	9.06E-05
Benzene X	1.09E-07	9.85E-04	6.03E-04	ND	ND
Toluene	1.95E-08	3.16E-04	1.77E-04	2.04E-04	2.19E-04
Chlorobenzene ⁽⁴⁾	3.29E-08	5.20E-05	7.44E-05	4.78E-05	5.42E-05
Styrene	NA	5.97E-04	3.79E-04	5.16E-04	6.20E-04
Xylenes (total)	2.17E-07	1.75E-04	1.07E-04	4.78E-05	5.42E-05
POHC Spiking ?	NA	Yes	Yes	No	No

- 1 Commonly used laboratory solvent.
- 2 Not Applicable (not assumed to be a PIC in Risk Assessment)
- 3 Non-Detect
- 4 Quantified below the detection limit.

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