Marathon Petroleum Company

EPA Region 5 Records Ctr.

375295

RECEIVED IN THE OFFICE OF THE DIRECTOR

AUG 31 1982

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 30, 1982

Richard Carlson, Director
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, IL 62706

Dear Mr. Carlson:

In compliance with RCRA regulations, please be advised that the attached measurements were obtained on ground water samples taken from the six ground water monitoring wells at Marathon Petroleum Company's Robinson, Illinois Refinery (EPA ID #ILD005476882, IEPA State ID #0330250003G). The wells were sampled on July 19, 1982. A map showing the location of the monitoring wells and the ground water flow direction is attached.

The following parameters exceeded the National Interim Primary Drinking Water Standards:

Well #B-2	Marathon Lab Results
Nitrates	27.8 mg/l

This well, which is hydraulically upgradient of our land-based hazardous waste facilities, is adjacent to farmland to which nitrogen fertilizers are applied. This probably accounts for this high nitrate measurement.

Please note the name change to Marathon Petroleum Company, which became a wholly-owned subsidiary of Marathon Oil Company on July 10, 1982.

If you have any questions, please contact me at 618-544-2121.

Yours truly,

L. M. Echelberger
Environmental Coordinator

LME/VLM:lmw

Attachments

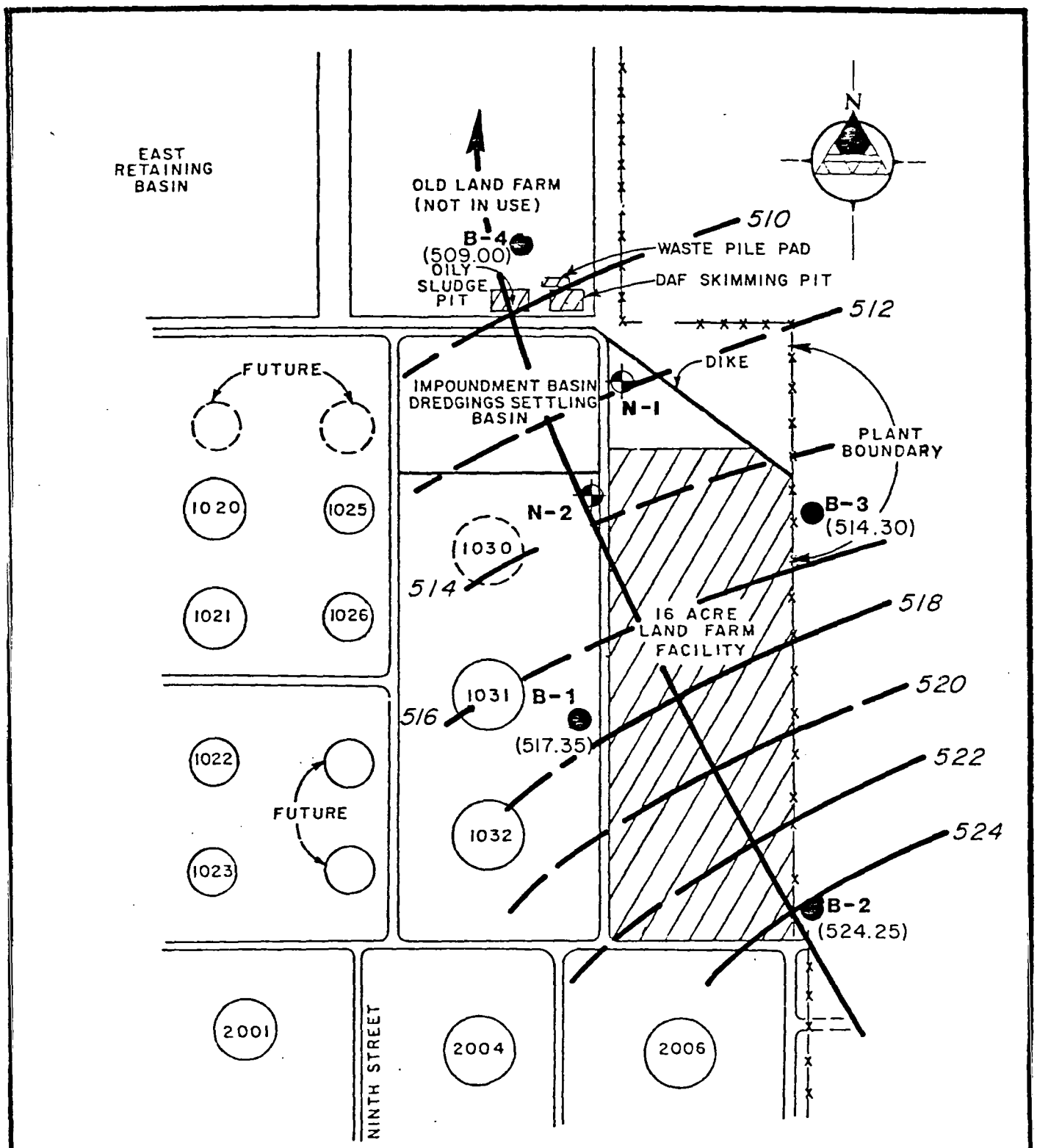
RECEIVED

SEP 1 1982

E.P.A. — D.L.P.C.
STATE OF ILLINOIS

GROUND WATER ANALYSES
MARATHON PETROLEUM COMPANY - ROBINSON REFINERY
DATE OF SAMPLING JULY 19, 1982

WELL NO. → / PARAMETER ↓	B-1	B-2	B-3	B-4	N-1	N-2
Temperature (°F)	60°F	58°F	60°F	59°F	64°F	62°F
Arsenic (mg/l)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Barium (mg/l)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium (mg/l)	0.005	0.001	0.003	0.005	0.005	0.004
Chromium (mg/l)	0.0025	0.0027	0.0016	0.0015	0.0031	0.0031
Fluoride (mg/l)	0.11	<0.10	0.32	0.25	0.18	<1.0
Lead (mg/l)	0.009	0.009	0.009	0.009	0.008	0.007
Mercury (mg/l)	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Nitrate (as NO_3-N) (mg/l)	4.6	27.8	7.4	2.6	3.6	2.6
Selenium (mg/l)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Silver (mg/l)	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Endrin (mg/l)	ND	ND	ND	ND	ND	ND
Lindane (mg/l)	ND	ND	ND	ND	ND	ND
Methoxychlor (mg/l)	ND	ND	ND	ND	ND	ND
Toxaphene (mg/l)	ND	ND	ND	ND	ND	ND
2, 4-D (mg/l)	ND	ND	ND	ND	ND	ND
2, 4, 5-TP Silvex (mg/l)	ND	ND	ND	ND	ND	ND
Gross Alpha (pCi/l)	3 ± 4	0 ± 3	4 ± 4	5 ± 5	4 ± 4	1 ± 4
Gross Beta (pCi/l)	4 ± 5	0 ± 5	0 ± 5	3 ± 6	6 ± 6	3 ± 5
Radium 226 (pCi/l)	-0.2 ± 0.7	-0.2 ± 0.7	-0.2 ± 0.7	0.6 ± 1.0	0.5 ± 0.9	-0.3 ± 0.7
Radium 228 (pCi/l)	2.4 ± 1.3	2.4 ± 1.3	0.7 ± 1.3	0.4 ± 1.2	0.9 ± 1.3	0.6 ± 1.6
Coliform Bacteria (1/100 ml)	0	0	0	0	0	0
Chloride (mg/l)	10	34	4	4	24	6
Iron (mg/l)	0.005	0.003	0.014	0.015	0.005	0.003
Manganese (mg/l)	0.201	0.004	0.030	0.749	0.278	0.462
Phenols (mg/l)	<0.002	<0.002	<0.002	0.002	<0.002	<0.002
Sodium (mg/l)	38.5	40.3	52.5	36.7	32.0	40.3
Sulfate (mg/l)	9	0.5	11	175	21	12
pH (pH Units)	7.48/7.59/7.59/7.54	8.13/8.07/8.08/8.04	8.14/8.26/8.24/8.22	8.13/8.22/8.23/8.21	7.88/7.90/7.88/7.93	7.63/7.68/7.73/7.97
Specific Conductance (μmhos/cm)	489/ 498/ 495/ 498	481/ 481/ 483/ 480	345/ 348/ 347/ 350	826/ 830/ 831/ 828	622/ 621/ 622/ 619	472/ 473/ 470/ 473
Total Organic Carbon (mg/l)	50.6/49.4/49.5/46.5	23.7/23.4/21.7/20.0	28.7/25.9/26.4/25.3	42.1/35.4/32.4/37.5	10.6/10.7/11.2/9.0	15.2/8.3/13.1/8.9
Total Organic Halogen (μg/l)	23/ 28/ 24/ 24	41/ 40/ 42/ 41	23/ 26/ 29/ 27	41/ 44/ 41/ 36	9.2/ 18/ 8.8/ 12	15/ 17/ 19/ 14



KEY:

B-1 ● EXISTING PIEZOMETER LOCATIONS

(517.35) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

N-1 NEW PIEZOMETER LOCATIONS

EQUIPOTENTIAL LINE (CONTOUR OF EQUAL HYDRAULIC HEAD) (DASHED WHERE APPROXIMATE)

FLOW LINE; INDICATES DIRECTION OF GROUND WATER FLOW

LAND BASED HAZARDOUS WASTE MANAGEMENT FACILITY

400 0 400
FEET

FIGURE 2

POTENTROMETRIC SURFACE MAP
ROBINSON REFINERY
MARATHON OIL COMPANY

Dames & Moore

0814-024-07