

120 LCCP

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Technical Memorandum

Research Project No. 608-81-839-9

Conoco Inc.
Research and Development Department
Research Services Division
Ponca City, Oklahoma

To Mike Hayes, LCCP

From E. L. Sones, RSD

Date May 15, 1981

Subject ANALYSES OF WASTEWATERS FROM THE LCCP 002 OUTFALL

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Summary

The organic priority pollutants found in the samples in concentrations of 8 ppm and above are given in Table I. Other priority pollutants indicated to be present in lower concentrations are given in the attached reports^{1,2,3}.

The data for metals and chemical analyses are given in Tables II and III.

Discussion

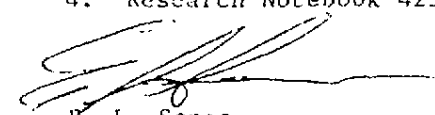
The samples were delivered to Ponca City on 24 March 1981 by a chartered airplane. Those waters were sampled by LC personnel and shipped in containers provided by this laboratory.

The samples were received still adequately packed in ice and below 4°C. On receipt, the samples were stored in a cold room at 4°C until analyzed. Extraction of the composited sample for concentration of the nonvolatile organic components was performed within five days, and those extracts were preserved under refrigeration until the analyses were performed. Analyses of the extract for organics by GC-MS per Method 625 are reported in these data. Analyses for pesticides per Method 608 are in progress and will be reported separately when available. Analyses of the VOA samples were accomplished the same week as received.

Determinations of the radioactivity parameters will be reported to you as soon as available.

References

1. TSR No. 263-81-804-8 by R. O. Gardner
2. TSR No. 431-81-804-8 by C. B. Herrin
3. TSR No. 435-81-839-9 by C. B. Herrin
4. Research Notebook 4236, page 93.


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BW
Attachments
Copies to: FK JCL RTF DZ

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TABLE 1

ORGANIC PRIORITY POLLUTANTS FOUND IN LCCP 002 OUTFALL

Compound	Concentrations in ppb	
	by 624	by 625
Benzene	244	---
Toluene	60	---
Xylenes	---	110
Ethylbenzene	2	16
Phenol	---	8
Naphthalene	---	26
Di(2-ethylhexyl)phthalate	---	11

TABLE 11

DISSOLVED METALS IN LCCP 002 OUTFALL

	Concentration in Mg/Liter	
	by ICP	by AA
Antimony	<0.25	
Arsenic		0.006
Beryllium	<0.005	
Cadmium	<0.015	
Chromium	0.033	
Copper	0.024	
Lead	<0.25	
Mercury		<0.013
Nickel	<0.075	
Selenium		<0.002
Silver	<0.03	
Thallium	<0.5	
Zinc	0.13	
Aluminum	8.8	
Barium	0.15	
Boron	<0.05	
Cobalt		1.6
Iron	1.0	
Magnesium	12	
Molybdenum	<0.05	
Manganese	0.45	
Tin	0.13	
Titanium	0.24	
Calcium	220	
Strontium	0.71	
Vanadium	0.026	
Sodium	62	

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TABLE III

DETERMINATIONS BY CHEMICAL ANALYSES
ON LCCP 002 OUTFALL

<u>PARAMETER</u>	<u>VALUE</u>
Total Phenols	65 ppb
Total Cyanides	<1 ppb
Chloride	370 ppm
Fluoride	5 ppm
Bromide	<1 ppm
Sulfate	7 ppm
Sulfite	<1 ppm
Sulfide	<1 ppm
Nitrate	<1 ppm
Nitrite	30 ppb
Phosphate	<1 ppm
Total Nitrogen	5 ppm
Oil and Grease	11 ppm
Surfactants	0.44 ppm

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